The Health Concerns of clients on methadone maintenance: a study by the nurses' health promotion committee

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The health promotion committee
(in alphabetical order)

Anita Connor
Noreen Geoghegan
Gail Hawthorne
Philip James
David Spiro

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Chapter 1

Introduction and Background

"Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being." (W.H.O. 1986)

Since the publication of the Health Promotion Strategy in 2000, there has been an increased emphasis on the development of settings based interventions which seek to exploit the opportunities afforded by environments such as the hospital and the community for a more co-ordinated, comprehensive and integrated approach to promoting health. There has also been a considerable emphasis on identifying key target population groups and developing interventions to meet their particular needs. The National Drugs Strategy indicates that education and the promotion of healthier lifestyle choices make up part of both the prevention and treatment pillars of the Irish Government's response to drug abuse (Department of Tourism, Sport & Recreation 2001).

High risk behavior such as injecting drug use means individuals are more susceptible to a variety of medical problems. Indeed not only physical problems, but these behaviors impact on the individual both psychologically and socially (Ralston and Wilson 1996). Novick et al. (1997) discuss the medical illnesses that frequently occur as a consequence of substance abuse. While it is understood that a lot of these illnesses are a direct result of their substance misuse they are susceptible to the entire spectrum of disease. Structures for the delivery of rehabilitation services are discussed in the report, *"National Drugs Strategy 2001-2008: Rehabilitation"* and health promotion is identified as one of the key components (Department of Community, Rural & Gealtacht Affairs 2007).

Health promotion has been an integral role of nurses for decades. A deficit in health promotion information for drug users was observed both within the Addiction Services and at a national level. In order to address this, several members of the nursing team within the addiction service came together to discuss and examine the observed deficit. Consequently a strategy to develop and implement an initiative to meet the health information needs of drug users was instigated.

The Nursing Health Promotion initiative in the addiction service has been in existence since 2003.

The aims of the Health promotion initiative are:

1. To promote awareness about the importance of clients looking after their own health and well-being, not just in relation to drug use or misuse.

2. To promote a healthier lifestyle.

3. To promote clients attending the Addiction Services to liaise with the various health professionals in the clinics regarding concerns they have about their health and well-being.

The health promotion committee have notice boards placed in a prominent position within each of the clinics. These notice boards have information regarding a health topic placed on the board on a monthly basis. There are twelve topics and so the topics stay up for one month per year. These topics and their presentation and information have been reviewed on a regular basis in order to improve and update their content. Comment cards are used to encourage clients to provide feedback on the topic to the committee. These comment cards are brought to each committee meeting and discussed. However at a recent meeting of the health promotion committee three requirements for the development of the initiative were voiced:

1. To gain an understanding of the health concerns of our clients in order to focus our health education more effectively.

2. To promote more health promotion focused interaction between professionals and clients.

3. To provide education through numerous mediums.

The service consists of 20 clinics which are run on an outpatient setting. A multidisciplinary approach is used consisting of general practitioners, nurses, counsellors, pharmacists, outreach workers and consultant psychiatrists. Mostly our client's primary addiction is one of heroin however it must be mentioned an increase has been noted in the snorting and injecting of cocaine use, both anecdotally and nationally (NACD 2007). At present the number of clients receiving methadone treatment from this service is approximately 1200. Methadone maintenance can create significant benefits for the individual and society (Ralston & Wilson 1996). However what of the individual once commenced in treatment? What are their views on their health? "Information on how individuals perceive their own health is important for providing appropriate health-related support and monitoring health over time" (Neale 2004).

It was therefore decided to carry out research into the health care concerns of our clients. In discussing this, the health promotion committee also questioned the ability of staff in the service to accurately predict the health concerns of the clients attending the service. It was agreed that this would be a good opportunity to assess this at the same time as assessing the clients concerns.

It is important to define the term "health concern" and how it differs from other commonly used phrases such as "health needs" and "health status". In this research we

use the phrase health concern to refer to those health related topics and issues which the client thinks or worries about. These worries may be about somatic or physical symptoms such as lack of energy or regarding a particular illness or disorder such as cancer or HIV. However, taking health in its broader sense, health concerns may also be related to social issues like housing and relationships as well as psychological issues such as depression and other emotions. The key aspect of health concerns is that they are the client's subjective worries or concerns, and on objective assessment these worries may prove unnecessary or groundless. On the other hand, health needs are an objective assessment of the health requirements of a client and therefore the clients may or may not be aware of these needs. Finally, health status is an objective assessment of a client's health at a given time and once again the client may be unaware of their health status. The following vignette may illustrate the difference between these three concepts. A client attending the addiction service states that he is physically fine but is worried about his cramped accommodation and the stress of which he believes is placing strain on his relationship with his girlfriend and their daughter. This is his health concern. However, he is encouraged to undergo routine viral screening due to his needle sharing in the past. The viral screening subsequently shows that he is Hepatitis C positive. This is his current health status which is markedly different from his perception that he is physically fine. Finally, due to this recent diagnosis it is deemed that his current health needs are education and treatment of Hepatitis C in order to manage it effectively.

As this example illustrates, the actual health status and needs of clients may be considerably different from the concerns the client has. Ideally, staff and clients will have a shared view as to what the health needs are as this will promote an alliance whereby staff and patient are working together on agreed goals. This may require staff to negotiate goals with clients, but they first need to gain an understanding of the health concerns of the client. It is hoped that this research will go someway towards giving a voice to the health concerns of clients in the methadone maintenance programmes. In addition it will also assess the ability of staff to gauge their client's health concerns. It is important to bear in mind that this is not research into either the health needs or status of clients.

Chapter 2

Literature Review

Methods employed to search the Literature

A search of the literature was carried out on both the medline and cinahl databases to identify relevant literature and any research of a similar nature that may have been carried out previously. In order to insure that the literature search was thorough, both the main researcher and a librarian in the health service carried out a search on both databases. In addition, the references cited by the authors of the studies uncovered in the searches of databases were also examined to uncover any relevant studies which may have been overlooked. Due to the exceptionally small amount of research in this area each study will be outlined separately. It is important to note that no research was identified which attempted to measure the health concerns of those with addictions. The literature discussed in the next section attempted to measure either the client's actual health or healthcare needs, not their health concerns. Therefore in the second section we will examine research which examined the health concerns of different client populations. In the third section the issues of staff perceptions of client health concerns will be discussed. Finally, section four will summarise the methodological issues of the research discussed and the relevant impact these may have for this study.

Literature on the Health of those with Addictions

Polinsky et al. (1998) carried out a research piece to examine the constellation of symptoms presented by 182 illegal drug users in Los Angeles when they presented for assessment by a drug treatment service there. By re-administering the tool six months later Polinsky and colleagues were able to assess whether or not the profile of domains had changed. Polinsky used a version of the Addiction Severity Index (ASI) which assesses eight domains: alcohol use, drug use, medical, psychological, legal, employment / financial, family / social relationships and housing. While these domains are pertinent to this study the focus of the ASI tool is markedly different from the focus of this study. The purpose of this study is to gain an understanding of the health concerns of clients, whereas the ASI is a structured interview tool aimed at measuring the severity of an individual's addiction. Their analysis showed that medical concerns were a concern both at initial intake and at six months follow up and that in general, the older the client the greater their medical concerns. Housing and medical needs together were also a common cluster among this client group. Psychological needs were not reported as being high at either point of assessment indicating a low level of concurrent psychiatric and substance abuse problems.

An interesting study was published in 1999 which compared the medical symptoms reported by cocaine, opiate and alcohol dependent clients, (Patkar et al. 1999).

This study had a sample of 321 clients across the three drug groups and used the 134-item medical symptom checklist (MILCOM) which can categorise symptoms into 17 body organ systems such as respiratory, neurological etc. Again this study has a different focus than the one proposed in our study. The MILCOM assesses medical symptoms only whereas this study will attempt to gain a broader picture of clients' health concerns by including areas such as mental health, social / housing situation and relationships. This renders the MILCOM inappropriate for this study. Incidentally, Patkar's study indicated that cocaine addicts report the lowest level of symptoms across the majority of the 14 subscales. As the majority of the cocaine dependent clients were younger than those in the other two groups an analysis was carried out to assess whether age alone accounted for the reduction in symptoms. This analysis indicated that the correlation between age and number of medical symptoms is not statistically significant which is at odds with the result reported by Polinsky (1998).

A Canadian study attempted to compare the self-perceived health of opiate users to the general population and towards other chronic disease populations, (Millson et al. 2004). The authors used the SF-36 which is a generic tool used to measure Health Related Quality of Life, with a sample of 143 opiate users. This is a widely used research tool that has been used with numerous client groups internationally. The subscales measured on this tool are: physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role emotional, mental health and both a physical and mental health summary. Again this questionnaire has a relatively narrow definition of health without taking into account such items as housing and friendships which is at odds with the research questions of this study. Of interest in this study is the finding that opiate users on a methadone programme, perceive their health to be worse than both the general population and individuals with serious illnesses. The only client population who perceived their health as negatively as opiate users are those diagnosed with psychiatric illnesses.

Lundgren et al. (2005) carried out a large study in Boston on a sample of 507 injecting drug users. Working on the findings of previous research which has demonstrated that psychiatric symptoms are associated with needle sharing, they set out to examine whether particular psychiatric symptoms were more strongly associated with needle sharing than others. Based upon the additional demographic data collected they also attempted to examine any relationships between needle sharing, drug treatment use and psychiatric symptoms. In addition to a tool to record the demographic details, the psychiatric subscale of the Addiction Severity Index was used to assess psychiatric symptoms. As noted earlier the ASI is a tool used to measure severity of an individual's addiction, whereas our study aims to measure clients' health concerns only. Lundgren's results suggest that treating the mental health problems of IVDUs who are not drug free can reduce HIV risk behaviours.

Two additional studies by Ryan and White (1996) and Stein et al. (1998) are worth mentioning as they both used versions of the Medical Outcomes Study Short Form (SF-36 and SF-20 respectively). These are widely validated tools used to assess medical and emotional functioning and have been employed in research with individuals with a

variety of illness such as asthma, pain etc. Ryan and White (1996) completed the SF-36 in a structured interview with 100 clients consecutively admitted to a methadone programme in Australia, along with gathering some information on demographic variables. Their results indicate that at entry to a methadone programme, heroin users report considerably worse physical and psychological health than the general population which is consistent with findings later found in a Canadian population by Millson et al. (2004). Additionally, the methadone treatment clients reported similar health related quality of life to those with psychiatric disorders, although drug users reported their general health as worse. Meanwhile, Stein et al. (1998) administered the SF-20 with 2,688 individuals seeking treatment for drug or alcohol difficulties at four treatment facilities in Boston. Their results indicate that cocaine, heroin and alcohol have similarly negative outcomes on individuals' health and adversely affect an individuals' quality of life.

Literature on the Health Concerns of Other Client Populations

Various studies were found which attempted to measure the Health of various patient populations but few attempted to measure the health concerns of patients. However, one study in particular stood out as defining health concerns in the same manner as this study. Dush and Spoth (1995) reported on a study they carried out in order to assess the performance and psychometric properties of a questionnaire they developed (the Health Concerns Questionnaire) to assess the health concerns of patients with chronic pain. Dush et al. (1999) again published on a revised version of this questionnaire (Health Concerns Questionnaire 3) which had a number of new items added to it. This new questionnaire asks the client to assess the degree of concern they have regarding 66 health related concerns. The older version was slightly shorter (55 items) and offers fewer subscales for analysis. The HCQ3 can be totaled together to give a Total Distress Score as well as two subscales for psychosocial and somatic symptoms. In addition it is possible to work out a somatisation ratio which is the percentage of distress attributable to somatic complaints. This questionnaire has been subjected to factor analysis which revealed three separate factors; anger, anxiety and depression. These three factors were composed of numerous items ranging from four to eleven.

Dush and Spoth (1995) and Dush et al. (1999) both report that the HCQ3 has proven to be a reliable and psychometrically robust tool. It is also easy to use and appears undaunting to participants as it fits neatly on one A4 sheet and can be completed within a few minutes. While untested with addiction clients it does appear to cover a wide range of health and psychosocial concerns. It was selected as the only suitable tool available in the literature for this study.

Literature on staff understanding of their clients Health Concerns

A review of the Cinahl and Medline databases failed to uncover any research into staff understanding or ability to predict the health concern of clients with addiction. In fact, little or no research appears to have taken place on this topic with any client population. In recent years concepts such as client advocacy and empowerment have

become popular in the health care literature. It is generally regarded as positive to develop client's own ability to make decisions regarding their care and listening to their concerns is one way of achieving this. Clients' opinions are now placed at the centre of their care and so supporting a client to make their views known is therefore seen as an important role, particularly within nursing literature. The Tidal Model of Nursing has been developed specifically to place the clients' concerns and perceptions at the centre of their care in the psychiatric services, (Barker & Buchannan-Barker 2005). If nurses and other staff are listening to their clients it would seem likely that they would be reasonably able to articulate the type of concerns their clients are likely to be experiencing.

It was hoped that by asking staff to estimate the average health concerns of their clients using the same tool being used to measure the client's health concerns it may be possible to estimate whether staff are aware of their clients' health concerns. Only 13 staff questionnaires were received which were not enough to allow any from of meaningful analysis. In conversation with numerous staff in the service, the Health Promotion Committee became aware that there was some confusion regarding the method of completing the staff questionnaire as the instructions were not clear. For this reason it was decided to abandon this element of the study and focus only on the health concerns of clients.

An overview of Methodological Issues

The review of the literature, particularly the articles summarised above, highlight a number of issues which were important in the development and designing of this study:

- Without exception, all the studies reviewed which attempted to measure clients health, health concerns, or perceptions of health used a quantitative survey design using a previously validated questionnaire. While some studies did carry out interviews (such as Ryan & White 1996) they still simply completed a questionnaire in a structured interview. This is probably unsurprising as the use of questionnaires containing scales to measure agreement with items are regarded as the most appropriate method of measuring the attitudes or opinions of a group of individuals, (Edelmann 1996).
- It would appear that much of the literature attempted to measure health or symptoms and not health concerns. A client may have numerous health concerns, such as becoming infected with hepatitis, without ever actually becoming infected. Therefore tools which measure symptoms and actual health (such as the ASI or SF-36) were not suitable for this research.
- The majority of the studies had sample sizes between one and two hundred clients and so a similar sample size was considered necessary for this study.

Chapter 3

Methods & Procedures

Research Questions

The research study reported here attempted to answer the following question:

What are the health concerns of the clients attending the methadone maintenance clinics in the addiction services?

While some research has been carried out, albeit not in Ireland, to uncover the health status of various client groups attending addiction services, none appear to have been carried out to uncover the concerns of this client population towards their health. As stated in the introduction, the purpose of this research was to provide information which could be used to help the health promotion committee to focus their efforts on the topics of health most of concern to the clients attending the service.

Design

This study was quantitative in design. It involved a written questionnaire survey of the clients' health related concerns. Clients are asked to rate their level of concern regarding 66 potential health concerns using a 4 point rating scale, (mild, serious, severe or very severe concern). In addition, they were afforded the opportunity to list any additional health concerns not covered in the questionnaire. Basic demographic information was also obtained.

Setting

The setting for the research is a large, community addiction service in Dublin which covers a catchment area of approximately 250,000 people. The service provides treatment for opiate dependence through a variety of treatment strategies including methadone maintenance. The catchment area covers most socio-economic groups with some areas experiencing considerable difficulties related to unemployment, social deprivation, crime and drugs.

Sample

As the service is an adult service all participants were over the age of eighteen. In addition, they were in treatment for opiate addiction and were on a methadone maintenance programme. In order to ensure the data was representative of our clients, those who were not on methadone or were on a detoxification regime were excluded. The service currently provides treatment for approximately 1,200 clients. All the clients attending the service are required to reside in the catchment area.

Questionnaire

The questionnaire used to gather the data is the Health Concerns Questionnaire 3 (HCQ3) which was developed by Dush et al. (1999). The HCQ3 assesses the degree of concern a client has on 66 health related concerns. The respondent uses a simple four-point Likert type scale, ranging from mild concern to very serious concern, to rate each of the 66 items. If they are not concerned about an item they simply leave it blank. The 66 items on the questionnaire can be totaled together to give a Total Distress Score (TDS) as well as two subscales for psychosocial and somatic symptoms. In addition it is possible to work out a somatisation ratio which is the percentage of the TDS which is attributable to somatic complaints. The HCQ3 has been subjected to factor analysis which revealed three separate factors; anger, anxiety and depression. These three factors were composed of numerous items ranging from four to eleven. The HCQ3 was unchanged for this study but additional questions to obtain demographic information were printed on the reverse of the sheet. A copy of the HCQ3 is found in Appendix A and the demographic sheet in Appendix B.

Dush and Spoth (1995) and Dush et al. (1999) both report that this item has proven to be a reliable and psychometrically robust tool. It is easy to use and appears undaunting to participants as it fits neatly on one A4 sheet and can be completed within a few minutes. While previously untested with addiction clients it does appear to cover a wide range of health and psychosocial concerns. In our attempts to obtain permission to use this tool we learned that the lead author, Dr. David Dush passed away a few years ago. Neither the university he worked at nor the journal which published the article (The American Journal of Pain Management) were able to offer any advice on where to obtain permission to use the questionnaire. Internet searches failed to identify a company selling the questionnaire or contact with any of the other authors. ETC Consult, the company which is responsible for the importation of numerous psychological tests into Ireland was also unable to obtain any information on the HCQ3. A copy of the HCQ3 was obtained from the internet, (Dush and Pytlak 2002) and most of the scoring information was contained in the article in which it was published, (Dush et al. 1999). The authors have failed to obtain formal permission to use the questionnaire but in light of the considerable efforts made to obtain permission and the lack of a suitable questionnaire as an alternative it was decided to use the HCQ3.

Date Collection

Questionnaires was distributed to clients and collected within the clinic throughout November 2006. A copy of the questionnaire was offered to each client on methadone maintenance in the service along with a return envelope and a letter explaining the study (Appendix C). The nurse in the clinic provided a brief explanation of the study to the client and distributed the questionnaire, information sheet and return envelope. If the client wished to participate they completed the questionnaire and returned it in the envelope provided. The nurses pointed out in their explanation that they could help the client with the questionnaire or the client could take it home and have a

friend or relative help them with it. It was hoped that this would afford an opportunity to those clients who may have literacy problems to participate. Clients could also take the questionnaire home to have more time to consider participating. Two weeks after the questionnaires were distributed a reminder poster was placed in each clinic waiting room. Client were verbally reminded of the study by the nurse and offered a new questionnaire if they needed one.

Data Analysis

Once the data was collected it was coded and entered into a computer. In line with best data protection practices, no identifying details such as date of birth or name were entered on the computer. The software programmed used was the Statistical Package for the Social Sciences (SPSS) as this is probably the most versatile and widely used programme for analysing quantitative data. The analysis of data mainly consisted of descriptive statistics such as means and frequencies.

Dissemination

It is hoped to disseminate the findings widely among healthcare staff, particularly in Ireland. The authors also recognise that this research is also relevant to staff outside of the addiction services (such as general practitioners, public health nurses etc.), who may also be providing healthcare to clients of the addiction services. With this in mind it is important to pick dissemination methods as broadly as possible. The main mode of dissemination will therefore be through oral and poster presentations at conferences in Ireland. Nursing, medical, addiction and health promotion conferences will be particularly targeted. In addition, summaries of the research will be written up for publication in a nursing or addiction journal.

Ethical Considerations

Due to the nature of the study ethical considerations were less of an issue compared to other forms of research such as experimental. No clients received an assessment or treatment as part of the study, be it physical or psychological. Clients who participated were simply asked to complete a form rating their experience of certain health concerns and provide some basic demographic information. Nonetheless, ethical approval was sought and granted from the Ethics Committee of the Drug Treatment Centre Board.

Due to the nature of the study the authors believe anonymity was the most critical ethical consideration. All respondents required anonymity to promote honest responses and to promote participation. Also, if anonymity was not assured participants may feel somewhat pressured into participating which diminishes their consent somewhat. For this reason all clients received the questionnaire and were encouraged to participate. The researchers and the staff in the individual clinics are unable to identify which clients have and have not completed a questionnaire. In addition the research will be unable to identify the client's clinic, only the locality they come from, (e.g. Dublin 12, 24 etc.). For

those participants who opt not to take part, they can simply do so by not returning the questionnaire.

Chapter 4

Results

Demographic Statistics

Females accounted for 38.3% of our sample. The age of participants in the study ranged from 18-56 with a mean of 30.21. There was no significant age difference between males and females. The mean age for females was 29.09 while for men the mean age was 30.60. Almost 70% of our clients reported that they did have children and perhaps unsurprisingly women (83%) were more likely to report having children than men (60.4%). In terms of being in a long term relationship 52.2% of clients responded that they were in a long term relationship, with women more likely to report being in a long term relationship. For example, 60.6% of women reported being in a relationship compared to 45.9% of men. The number of years of schooling completed has a mean score of 11.27 years and again there was not a significant difference between male and females.

Table 1: Descriptive Demographics of respondents

Gender	Male Female	61.7% 38.3%
Age	Range Mean Standard Deviation	18-56 30.21 6.55
Children	Yes No	69.5% 30.5%
Currently in a long term relationship	Yes No	47.8% 52.2%
Number of year schooling completed	Range Mean Standard Deviation	1-21 11.27 6.2
Age first used heroin	Range Mean Standard Deviation	9-46 18.03 5.14
Current methadone dose	Range Mean Standard Deviation	7-200mls 80.56mls 25.7mls
Number of nights take away in past week	Range Mean Standard Deviation	0-7 2.13 2.46

The average age of first use of heroin was 17.95 years and again there was little variance between males and females. The average methadone dose was 80.56mls and

there was a slight difference when men were compared to woman. Women had an average methadone dose of 77.7mls while men had an average dose of 81.6mls, indicating that slighter higher dosages are being prescribed to men. The length of time in drug treatment had an average of 6 months again the length of time in treatment reported by men and women is very similar. As part of the contingency management protocol of the service, clients are rewarded for providing drug free urines with their dose of methadone to take-away. This means that the client will not have to attend the clinic daily. The number of methadone takeaways in the past week ranged from 0 to 7 days with a mean of 2.13 and a standard deviation of 2.46. Women recorded having an average higher number of takeaways in the past week with 2.58 days compared to an average of 1.89 among their male counter parts.

Drug use

Respondents were asked to indicate whether they have used a drug in the past three months or not, or to indicate if they have never used the drug in question. The drugs they were asked about were; cigarettes, heroin, cocaine, cannabis, ecstasy, acid, speed, solvents and alcohol. The responses of participants in relation to the drugs are listed below in Table 2. As we can see from this table, cigarettes are by far the most common drug currently being used by our clients with approximately 92% of all clients admitting to smoking with no difference between men and women. Cannabis, alcohol and heroin are the next most commonly used drugs with between 62% and 65% of respondents reporting use in the past 3 months. Interestingly, respondents were more likely, albeit only slightly, to admit to using the illegal drug cannabis in the previous three months than the legal drug alcohol. A significant 1.6% of our respondents stated that they never used heroin and are likely to have developed an addiction to methadone bought illegally on the street. Cocaine was the fifth most commonly used drug in the past three months with 42.5% of respondents having used it. Of interest is the finding that across our five most commonly used drugs (cigarettes, cannabis, alcohol, heroin and cocaine), women were more likely to report use of alcohol, cocaine and heroin in the previous three months. Use of cigarettes was virtually identical between genders and men were more likely to report use of cannabis.

There was a significant drop in the use of the most common drugs and the four least used drugs; ecstasy, speed, acid and solvents. Perhaps unsurprisingly these drugs were also the ones that clients were most likely to report never having used. Only 12.8% of clients admitted to using ecstasy in the past 3 months. Females (16%) were more likely to state that they never used speed compared to their male counterparts (9.4%). 8.1% of respondents admit to using speed in the last 3 months and 18.4% stated that they have never used speed. In relation to the use of acid 6.8% of respondents stated that they had used it in the past 3 months while 66.7% stated that they have not used it. The remaining 26.5% clients stated that they had never used acid. In terms of gender differences in acid use, the significant difference was in terms of never using it. Only 19% of men said that they never used acid compared to 41.6% of women. Only 3.7% of respondents stated that they have used solvents in the past 3 months and 44.7% stated that they have never used solvents. Again we see higher use of solvents in the past three months among men (5.1%)

than women (1.4%). Men (39.7%) were also less likely to report having never used solvents compared to 56.8% of women.

Table 2: What drugs have you used drugs in the past three months

Drug	Yes	No	Never Used
Cigarettes	92.6	5.4	2.1
Males	92.5	4.1	3.4
Females	92.3	7.7	0.0
Cannabis	64.9	30.7	4.3
Males	69.5	26.2	4.3
Females	56.6	38.6	4.8
Alcohol	63.8	33.6	2.6
Males	62.9	33.6	3.6
Females	65.5	33.6	1.1
Heroin	62.6	35.8	1.6
Males	59.6	38.4	2.1
Females	65.6	33.3	1.1
Cocaine	41.5	50.4	8.1
Males	40.3	53.5	6.3
Females	42.9	45.2	11.9
Ecstasy	12.8	75.7	11.5
Males	12.9	77.7	9.4
Females	11.1	72.8	16.0
Speed	8.1	73.5	18.4
Males	6.6	75.9	17.5
Females	8.9	69.6	21.5
Acid	6.8	66.7	26.5
Males	7.3	73.7	19.0
Females	5.2	53.2	41.6
Solvents	3.7	51.6	44.7
Males	5.1	55.1	39.7
Females	1.4	41.9	56.8

Levels of Health Concern

A Total Distress Score (TDS) was calculated by summing the responses of an individual for the 66-items in the Health Concerns Questionnaire (HCQ-3). For the entire sample (n=261) TDS was 83.62 and comparisons between the TDS of males and females showed considerable variance. Females showed a much higher mean TDS with a mean of 93.03 compared to the equivalent score of 78.12 for males. When the TDS is broken into its two broad categories, Psychosocial Symptom Index (PSI) and Somatic Symptom Index (SSI), means of 48.05 and 35.57 are reported, respectively. The Somatisation Ratio (SR) is the percentage of the respondents' score which is made up from their responses to the 31 somatic items on the 66 item questionnaire. The SR reported was 43.54% and it is interesting to note that the SR for males and females is almost identical at 43.30% and

43.68% respectively. These scores indicate that although females reported greater levels of distress compared to men, they both endorsed Psychosocial Stresses at a similar rate. The mean score on the three emotional subscales was 15.38 for anxiety, 11.64 for depression and 5.29 for anger. Direct comparison of these subscales should not be attempted as they contain different numbers of items. The pattern of women scoring higher than men was continued across these three subscales. The results discussed above are summarised in Table 3 below.

Table 3: Means for Total scores and subscales

Item / Concern	**Sample (n=261)**	**Females (n=97)**	**Males (n=156)**
Total Distress Score	83.62	93.03	78.12
Standard. Deviation	53.65	57.64	51.20
Psychosocial Symptom Index	48.05	54.31	44.41
Standard. Deviation	32.24	35.49	30.00
Somatic Symptom Index	35.57	38.72	33.71
Standard. Deviation	23.53	24.54	23.16
Somatisation Ratio	.4354	.4368	.4330
Standard. Deviation	.12980	.12434	.13506
Anxiety Subscale	15.38	18.63	13.50
Standard. Deviation	11.28	12.34	10.37
Depression Subscale	11.64	12.94	10.80
Standard. Deviation	8.30	9.06	7.77
Anger Subscale	5.29	5.65	5.13
Standard. Deviation	4.21	4.41	4.13

Most commonly reported health concerns

The most endorsed health concerns were worrying about health, troubled by the past, hard to trust anyone and poor sleep. It is important to note that of the 10 most endorsed health concerns (see Table 4 below) only two, poor sleep and sweating, were physical concerns. The majority of the ten most endorsed health concerns are concerns that would be expected from clients who have a mood disorder. For example, troubled by the past, poor sleep, depressed, feeling guilty, less interest in things and dwell on problems.

Table 4: 10 most endorsed health concerns for respondents

Item / Concern	**N**	**Mean**	**Std. Deviation**
Worry about health	261	2.07	1.551
Troubled by the past	261	1.99	1.621
Hard to trust anyone	261	1.89	1.602
Poor sleep	261	1.87	1.556
Depressed	261	1.84	1.530
Felling guilty	261	1.81	1.497
Less interest in things	261	1.79	1.495

Memory problems	261	1.79	1.502
Sweating	261	1.78	1.382
Dwell on problems	261	1.78	1.487

Most commonly reported health concerns for women

When the female respondents (n=97) are examined on their own we see a fairly similar picture. Psychosocial and particularly mood related health concerns predominate. Troubled by the past, depressed and feeling guilty are the top health concerns for women. Compared to the overall health concerns, memory problems and sweating do not appear in the ten most endorsed health concerns for women and are replaced by low energy and eating problems. This means that the only somatic concerns reported by women are poor sleep and eating problems but these again are strongly related to depression and other mood disorders.

Table 5: 10 most endorsed health concerns for female respondents

Item / Concern	N	Mean	Std. Deviation
Troubled by the past	97	2.28	1.606
Depressed	97	2.22	1.596
Feeling guilty	97	2.21	1.587
Worry about health	97	2.18	1.601
Dwell on problems	97	2.11	1.506
Low energy	97	2.06	1.580
Hard to trust anyone	97	1.99	1.604
Poor sleep	97	1.96	1.567
Eating problems	97	1.96	1.626
Less interest in things	97	1.95	1.590

Most commonly reported health concerns for men

The most commonly endorsed health concerns for men (n=156) were again quite similar to those of the whole group. As with their female counterparts, the ten most endorsed heath concerns for men had eight in common with the concerns of the whole sample. However, the two health concerns that did not make it into the top ten health concerns of men were dwelling on problems and feeling guilty. These were replaced by eating problems and quick mood changes. This means that men had three somatic concerns in their ten most endorsed health concerns; poor sleep, sweating and eating problems. However, two of these, sleep problems and eating problems, are closely related to depression and other mood disorders.

Table 6: 10 most endorsed health concerns for male respondents

Item / Concern	N	Mean	Std. Deviation
Worry about health	156	2.03	1.532
Troubled by the past	156	1.87	1.613

Poor sleep	156	1.85	1.558
Hard to trust anyone	156	1.84	1.608
Sweating	156	1.77	1.377
Memory problems	156	1.76	1.512
Eating problems	156	1.70	1.620
Less interest in things	156	1.69	1.418
Quick mood changes	156	1.68	1.490
Depressed	156	1.62	1.447

Least commonly reported health concerns

The least endorsed health concern for respondents was excess pain, followed by hearing problems and swelling. Of interest is the finding that too much alcohol was the fourth least endorsed health concern despite the fact that almost 64% of respondents reported drinking in the previous three months. In contrast to the most endorsed health concerns, eight of the least endorsed concerns were somatic in nature. Too much alcohol and work or school problems are the only psychosocial symptoms in the ten least endorsed health concerns.

Table 7: 10 least endorsed health concerns for respondents

Item / Concern	N	Mean	Std. Deviation
Excess pain	261	.44	.981
Hearing problems	261	.51	1.018
Swelling	261	.61	1.064
Too much alcohol	261	.67	1.203
Work / School problems	261	.76	1.215
Odd skin sensations	261	.76	1.224
Stiffness	261	.77	1.183
Physically restricted	261	.78	1.257
Muscle weakness	261	.81	1.180
Heart palpitations	261	.81	1.197

Least endorsed health concerns for women

The ten least endorsed health concerns by women were similar to the overall health concerns except again there were two concerns which were different. Stiffness and heart palpitations were not in the women's ten least endorsed concerns and were replaced by conflict with others and vision problems. Again three of the ten least endorsed health concerns for women were psychosocial; work or school problems, too much alcohol and conflict with others.

Table 8: 10 least endorsed health concerns for female respondents

Item / Concern	N	Mean	Std. Deviation

Hearing problems	97	.40	.759
Excess pain	97	.48	1.042
Work / School problems	97	.61	1.151
Swelling	97	.64	1.053
Too much alcohol	97	.71	1.291
Muscle weakness	97	.76	1.144
Conflict with others	97	.78	1.166
Physically restricted	97	.84	1.304
Vision problems	97	.88	1.317
Odd skin sensations	97	.90	1.350

Least endorsed health concerns for men

Men had seven concerns in common with the overall least endorsed health concerns. The following health concerns were not in the men's least endorsed health concerns; work or school problems, physically restricted and muscle weakness. Instead they were replaced by marital stress, gain of weight and vision problems. Seven of the ten least endorsed health concerns for the male group were somatic in nature.

Table 9: 10 least endorsed health concerns for male respondents

Item / Concern	N	Mean	Std. Deviation
Excess pain	156	.42	.887
Swelling	156	.56	1.061
Hearing problems	156	.58	1.130
Too much alcohol	156	.59	1.089
Marital stress	156	.66	1.205
Gain of weight	156	.68	1.169
Odd skin sensations	156	.71	1.160
Stiffness	156	.72	1.123
Heart palpitations	156	.74	1.159
Vision problems	156	.78	1.316

Health concerns and methadone dose

In order to compare the effects of methadone dose on health concerns we divided the 250 respondents who reported their current dose into two broad groups; those on higher and lower doses. As the median and mode both occurred at 80mls of methadone, it was not possible to divide the participants into two equally sized groups. In the end the low dose group contained 133 individuals whose dose was reported as ranging from 7mls and 80mls, while the high dose group of 117 clients reported doses ranging from 81mls to 200mls of methadone. The TDS showed considerable variance between the groups with those on higher doses recording a mean of 95.01 compared to 76.47 in the lower dose group. Also of interest is the fact that the SR did not vary dramatically between these two groups with the SR for the higher and lower dose groups being 43.96% and 43.30%

respectively. The mean score for the higher dose group on the PSI was almost the same as that for women and the score for the lower dose group on the PSI was very similar to the same scores for men. This finding is all the more interesting when we note that men were, on average, on higher doses. When SSI scores are examined we can see that the gap between the higher and lower dose groups were wider than the gap between men and women. This would appear to indicate that methadone dose, rather than gender, may have a bigger impact on the level of somatic symptoms reported.

When we examine the three emotional subscales, anxiety and anger we can begin to see some further patterns emerge. The gap between the mean scores for the high and low dose groups is smaller than the gap between the same scores for men and women. However, this finding does not apply to the anger scores. While the mean anger scores between men and women was quite similar (men 5.13, women 5.65) the gap between the higher and lower dose groups is larger with the higher dose group scoring a mean of 6.19 and the lower dose group scoring 4.66.

Table 10: Means for Total scores and subscales comparing methadone dose

Item / Concern	**Sample (n=261)**	**High Dose Group (n=117)**	**Low Dose Group (n=133)**
Total Distress Score	83.62	95.01	76.47
Standard. Deviation	53.65	53.45	52.71
Psychosocial Symptom Index	48.05	54.31	44.19
Standard. Deviation	32.24	32.43	31.62
Somatic Symptom Index	35.57	40.70	32.27
Standard. Deviation	23.53	23.27	23.02
Somatisation Ratio	.4354	43.96	43.30
Standard. Deviation	.12980	11.78	13.31
Anxiety Subscale	15.38	17.05	14.49
Standard. Deviation	11.28	11.05	11.43
Depression Subscale	11.64	13.26	10.57
Standard. Deviation	8.30	8.24	8.20
Anger Subscale	5.29	6.19	4.66
Standard. Deviation	4.21	4.36	3.97

Side Effects of methadone

According to the MIMS (January 2007), methadone has six adverse reactions or side effects; nausea, vomiting, constipation, drowsiness, blurred vision and dizziness. These related fairly closely to 5 items on the HCQ-3; stomach problems, bowel problems, tired or drowsy, vision problems and light headed or dizzy. A new variable was therefore computed using the responses of clients to these five areas. Correlations were examined using Spearman Rho non-parametric test. Of interest is the fact that there was no correlation between the methadone side effects variable and the dose of methadone the

client is on. To investigate this finding further we looked for correlations between the current methadone dose and any of the five items related to methadone side effects. Again no statistically significant relationship was found.

Additional Client Comments

As mentioned earlier, clients were invited to make additional comments on the questionnaire if they wished. Of the 261 questionnaires returned, 37% (n=97) made additional comments. This qualitative data was analysed using content analysis to identify themes. Each member of the research team initially examined the comments individually and then a round table discussion took place where each researcher's categories were examined and a final set agreed upon. The frequency with which an item was reported was taken as an indication of its importance. This resulted in six broad categories being identified with many clients commenting on a number of different topics. The categories identified were physical health, mental health, sexual health, drug comments, service comments and stigma.

Physical Comments

By far this section was comprised of the most comments (58) which necessitated the division of this into four subcategories. The first subcategory was viral infections, and was made up of seventeen comments ranging from requests for more literature and information on Hepatitis C and HIV to straight statements that the client is worried about these viruses and concerned about being made sick due to side effects of Hepatitis C treatments. The following quote summarises the concerns:

> *"I am very worried about my Hep C and how it will affect me in the future and will I die before my children grow up." (Q234)*

The second subcategory consisted of eight comments related to diet, nutrition and weight management. The majority of these comments related to gaining weight but weight loss and stomach problems were also mentioned. Related to this, the third subcategory was made up of six clients who commented on their concerns about and need for dental care. Finally, a miscellaneous subcategory was required to capture the other comments which highlighted concerns regarding blood pressure, DVTs, asthma, sweating and various aches and pains.

Sexual Health

This category contained seven comments with four of these relating to worries and difficulties regarding ability to have children and cope with parenthood. A particular concern appears to be the effects of Hepatitis C and other viruses on the health of clients' children. Concerns were also raised about the risk of catching Sexually Transmitted Infections (STIs) such as genital warts and Hepatitis from past high risk sexual behaviour.

Mental Health

This category contained fourteen comments with half of these related to clients expressing feelings of low mood and depression as well as suicidal thoughts by two clients. Related to clients' feelings of low mood was evidence of guilt, shame and low self-esteem for becoming an addict in the fist place as evidenced by the following quote:

> *"I hated becoming a heroin addict and feel very stupid and angry. I have let down myself and everybody who loves me which brought an awful lot of guilt and depression." (Q214)*

A few additional comments were made relating to the clients finding it difficult to cope with hassles and stress, not knowing where to go for help and feeling somewhat overwhelmed with life.

Service Comments

Seventeen comments were made relating to the service and these covered a large number of topics. Four comments pointed out good aspects of the service including improved buildings or accommodation for the clinic as well as finding particular staff helpful. However, a number of problems related to the service were also highlighted including the need for more counselling and for both male and female counsellors to be available, the need to offer clients the opportunity to detox from methadone and to support them after they have done so. Two clients commented that the rigidness of the clinic timetable was not healthy and made it difficult for them to get a job or to live a normal life. One client compared the power the Doctor has over them as being similar to the power their drug dealer previously had. Two clients recommended that the services should "treat the whole person" by dealing with addiction, mental health and physical problems which they do not believe is being done adequately at present. For example:

> *"I would like more counselling. I feel I just come to clinic collect methadone and leave." (208)*

Finally, two clients commented that they would like the opportunity to participate in further studies (and to know more about this study) for them to help prevent others from making the same mistakes they have.

Drug Comments

Eleven comments were made related to various drugs. While one comment related to the harm caused by heroin, methadone was also cited as a problem by three clients who were concerned that they will be on it for the rest of their life. A variety of other drugs were mentioned as causing problems by one or two clients. The drugs mentioned included alcohol, cannabis, cough bottles, benzodiazepines sleeping tablets and Solpadine. The following quote outlines the effects one respondent believes benzodiazepine tablets are having on their life:

> *"I used to take them for a stone but now but now it's like worse, I just need them to get out of bed." (Q35)*

Stigma

Three comments were made by clients which suggested that clients felt that they were being treated with less respect than other members of society because of their status as a drug user or addict. Questionnaire 47 presented this point of view succinctly:

> *"I think all drug addicts should be treated the same as anyone not all drug addicts are scum or have a criminal record." (Q47)*

Chapter 5

Discussion

Upon reading the results the health promotion committee identified a number of key themes which warranted particular attention in the discussion section as they are the topics which the committee may need to address over the coming months. They are:

1. The high levels of smoking reported by the clients
2. The fact that the health concerns which were the most strongly endorsed were related to mental health issues, particularly depression.
3. The high rates of poly-drug abuse reported.
4. A number of clients highlighted concerns related to Hepatitis.

Cigarette smoking

A total of 92.5% of clients reported smoking cigarettes in the past three months. In contrast, the prevalence of smoking in Irish adults in 2006 was 24.7% with the 18 to 35 year age group having the highest proportion of smokers in Ireland with about one third smoking (Office of Tobacco Control 2007). The majority of the participants in this study also fall into the 18 to 35 year age group. The figures highlight the fact that clients in the methadone programme report rates of smoking that are about three to four times higher than the general population. The Department of Health & Children (2000) recognised that not only was smoking a major health hazard, but that it was a health hazard that was particularly prevalent in the lower socio-economic groups. The National Health Promotion Strategy therefore calls on efforts to be made to apply effective smoking cessation interventions with those populations who are most affected (Department of Health & Children 2000).

Should we need reminding that smoking is a serious health hazard in Ireland, it should be noted that smoking related deaths account for 21% of all deaths in Ireland. The equivalent figure for Sweden is only 8% (Department of Health & Children 2000). Peto and Doll (2006) point out that approximately half of persistent smokers die as a result of the habit and that if an individual smoker stops smoking by age 35, they have similar pattern of survival as non-smokers. The message becomes pretty clear; in order to reduce the harm caused by cigarette smoking we need to help our clients to stop smoking. The earlier our clients stop smoking, the more harm they will avoid. However, before we enthusiastically immerse ourselves in the goal of trying to reduce our clients' cigarette smoking a major concern needs to be considered. Will attempts at smoking cessation make our clients more prone to relapsing in relation to their opiate addiction? As we have already outlined, smoking cigarettes is already going to be causing significant harm to our clients' health but is this harm reduction worth it if the client is more prone to start using heroin again due to the stress associated with smoking cessation? The answer to this question or dilemma is quite simple – research has shown that smoking cessation is

unlikely to increase the risk of relapse in clients with alcohol problems (Cooney et al. 2003). In fact, research has shown that smoking cessation may have a positive impact on outcome for those seeking assistance with alcohol and drug problems (Kohn, Tsoh & Weisner 2003). In clients on methadone maintenance, research has found a correlation between reductions in cigarette smoking and a reduction in illicit drug use (Stoptaw et al. 2002). These results would suggest that smoking cessation is unlikely to cause our clients any harm and may in fact help them with their primary drug addiction.

The Cochrane review of nursing interventions for smoking cessation concluded that nursing interventions in smoking cessation can be effective (Rice & Stead 2004). In particular they recommend that clients be provided with opportunities to discuss their smoking habits and be offered follow up and other treatments. Rice and Stead (2004) further conclude that interventions which require multiple contacts as a part of health promotion or smoking cessation drive are more effective than brief interventions delivered by nurses as part of other nursing duties. It is also important to note that these findings were related to clients receiving interventions in medical services and not in addictions services. El-Guebaly et al. (2002) suggest that the success rate of smoking cessation interventions for those with mental health or addiction problems is similar to those found when the interventions are applied with the general population. Ranney et al. (2006) claim that that self-help strategies alone are unlikely to be effective and so counselling and / or Nicotine Replacement Therapy (NRT) should be used. Other treatments suggested with smokers with other addictions include staff quitting to act as role models, NRT, education and relapse prevention, behavioural programmes (el-Guebaly et al. 2002) and contingency management (Shoptaw et al. 2002). Interestingly, Clarke et al. (2001) found that 68% of clients in a methadone maintenance treatment programme were planning to quit smoking within the next 6 months or had already begun to make changes in relation to their smoking. Similar results can be seen among adolescent substance abusers where 62% of smokers reported having previously tried to quit (Myers & MacPherson 2004). These results suggest that smoking cessation is something our clients may be interested in and so all clients who smoke should be offered some form of support or treatment in this area. The Contemplation Ladder has been demonstrated in the literature as a useful tool in measuring smokers thinking in relation to quitting and could be used with our client group (Biener & Abrams 1991).

Depression

The top ten health concerns reported by the respondents of this study can all be closely related to depression and mood. Five of the clients most endorsed health concerns (depressed, less interest in things, poor sleep, feeling guilty and memory problems) relate closely to five of the nine symptoms of depression listed in the Diagnostic and Statistic Manual IV (DSM-IV) (American Psychiatric Association 2000). However, many of the five remaining health concerns are also commonly found in individuals with mood or depression problems, for example worry about health, troubled by the past, hard to trust anyone and dwelling on problems.

Unfortunately this study did not set out to measure levels of depression, but only to identify the health concerns of clients on a methadone maintenance programme. Therefore the HCQ-3 questionnaire does not measure depression directly but Dush et al. (1999) compared the HCQ-3 scores of patients with chronic pain to the Beck's Depression Inventory. The respondents in Dush et al's study reported a mean Total Distress Score (TDS) of 55.32 whereas the respondents in this study scored a mean TDS of 83.62 indicating a considerably higher rate of health concerns among the participants of this study. While the clients on methadone maintenance scored significantly higher on both the psychosocial and somatic symptoms indexes the differences on the psychosocial index appeared to account for most of the variance. The clients with chronic pain in Dush et al's study reported that 58.48% of their TDS was accounted for by somatic symptoms while only 43.54% of scores by the clients on methadone maintenance were related to somatic concerns. In addition, the methadone maintenance clients scored considerably higher than the chronic pain clients on the anxiety, depression and anger subscales of the HCQ-3. However, these three subscales were developed after the initial questionnaire was developed and have not been extensively tested to check their validity and reliability. Dush et al. (1999) state that in their study, all patients who had a score on the Beck Depression Inventory (BDI) indicating severe depression scored 40 or higher on the psychosocial symptom index on the HCQ-3. However, the HCQ-3 was not particularly sensitive at identifying those with depression as many people scored over 40 on the psychosocial symptom index but did not score highly on the BDI. It is also worth noting that scoring information was not available for the HCQ-3. Dush et al. (1999) point out that 31 items related to somatic concerns and 35 related to emotional or psychological concerns were identified to develop the somatic and psychosocial indexes respectively, based upon the majority agreement of seven raters. However, Dush et al. (1999) do not provide information regarding which items belong to each index so the six members of the health promotion committee assigned them to the appropriate index in a manner similar to that described by Dush et al. It is possible that we may have differed slightly in how we categorised some items which may affect our somatic and psychosocial index scores.

However, the idea that many of the clients on methadone maintenance are experiencing some form of depression seems likely when one examines the relevant research. Joe et al. (1991) found that in a sample of 145 intravenous drug users (IVDU), 83% showed some evidence of depressive symptoms with 62% of their sample having depression scores indicating moderate to severe depression using the BDI. A more recent study of 598 IVDUs found that nearly 50% had scores indicating significant depression using the BDI (Johnson et al. 2006). Rooney et al. (2002) compared the quality of life of clients on a methadone maintenance programme and on a harm minimisation programme in Dublin. While they found higher rates of depression among clients on the harm minimisation programme, 31% of clients on the methadone maintenance programme had some depression with 5.1% severe. A more recent Dublin study found high rates of anxiety (56%) and depression (41%) symptoms in a sample of 55 clients on methadone maintenance (MacManus & Fitzpatrick 2007). These results indicate that depressive symptoms are likely to be prevalent among clients on a methadone maintenance programme. MacManus and Fitzpatrick (2007) concluded that clients attending

methadone maintenance would benefit from routine assessment of their mental health needs and this is echoed by Johnson et al. (2006). Joe et al. (1991) found that depression symptoms were positively correlated with engaging in high risk sexual behaviours, leading to an increased risk of contracting STI's. This highlights the importance of treating depression with this client group. Havard et al. (2006) reported that clients in treatment for heroin addiction who had major depression were more likely to report heavier drug use, more risk-taking behaviours and poorer physical health. Golub et al. (2004) has pointed out that a potential side effect of interferon, one of the commonly used treatments for Hepatitis C, is depression and so any client being considered for interferon should be assessed in relation to their mood prior to starting the treatment. Johnson et al. (1998) found that rates of depression were high among both hepatitis C positive and negative drug users prior to them testing for their viral status. The Hepatitis positive group did score higher for depression than the negative group. These results suggest that depression among those taking interferon may be partially explained by a pre-existing depression which was not identified.

Polydrug Abuse

As all the participants in the study were on a methadone maintenance programme, they were all trying to cope with an opiate addiction. However, the results indicate that there were also a lot of clients who were using other substances. Cannabis (64.9%) was the most commonly used illicit drug in the previous three months followed by heroin (62.6%) and cocaine (42.5%). Alcohol had been used by 63.8% of clients in the previous three months. The use of other drugs such as ecstasy (12.8%), speed (8.1%) and acid (6.8%) was not as prevalent. There appeared to be little gender difference in clients' drug use in the previous three months with heroin use showing the greatest gender difference – 59.6% of males compared to 65.6% of females. Clients were not asked the amount or frequency of drug use in this study and so we have no means of assessing how much of a problem the usage reported here is likely to be.

Cannabis use was reported by almost 65% of clients in the previous three months, making it more widely used than alcohol which was used by 63.8% of clients in the previous three months. In comparison, recent research in Ireland has shown that the 15-34 year age group has the highest prevalence of cannabis use with 24% of individuals reporting having used cannabis in their lifetime (NACD 2005). The much higher level of cannabis among clients in the addiction service is of concern for a number of reasons including the increased damage to the clients' physical health, the contribution of cannabis intoxication to accidents as well as the increased risk of developing schizophrenia and other mental illnesses (Joint Committee on Arts, Sport, Tourism, Community, Rural and Gealtacht Affairs 2006). However, Degenhardt et al. (2003) have demonstrated the link between cannabis use and depression which may be of particular interest in relation to this research given the fact that mood related issues appear to be of concern to many of our clients. Campbell (1999) discussed the debate regarding cannabis causing cognitive impairment and notes that there is little conclusive evidence on the topic. However he does mention that memory loss, reduced motivation and volition, and

ability to focus ones attention have all being linked to cannabis use in addition to the increased risk of developing psychosis, depression and anxiety (Campbell 1999). Whether these potential effects are permanent or dissipate upon stopping cannabis use is questionable, however, either way these emotional and cognitive effects are likely to be holding back our clients in their everyday functioning. In particular, motivation is a key concept for clients in dealing with their addiction and cannabis use is likely to make this more difficult.

As mentioned above, 63.6% of clients reported using alcohol in the previous three months. These results are similar to those of a separate study with the same client group which reported that 56% of their sample had drank alcohol in the previous thirty days (MacManus & Fitzpatrick 2007). Unfortunately our study has not attempted to measure the amount of alcohol used by our clients during the three month period but MacManus & Fitzpatrick (2007) found that their sample had a mean daily alcohol intake of six units. Alcohol intake at six units per day would amount to forty-two units per week which is twice the recommended maximum weekly intake for men (21 units) and three times that limit recommended for women (14 units) (Garvey & Keenan 2002). MacManus & Fitzpatrick (2007) suggested that there are high levels of alcohol dependence among the methadone maintenance clients in Ireland and suggest that this may be the result of their substituting one drug (alcohol) for their previous drug of choice (heroin). The effects of excessive alcohol intake can have considerable negative neurological, psychological, physical, emotional and social effects on an individual such as Korsakoff syndrome, gastrointestinal problems and depression (Garvey & Keenan 2002). Due to the potential harm alcohol presents, it is important that clients have their alcohol use assessed and appropriate treatment and advice offered when indicated.

A significant amount of cocaine use was also reported with 41.5% of clients stating they had taken it in the past three months. Again, the amount and frequency of cocaine use was not recorded. However, the consensus from international research is that many clients using heroin or on treatment programmes for heroin addiction also use cocaine (Leri et al. 2003). What is not clear is why they are using cocaine and so various theories to explain the phenomenon have been proffered such as simply switching addictions, using cocaine to make it easier to come off heroin or to increase the euphoric effect from heroin i.e. “speedballing” (Leri et al. 2003). As none of these theories on their own seem to account for all the use it would appear that a pragmatic view is required whereby clients tend to use cocaine for various reasons. Cocaine use is on the increase within the Irish general population and many drug treatment services and their clients view its use as untreatable, possibly due to the fact that there is no medical substitute which can be prescribed (NACD 2007). It has been suggested that traditional drug treatment services will need to adapt their programmes and structures to provide cognitive-behavioural therapy and other treatments which have been shown to be successful with cocaine users (NACD 2007).

Hepatitis

> *"I am very worried about my hep C and how it will affect me in the future and will I die before my children grow up?....." (Q235)*

Injecting drug users are at a high risk of acquiring hepatitis C virus (HCV) (Bolumar et al. 1990) and Human Immunodeficiency virus (HIV) (Madden 1997). Since 1992 the Irish Government have pursued a policy of harm reduction by providing methadone maintenance, needle exchange and education through outreach programmes. Despite the increasing availability of harm reduction interventions recent studies have estimated that between 52% and 80% of injecting opiate users are infected with hepatitis C. (Smyth et al. 1998). With the introduction of careful screening of blood products, the incidence of hepatitis C has reduced among certain cohorts. However, in line with European estimates, the injecting drug use community are now the largest at risk cohort in Ireland. Given its high incidence and prevalence, the complications of chronic hepatitis C will impact on the morbidity and mortality of this at-risk population in the developed world for the foreseeable future.

Hepatitis C in the injecting drug user (IVDU) population is a major medical concern. Cooper and Mills (2006) outlined that concurrent substance abuse, co-morbid mental health conditions, poor socio-economic status and a complex treatment protocol that is often incompatible with the life style of an IVDU, continue to account for a poor uptake and completion of hepatitis C treatment. Poor understanding of the implications of testing positive for hepatitis have also been highlighted as a barrier to accessing treatment. A recently published report concluded that one of the biggest factors leading to unsuccessful treatment outcomes is lack of baseline education (Fried & Corbett 2007).

The impact of social behaviours on HCV disease progression need to be outlined to the client as each have an effect on disease progression. Alcohol has been shown to increase the disease progression of hepatitis C (Freeman et al. 2001). A study by El-Zayadi (2006) found that smokers have lower response rates to interferon-based therapy when compared with non-smokers. He also noted that smoking can foster the development of fibrosis. A study by Herzode et al. (2005) showed that daily cannabis smoking was an independent predictor of fibrosis progression in patients with chronic hepatitis C. Fried and Corbett (2007) recommend that clinicians encourage patients to stop smoking and encourage services to provide smoking cessation services such as smoking cessation classes or nicotine replacement therapy. It is increasingly clear that obesity and associated metabolic disorders play a role in the progression of liver disease and poor response to hepatitis C treatment (Leandro et al. 2006). Depression also needs to be considered as it is known to be one of the symptoms of hepatitis C (Cooper & Mills 2006) and is also a side effect of Hepatitis C treatment. However, research has highlighted the importance of recognising psychiatric disorders at baseline, as studies show that patients with psychiatric disorders can successfully complete treatment when managed with proper medications and close monitoring (Schaefer & Schmidt 2003).

The management of clients with hepatitis C (HCV) can be complex and challenging because of the potential adverse effects of therapy and common co-morbidities often found among the drug using population. Client management can be time consuming and require commitment from multiple clinical staff and specialists. Studies have shown that a team based approach can improve treatment in a cost effective manner (Druss 2001). Fried & Corbett (2007) concluded that it is essential to build relationships and avenues for communication before the need arises. When questions or challenges arise, a network of experts can facilitate recommendations and quickly solve problems for effective patient care. The impact of social behaviours on HCV, such as smoking, drinking alcohol, or injecting drug use also need to be included in education. Clients may choose not to change their behaviours, but this education will provide valuable information to assist them in making informed decisions.

Chapter 6

Conclusions & Recommendations

In answer to the research question: *what are the health concerns of the clients attending the addiction services*? this paper has highlighted four main areas of concern for this client group.

Smoking:
Almost all clients in our service reported that they smoke cigarettes. This is an issue that demands our attention and action, particularly when you consider the health implications of smoking. International research has shown that a high number of clients who smoke within methadone treatment services were contemplating stopping smoking. Two broad recommendations can be made:

1. An assessment of clients' motivation regarding smoking cessation and their interest in participating in various smoking cessation treatments would provide useful information regarding how best to address this issue.
2. Some form of treatment or support is needed in order to help our clients to deal with their nicotine addiction, bearing in mind that research has shown that specific smoking cessation interventions, rather than interventions added in as part of other nursing or counseling duties have proven to be more effective. The assessment of clients' motivation is likely to guide the interventions chosen.

Depression:
As mentioned previously, this research did not aim to measure depression. However, our findings suggest that many of the health concerns affecting our clients are related to mood and are not physical concerns; for example troubled by the past. This is in keeping with previous research with this client group. Based on this information the following recommendation can be made:

1. The service should examine the possibility of introducing a formal mood measurement tool. This would assist in identifying those clients affected by mood problems and enable them to receive the necessary interventions such as counselling or antidepressant medication.

Polydrug use:
A high proportion of clients who responded reported using a variety of substances during the previous three months, particularly cannabis and alcohol. This research did not quantify the amount or frequency of the actual drug use within the three month period. The following recommendations are made:

1. Further research is needed to quantify in greater detail the extent of polydrug use within our client group.

2. The use of different drugs carries unique health and social risks. The approach the service takes to dealing with non-opiate substance misuse should be examined in line with best practice.

Hepatitis

Injecting drug users are the most "at risk" cohort for hepatitis C in Ireland. Given its high incidence and prevalence the complications of hepatitis C will have far reaching health and social implications. This research has highlighted the fact that many of the clients on methadone maintenance are worried about various aspects of Hepatitis. They want more information and education in relation to this issue. The authors make two recommendations:

1. The service needs to develop systems which ensure clients who are diagnosed with Hepatitis are followed up and provided with adequate treatment, support and education. Such clients need to be aware of the impact of social behaviours such as alcohol, smoking and diet on hepatitis C disease progression. This works toward giving the client tools for informed decision making in regard to their lifestyle choices.
2. Due to the high risk of contracting hepatitis faced by injecting drug users all clients attending the clinics who have not tested positive for Hepatitis require high quality and up to date information. In addition they will require access to screening and advice from adequately trained health professionals.

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Appendix A
The Health Concerns Questionnaire – 3 (HCQ-3)

Health Concerns

Name _____

Date _____ Age _____ Sex _____ Years of school completed _____

Directions: *Please mark only those items that are concerns for you, using a 1, 2, 3, or 4:*

1 - mild concern **2 - serious** **3 - severe** **4 - very severe concern**

Leave items blank if they are not concerns for you.

___swelling
___sweating
___light headed or dizzy
___loss of weight
___gain of weight
___marital stress
___other family problems
___conflict with others
___work/school problems
___angry
___too inactive
___physically restricted
___medicine side effects
___hearing problems
___heart palpitations
___nightmares
___losing control
___irritable
___quick mood changes
___restless
___feel detached or dazed
___troublesome habits
___feel worthless
___too much alcohol
___dwell on problems
___too many fears
___feel guilty
___breathing problems
___hot or cold spells
___eating problems
___tired or drowsy
___muscle tightness
___worry about health
___other worries
___nervous
___feel used
___panicky
___headaches
___other pain
___excess energy
___poor sleep
___poor concentration
___muscle weakness
___shaky or trembling
___memory problems
___feel confused
___sexual concerns
___low energy
___loss of appetite
___less interest in things
___too many drugs
___draw away from people
___negative about future
___depressed
___vision problems
___stiffness
___bowel problems
___odd skin sensations
___stomach problems
___hard to trust anyone
___watched or talked about
___think about suicide
___financial stress
___troubled by the past
___other health problems
___other problems

Appendix B
Demographic Questionnaire for Clients

Instructions: please complete each section of the questionnaire to the best of your ability. On this page we would like you to provide some basic information about yourself. On the back a copy of the Health Concerns Questionnaire is printed. Remember, do not fill your name in on the questionnaire, it is not needed. If you have any additional comments or concerns you would like to mention please use the space at the bottom of this page.

Age: _____ Sex (please circle): M F

What age were you when you left full-time education? _____

Do you have children? (please circle): Y N

Are you married or have a long-term partner? (please circle): Y N

What age did you first use heroin at? _____

Have you ever injected heroin? (please circle) Y N

What is your current methadone dose? _____

How many years are you in drug treatment? _____

How many nights' take-away did you get in the last week? _____

Have you used any of the following drugs in the past 3 months? If you have never used a particular drug please tick the "never used" box.

	Yes	**No**	**Never used**
Heroin	☐	☐	☐
Cocaine	☐	☐	☐
Ecstasy	☐	☐	☐
Alcohol	☐	☐	☐
Cannabis	☐	☐	☐
Amphetamines (Speed)	☐	☐	☐
Acid	☐	☐	☐
Solvents	☐	☐	☐
Cigarettes / tobacco	☐	☐	☐

Any additional health concerns or comments?

_____

_____

_____

Appendix C
Information sheet for clients explaining the study

INFORMATION SHEET

You are being invited to take part in a questionnaire on the health concerns of clients on a methadone maintenance programme. We also plan to compare clients' health concerns with staffs' perception of their health concerns. Before you agree to be involved, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully and feel free to ask questions if you are unsure. Thank you for reading this.

Who is conducting the study?
The nurses on the health promotion committee are carrying out the study. They are: Noreen Geoghegan, Assistant Director of Nursing, Philip James, Anita Connor, Andrea Kelly, Gail Hawthorn and David Spiro. They are all nurses working in the South-West Dublin Addiction Services.

What is the purpose of the study?
To gain an understanding of the health concerns of our clients in order to focus our health education more effectively.
To assess whether staff are aware of the health concerns of clients.

Why have you been chosen?
All persons who are in receipt of methadone maintenance treatment in the HSE Addiction Services in Dublin South-West are being asked to participate.

Do you have to take part?
Nobody has to take part in the study. Your involvement is entirely voluntary and you are free to simply not complete the attached questionnaire. If you do decide to complete the questionnaire and send it to us you will then be unable to change your mind as we will be unable to identify your questionnaire and will be therefore unable to remove it.

What does the study involve?
You are asked to complete the attached questionnaire which should take you about twenty minutes. Firstly, we would like to get some basic information about you and your treatment, such as your age, sex and dose of methadone. Secondly, you will be asked to rate your level of concern regarding 66 potential health concerns using a 4 point rating scale (mild concerns, serious, severe, very severe concern). If you are not concerned about an item simply skip it and leave it blank. In addition we would like you to tell us if you have any other health concerns that you have that is not covered in the questionnaire.

Is the research confidential?
Your involvement in this study will be completely confidential. Everything you say will be made totally anonymous and your views will be put with those of others so that your identity is hidden. You can complete the questionnaire on your own and return it to reception sealed in the envelope provided. This will ensure that even the researchers will not know who made the comments. As we will not know who made the comments you are guaranteed that nothing you say can be reported back to any member of staff. Any information collected from you will only be seen by members of the research team.

What are the benefits of taking part?
Your help in this study is very important if we are to improve our health promotion initiative for you and drug users in the future. We need to know what your health concerns are and only you can tell us. This information may also help direct the development of the service as it helps us to understand your needs and concerns.

What will happen to the results of the study?
The findings of this study will be written up as a report, but once again no clients will be identifiable. This report will be available to many people with involved in the drug services including, drug users and their families; Addictions Service staff; General Practitioners, and other health and social care professionals working with drug users. Other professionals may also read the report such as members of the prison service; government officials; and other researchers. It is also likely that the results will be reported on at conferences and in published articles in professional journals. We also plan to feed the results back to the clients of the service through the health promotion notice board in the clinic.

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Thank you very much for your interest

If you require further details about this research, please contact:

Noreen Geoghegan
HSE Addiction Services
Dublin Mid-Leinster
Bridge House, Cherry Orchard Hospital, Ballyfermot, Dublin 10.

Telephone: 01 6206400
Email: noreen.geoghegan@mailm.hse.ie