Addiction Treatment Research NEWS

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EDITORIAL

Here we are at the end of another year – the 9th year that (A)TRN has been published. Cutting Edge is becoming a distant memory and our thoughts are beginning to turn to the goals and plans for 2006. It has been an eventful year for the TRN and TRIG with our name being changed, to truly reflect our nature, to the Addiction Treatment Research Interest Group and consequently the Addiction Treatment Research News.

It has been interesting to note this year that the AOD treatment field has an ever increasing presence in the media. Sometimes this may feel unwelcome, but it also helps raise the profile of the sector and promotes the work underway and what we are all working towards. More and more the leaders in our field can be seen or heard in the media commenting on the situation in New Zealand.

Our guest writer for "I've been reading" this issue is Lee Nixon from Nelson CADS, who reviews some literature on testosterone levels and methadone. Tami Cave provides us with an excellent and timely summary of what is happening in Māori AOD research. There is also a grim yet educational piece from Nick Chamberlain on skin infections due to intravenous drug abuse. We have an interesting article on the little talked about Internet Pornography Addiction from Sean Sullivan at Abacus. Justin Pulford provides us with an update of research activity from Auckland CADS. Last, but not least Simon Adamson has been industrious again and provides us with a summary of the latest National Telephone Survey conducted by the NAC as well as the NAC report and the final ATRIG chairperson report for 2005.

I hope you and your service will enjoy and benefit from this final bumper issue of 2005. I would like to take the time to thank all those who have contributed to the ATRN this year, in particular, Lindsay Stringer, Simon Adamson, the team at Abacus, Sue Platts and Lisa Andrews. Also, thank you to all of you who have taken the time to read or distribute the ATRN in the past year.

All of us at the ATRN wish you and your families a very Merry Christmas and a prosperous New Year. Happy reading.

Meg Harvey
Editor
December 16, 2005

YOUR LETTER TO THE EDITOR HERE.

TRIG MEMBERSHIP

The executive committee of the Addiction Treatment Research Interest Group (ATRIG) would once again like to take this opportunity to remind current members that membership of ATRIG is annual. Currently we have 67 members, only a handful of whom have renewed their membership for 2006.

New members wishing to join ATRIG are warmly invited to fill in the membership form on the last page of this newsletter. Current members are also able to use this form to renew their membership.

Membership of ATRIG entitles members to an email copy of each edition of the Addiction Treatment Research News (ATRN) and participation in the ATRN discussion group.

Addiction Treatment Research News is the official newsletter of the **Addiction Treatment Research Interest Group (ATRIG).**

ATRIG was established in 1997 to promote research in the alcohol and other drugs field in New Zealand.

The **executive committee** are: Simon Adamson (Chairperson), Klare Braye, Alistair Dunn, Meg Harvey (Editor), Robin Shepherd, Janie Sheridan, Lindsay Stringer (Secretary)

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"Sometimes he still feels guilty (a little) – though not so much as he did. He realizes well enough that his dedication to pornography is coarsening whatever sensibilities he may once have possessed; that his craving is settling like some cancerous, malignant growth upon his mind, a mind crying out with ever-increasing desperation for its instant, morbid gratification. But he can do nothing about it." (Colin Dexter: The Third Inspector Morse Omnibus: 14)

Orford (1) speculates that the most troublesome addictions in the near future will be those that combine easy availability, emotional reward that is rapidly achieved and opportunity for continuous participation. He identifies five behaviours with the highest risk, and after gambling machines and Internet gambling, cites the third as pornography on the Internet (1).

Currently there are an estimated four million pornography sites, growing daily presumably as a result of demand and comprising, according to one Internet reviewer, up to 25% of search engine requests (2). Invitations to view these sites are often sent unsolicited and apparently innocuous searches of unrelated topics will sometimes result in pornographic websites being retrieved.

However, this refers to accessing pornography and it doesn't necessarily follow that people who knowingly access these sites are in any way addicted to the behaviour. Yet a case may be made that for some, and if the estimate of daily accessing of sites is remotely accurate possibly many people, they have considerably reduced control over the behaviour, with far-reaching consequences.

Internet pornography addiction: What is it?

Internet pornography addiction doesn't currently exist in mainstream medical categorisation resources. However, this perhaps isn't surprising, especially as the Internet itself is a relatively recent phenomenon. Medical recognition often lags behind reality: pathological gambling was not recognised by mainstream health until the late 1970's (ICD-9 in 1977; DSM-III in 1980) despite its existence for thousands of years. Even the term 'addiction' is a lay rather than scientific term (3,4). The description of what constitutes addiction is not defined in diagnostic manuals such as DSM-IV (5) or ICD-10 (6) with dependence criteria focussing upon drugs rather than extending to behaviours. Yet from the scores of definitions available from any literature review, there are a number of generally accepted symptoms attributed to any addiction (3).

These criteria and their application to Internet pornography could include:

- An urge often described as a craving. In pornography viewing, the initial involvement may be ego-syntonic (positive reinforcement in behavioural terms), but reasons for persistence may change to escape life's stressors (self-medication through negative reinforcement), where the behaviour is contributing to the stress as well as providing the relief. The need to 'instantly gratify' the urge commonly found in addictions can also be understood in terms of both narrowing of stress-coping mechanisms and a reduction in ability to handle increasing cycle of stress (guilt, secrecy, isolation, boredom, irritability, preoccupation, reduced effectiveness at work, receiving criticism, cognitive dissonance, relief through Internet pornography)
- A reduction in control over the behaviour. More risk is taken of discovery through, for example, the viewing of pornographic images during work-time or when others are around, when previously such viewing was restricted to home and when alone. There may be unsuccessful attempts to cut back on or reduce the behaviour such as deleting any downloaded images
- Perseverance in the behaviour despite possible consequences. Risks in the workplace remain high even with minimal viewing, and will escalate if images are down-loaded and saved. If codes of conduct are imposed at work around pornography access, and notwithstanding the behaviour continues, this may indicate addictive processes developing. Also if websites accessed have illegal images, risk of disclosure through monitoring may arise; perseverance despite increased risk may also be symptomatic
- A tolerance may develop, requiring more intensive levels of aspects of the behaviour over time to meet the desired need, e.g., dissociation from (problematic) reality. Images previously considered as shocking, lurid and graphic are then accessed
- Unknown neuro-adaptation that may involve neurotransmitters such as dopamine and serotonin (15). This may be linked to the craving sensation above
- A developing preoccupation with thinking about or accessing pornography, which may have consequences of reduced effectiveness at work arising from distraction, in addition to the time lost accessing such sites during work-time.

There are various theories of addiction, some of which suggest underlying unresolved issues or even biological components while others may focus on learned behaviour or social factors (7-9). Some suggest that lower self-esteem may contribute to addictive behaviour while others may result from fear of, or under-developed, social intimacy skills that may contribute to behavioural addictions. A fear of rejection can be avoided through the use of the Internet: viewers can initiate images and disconnect at will (control), while access to images of sexual partners who would not normally be available to them feed their fantasy world.

Why should the process become addictive?

The sexual drive is strong and primitive, with much of its control being determined by social mores. The transgression of these social mores results in disapproval when disclosed.

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Freud based much of his psychoanalytic work upon the sexual drive and its suppression (10). Conformity in society is a prerequisite and even a definition, although its substance will vary from society to society, and society's tolerance can also change over time. What was regarded as borderline in terms of acceptability years ago with the advent of Playboy magazine, changed over time, as its customers demanded more explicit images and society tolerated their publication. Some images, however, are unlikely to be tolerated, such as those involving children, animals and those suggesting torture or violence. It is these unacceptable images that colour society's pejorative view of pornography and those that access it. Laws make the downloading of objectionable images illegal, and a division of the Department of Internal Affairs in New Zealand monitors access to these sites and initiates prosecutions (11). As a result of the association with these extreme examples, a discovery of accessing any pornography can result in a person being summarily dismissed from their employment (12).

With the potential far-reaching consequences, one may wonder why people would risk viewing pornography with the possibility of the disclosure of this behaviour. Initial participation may be explainable by the perception that discovery is unlikely. However, when viewing persists, and consequently the likelihood of discovery increases, there may be different processes at work that may be best explained within the paradigm of addiction.

How pervasive is Internet Pornography Addiction

Internet pornography addiction may not be an isolated and rare event. There is little research available to estimate the prevalence of Internet pornography access, let alone research about a condition that could be described as an addiction. The reasons for this are somewhat obvious. Such behaviour, even if casual, is frowned upon, and even with regular media reports of prosecutions there is a poor understanding of what is illegal. Disclosure by survey is therefore unlikely. Even surveys of a far less socially disapproved behaviour, pathological gambling, identified that less than 30% of those with gambling problems would respond with the truth to a surveyor (13). Yet there are certain factors that can give an indication of prevalence. Firstly, for an addiction to develop there must be participation. The growth of access to computers, their common use and assimilation into our lives, and expansion of the Internet does not need to be argued. The Internet is readily accessed 24 hours a day, at home and at work, with a high level of privacy. Surfing the Internet can be immediately terminated if privacy is interrupted. As stated by Orford (1) accessibility is a major factor in all addiction, along with rapidly achievable and intense emotional reward, and the ability to continue uninterrupted. The accessibility of Internet pornography, emotional reward of pornography for many, and its low cost (although many more graphic sites may charge for access) may suggest more opportunities for pornography addiction to develop. Further factors may be the speed at which stimulating images can be displayed and changed (behavioural reinforcement) and access to an unlimited increase in graphic content, to account for tolerance.

The privacy offered by the Internet and the low likelihood of discovery, when matched to the fact of the substantial number of pornographic sites, suggests that many will be accessing pornographic sites at least occasionally, while many will be regular seekers and may be at-risk for pornographic addiction. The writer currently works within this field and is commonly contacted by people affected by Internet pornography behaviour that describes the criteria above, with consequences of familial stress, loss of employment, and even suicidal ideation and behaviour.

Conclusion

Internet pornography addiction is a new term that describes a behaviour that sits within the addiction paradigm. Currently it is poorly understood both in terms of what constitutes a problem and what the consequences may be, including criminal liability. Punishment at present is a consequence of even low-level behaviour, ensuring that self-disclosure and help-seeking will be low and will prevail against an accurate prevalence rate for this condition. As such, help-seeking is likely to be late-stage and often after disclosure by some significant other person. Addressing the behaviour through an addiction paradigm appears to be an appropriate treatment, and help-seeking may increase if the public can view the behaviour accordingly.

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When undertaking research a lot of energy goes into the initial stages of conceptualisation, developing a research protocol, gaining ethics approval, and securing funding. Once this is complete the task of collecting the data can often be experienced as the most time-consuming, not to mention nerve-wrecking part of the process. Completion of data collection is usually accompanied by a great sense of relief. However, the job of analysing, writing up and disseminating findings, via presentation and publication, remains. This can be a formidable task and may occur over the space of several years. For this edition of ATRN I would like to provide a brief overview of all research projects currently in this write-up phase within the National Addiction Centre.

Firstly, the following are research projects for which data collection was completed more than a year ago and for which dissemination, including the writing of papers for peer-reviewed publication, is ongoing:

- Christchurch Alcoholic Relapse Study (CARS). Julia Davies (Assistant Research Fellow) is examining results of a Prolactin response to Fenfluramine test administered to this sample. Prolactin levels in the bloodstream are used as a marker of CNS serotonin activity. It is hypothesised that reduced serotonin activity may predict worse treatment outcome.
- Brief Treatment Programme for Alcohol Dependence (BTP). This was a randomised controlled trial of Motivational Enhancement Therapy (MET). A book chapter (Sellman et al.) is currently in press and I intend to publish findings on the prediction of treatment outcome in the sample. Samadhi Campbell (Masters candidate) will be coding audiotapes of MET sessions to test hypotheses related to the interaction between client and therapist behaviour and impact on outcome. A second potential masters student is currently considering examining this data also.
- Naturalistic Treatment Outcome Project (NTOP). Baseline data on coexisting conditions and mental health treatment utilisation is currently in press (Adamson et al.) and further papers are to follow examining treatment outcome at nine months and examination of groups with specific co-existing conditions such as social phobia. Steve Marshall (Masters candidate) is analysing data on the association between cannabis use and depression in the sample.
- Methadone Treatment Index (MTI) Development. Daryle Deering (Lecturer) continues to develop this instrument as part of her PhD work, with a paper on its psychometric properties currently under review.
- Korero te Hikoi – Māori Men Talk the Walk of Addiction Treatment. Paul Robertson's (Lecturer) PhD work on the experience and beliefs of Māori men who have undertaken addiction treatment continues to be disseminated with plans for peer reviewed publication.
- Christchurch Outcome of Treatment for Depression Study. Fraser Todd (Senior Lecturer) is a co-investigator on this study and is using data on the association between cannabis use and psychotic symptoms and cannabis use as a predictor of treatment response to form the basis of his nearly completed PhD.
- Early Psychosis Study. Again Fraser Todd is a co-investigator and is particularly interested in the role of cannabis use in the emergence and course of psychosis in this population of first-presentations with psychosis.
- Spirituality in Addiction Treatment. Mike Baker (PhD candidate) is in the latter stages of his PhD work having undertaken a thorough investigation of spirituality with a prospective inpatient treatment population.

The following studies have seen data collection completed within the past twelve months and are all in the active write-up phase:

- National Telephone Survey of the AOD workforce. This data continues to be disseminated and papers on the client profile, identification of nicotine use, and a vision for the future of the AOD workforce are in the pipeline. In addition to the "main" study there were two follow-on studies. All Māori AOD workers interviewed agreed to a further interview with a Māori research assistant. Paul Robertson and Tami Cave have disseminated some of the finding and a paper is in preparation. All nurses taking part in the main study were asked to participate in a further interview to explore issues of nursing practice on AOD settings. Daryle Deering and Julia Davies are currently preparing a paper for publication.
- BTP five year follow-up. The five year follow-up data from this randomised controlled trial of motivational enhancement therapy will be presented to a conference in Santa Fe, New Mexico in January 2006.
- Programme for Youth Cannabis, Alcohol, and Nicotine Study (PYCANS). Meg Harvey (Assistant Research Fellow) is currently analysing and writing up her PhD research on cannabis use and cognition in an adolescent sample.
- Youth Nicotine. Karen de Zwart (Assistant Research Fellow) is analysing baseline and follow-up data for this clinical youth population in relation to their nicotine use, and will be using this to complete her PhD.
- Perceptions of Cannabis Use and Social Policy. Geoff Noller (PhD candidate) is currently preparing a paper on harm reduction and the National Drug Policy as part of his PhD work.
- Brief Intervention Training for GPs. Doug Sellman (Director) evaluated the impact of a brief intervention training session with a group of general practitioners.
- Feasibility Trial: Pre-quit NRT. Mark Wallace-Bell (Senior Lecturer) is part of a research group, based at the University of Auckland, and has completed a feasibility trial of nicotine replacement therapy initiated prior to smoking cessation.
- Pre-post Smoking Ban Study. As part of the same research group, Mark was part of a study which took breath and air samples in casinos and bars before and after the Smokefree Environments Amendment Bill came into effect in December 2004.

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SKIN INFECTIONS DUE TO INTRAVENOUS DRUG ABUSE MAY BE INCREASING AND HAVE SIGNIFICANT LONG-TERM SEQUELLAE

Sometimes, in advancing our medical knowledge, one has to start without the security of an evidence base and years of accumulated best practice guidelines. Case reports and anecdotal evidence can highlight a trend, change ones understanding of what was previously 'understood' or at least stimulate further research.

Over the past year the Northland Drug and Alcohol Service has noted a marked increase in the number of cases of severe skin infections associated with injecting drug use. In all of these cases there was a documented history or urinary evidence of recent or past intravenous methamphetamine or amphetamine use. An audit of 155 case notes over the past year revealed 11 cases of severe skin infections at intravenous injection sites. A number of these cases resulted in significant long-term sequellae, which included digit necrosis and amputation, bacterial endocarditis, septicaemia, skin ulceration requiring grafting, premature labour, septic arthritis, and cerebrovascular accident (CVA). There was also a case of septic arthritis, spinal abscess and paralysis in the year prior to the audit.

Cellulitis and local skin infections appears to be a relatively minor complication of injecting drug use, but it is important to recognize and communicate to our patients that 'the buck doesn't stop there' and that continued injecting drug use while on methadone maintenance treatment (MMT) can have devastating consequences.

One has to accept a level of intravenous use while on MMT, and it is consistent with the paramount principle of harm minimization to provide easy access to clean needles (to prevent the spread of HIV and possibly Hepatitis C), and ensure the methadone mixture is free of thickeners and astringent agents, which would simply damage veins and promote infection.

Northland has one of the highest numbers of methamphetamine labs in NZ (31 discovered by Police in Northland in 2004: 1) and methamphetamine users frequently suffer from skin lesions due to excessive picking and scratching. The lesions often become infected requiring antibiotic treatment and in a number of cases methamphetamine use has been associated with methicillin-resistant *Staphylococcus aureus* (MRSA) infection (2). An increase in skin and more invasive infections in Californian injecting drug-users was also caused by MRSA (3); as was the case in the patient mentioned above who required digital amputation.

A recent study (4) assessing primary care and emergency department use among injecting drug users in Vancouver revealed that abscesses, cellulitis and other skin infections accounted for the greatest proportion of emergency department use. Of all the factors identified, frequent crystal methamphetamine injection had the highest independent association with frequent ER use (AOR = 2.4, 95% CI: 1.0-5.6). The study concluded that Emergency department use was "due primarily to preventable injection-related complications that are less amenable to primary care interventions and therefore educational and prevention efforts that encourage and enable sterile injection practices should be promoted."

However, MMT programmes already provide these educational and preventive efforts, and, at least in the cases mentioned earlier, it appears to have been unsuccessful. Is it too simplistic to assume that skin picking and poor hygiene are the causes of methamphetamine skin infections?

Methamphetamine is a vasoconstrictor, which may well predispose a user to skin and soft-tissue infections. It is also intrinsically irritating to skin and mucous membranes (5). Methamphetamine is synthesized by converting ephedrine or pseudoephedrine into methamphetamine via a series of steps usually involving the addition of phosphorous and iodine.

'Word on the street', which can not be backed up by any medical evidence, or literature on consumer websites, is that Naphthalene, which is a by-product of the cook (first) stage of methamphetamine manufacture from ephedrine and pseudoephedrine (4), may be the cause of these skin infections. Ironically, Naphthalene is one of the main ingredients in camphor moth balls, which are used to keep clothes free of bugs; but it is hard to imagine this substance having such a positive effect on an injecting drug users veins.

Apparently, because of the need for mobile methamphetamine labs, cooks are skipping the last 6 hour process in manufacture that involves washing the methamphetamine in a solvent such as denatured alcohol to remove impurities, then freezing and re-crystallizing the methamphetamine. This produces the purest (purity levels greater than 80%) form of methamphetamine known as ice. If this step is omitted, either a low purity powder known as speed or a slightly higher purity, damp sticky substance like wet sugar is produced.

This reduction in purity as law enforcement and customs control measures become more effective was seen in the US where the average purity of methamphetamine has decreased from 71.9% in 1994 to 40.1% in 2001. This has been partially attributed to international measures to reduce the availability of chemicals used in the production of methamphetamine (6). It is reasonable to assume that with a reduction in purity comes an increased incidence of skin and soft-tissue infections.

It is difficult to estimate the incidence of skin and soft-tissue infections among injecting drug users because many are self-treated, however, a prospective study of injecting drug users in Amsterdam reported one abscess for every three years of injecting drug use (7). A cross-sectional study in San-Francisco found that one third had an abscess, cellulitis or both on physical examination (8).

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In 1998 the NAC (then called the National Centre for Treatment Development; NCTD) conducted a national telephone survey of the dedicated AOD workforce. A "dedicated AOD worker" was defined as a paid worker, 70% or more of whose client contact is with AOD clients. As part of the newly established National Addiction Treatment Sector Workforce Development Programme the NAC undertook a repeat of the 1998 survey.

Method

Alcohol and drug treatment workers (ADTWs) were randomly selected from a list of approximately 800 ADTWs maintained and regularly updated by the NAC and supplemented by the membership register of the Drug and Alcohol Practitioners Association of Aotearoa New Zealand (DAPAANZ). Identified ADTWs were phoned by a clinical psychology student who had their first name, initial of last name, and workplace details only. The intention for the 2004 survey was to interview a total of 275 ADTWs. In total 410 names were selected from the full list. Of these 85 were not clinical staff, proved to be duplicate names, or had departed. Of the remainder 89% (n=288) were interviewed, 6% declined to participate, and 5% could not be contacted.

Results

Neither gender nor ethnicity had changed significantly since 1998. In 2004 59% of the workforce were female, 64% Pakeha, 22% Māori, and 4% Asian. The average aged had increased significantly from 41.8 years to 46.6 years and the average number of years working in the AOD field had increased from 5.7 years to 8.0 years. The proportion of the workforce identifying as "ex-drinkers" decreased significantly from 36% to 27%. Whilst not an exact measure of the proportion of the field in recovery from a past substance use problem, this is likely to correspond quite closely to this population.

When ADTWs were asked to identify their professional area in 2004 there was no significant change in the proportion identifying as counsellor/therapist (64%), nursing (16%), social work (11%), psychology (5%) or medicine (3%), but there was a significant increase in those identifying as A&D or addiction clinicians (7%) or as "other (6%), which included occupational therapist, masseuse, pharmacist, and support worker.

Significant increases in level of qualification between 1998 and 2004 were evident. In 1998 the highest qualification was pretertiary/tertiary/postgraduate for 26%/58%/16% of those interviewed, compared to 6%/60%/34% in 2004. The proportion with any tertiary AOD-specific qualifications (40%) had not changed significantly, but there was a significant increase in the proportion with a postgraduate AOD-specific qualification, up to 13% from 5% in 1998. Seventeen percent were currently enrolled in AOD-related courses and 26% enrolled in other work-related courses.

ADTWs were more likely to have postgraduate qualifications if they had methadone clients on their caseload (43% versus 27%%, χ^2=8.2, p<.01), did not work at a kaupapa Māori service (38% versus 17%, χ^2=7.0, p<.01), were non-Māori (41% versus 11%, χ^2=18.7, p<.001), were a member of a professional body (40% versus 11%, χ^2=17.3, p<.001), and drank alcohol, or drank alcohol more often (χ^2 for linear trend =18.7, p<.001).

ADTWs were more likely to have AOD-specific qualifications if they were older (48.5 years versus 45.3 years, t=2.90, p<.010), were DAPAANZ members (73% versus 50%, χ^2=16.1, p<.001), or members of any professional body (44% versus 25%, χ^2=6.7, p<.01), were lighter drinkers (drinking less than three days per week) or non/ex-drinkers (63% versus 37%, χ^2=8.4, p<.01) compared to ex-drinkers and heavier drinkers, and to have worked in AOD for longer (9.5 years versus 7.1 years, t=3.51, p<.001).

ADTW were more likely to currently studying at a tertiary level if they were members of DAPAANZ (47% versus 31%, χ^2=7.9, p<.01), worked in a kaupapa Māori service (57% versus 37%, χ^2=6.0, p<.02) or were Māori (52% versus 37%, χ^2=4.2, p<.05), and did not currently have a post-graduate qualification (44% versus 32%, χ^2=4.0, p<.05). There was also a highly significant association with professional identity (χ^2=23.5, p<.001). Medical and psychology combined were least likely to be studying (9%) and had the highest rate of postgraduate qualification (91%), while addiction workers were the most likely to be currently studying (74%). They were not significantly less likely to have postgraduate qualifications than the remainder of the sample (21%). The remaining groups currently undertaking tertiary study ranged from 27% to 45%.

Membership of a professional association was not inquired about in 1998. In the 2004 sample 81% reported being members of a professional association. Most common was the Drug and Alcohol Practioners Association of Aotearoa New Zealand (DAPAANZ; 57%) followed by the New Zealand Association of Counsellors (NZAC; 17%), the New Zealand Nurses Organisation (NZNO; 12%), and the Aotearoa New Zealand Association of Social Workers (ANZASW; 7%), with 26% of the field belonging to more than one organisation.

Summary

Significant changes in the New Zealand AOD treatment workforce have been identified in the 2004 National Telephone Survey. The workforce can be characterized as stable, but aging. There has been a marked drop in the proportion of the workforce aged less than 35 years. This has significant implications for longer-term retention and the ability to adequately cater to younger-aged clients.

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MÃORI RESEARCH IN THE AOD FIELD

Over the last two decades, there has been considerable development in the provision of treatment services to serve those with alcohol and other drug related problems in Aotearoa/New Zealand. A growing responsiveness to the needs of Māori in terms of alcohol and other drug (AOD) prevention and treatment over this time has seen the parallel development of the Māori addictions field, which has contributed to the emergence of an increasingly visible and active Māori AOD workforce and the development of a range of Māori focused AOD services and interventions.

While advancements in training, education, service, treatment and workforce development have helped to foster the growth of the Māori AOD sector, in recent years the need for more Māori focused research into addiction has become evident in order to better meet the needs of tangata whaiora, as well as Māori kaimahi. As such, research projects with specific relevance to Māori have become vital to informing new developments and initiatives in the Māori addictions field.

Recent AOD related research projects have focused on a number of different areas. Workforce development projects have been brought to the fore of late under the auspices of Matua Raki - the National Addiction Treatment Sector Workforce Development Programme. Presently, there are a number of Māori addiction workforce development projects that are located within this programme. One of the main project areas is the proposed development and implementation of a Māori specific research strategy to ensure future development in terms of research is integrated, co-ordinated and supported by Māori kaimahi and key stakeholders in the sector.

Other current Māori addiction workforce development research projects within Matua Raki include a telephone survey of Māori addiction treatment workers, which focused on training issues specific to Māori, integration of Māori elements of practice and working with whanau. Initial consideration of the results of the Māori Telephone Survey and the National Telephone Surveys (conducted by National Addiction Centre in 1998 and again in 2004) indicated that Māori kaimahi in the AOD treatment sector were strongly committed to their work and wanted to further develop their expertise in the field. Respondents requested both Māori and western focused training, illustrating the need to continue to develop specific training for kaimahi, which integrates Māori and western knowledge, skills and processes of learning. The results of the current surveys and other research indicate, however, that such training should be firmly located within the frameworks of Te Ao Māori.

The second research project being undertaken within Matua Raki is a write up of the history of the development of Māori AOD treatment services and the Māori addictions workforce in Aotearoa. Key informants identified as being centrally involved in the early development of Māori AOD services/workforce have been interviewed and analysis of key themes is currently underway.

The Cutting Edge annual treatment conference on alcohol, drug and addictive disorders this year provided a useful overview of several other AOD related research projects being undertaken specific to Māori. Paul Robertson (Lecturer/Senior Clinical Psychologist, National Addiction Centre) has recently completed his PhD, which is a qualitative evaluation of Māori men's experience of the addiction treatment and recovery process. He has interviewed 11 men over an extended period of time with a key aim being to identify how changes in the participants' korero related to being Māori in addiction and recovery were related to substance use related behaviour. Findings indicated a clear need for Māori addiction treatments to avoid privileging notions of 'tradition' (both Māori and 12 step) and "support integrated narratives of 'being Māori in addiction', which reflect the varied needs, capacity and experiences of individuals and whanau" (Robertson, 2005).

Also from Cutting Edge 2005, presenters Ruth Herd (Hapai Te Hauora Tapui) and Dianne Richards (Oasis Centre for Gambling) explained a project recently undertaken to evaluate Wahine Tupono - a Kaupapa Māori Intervention programme for Māori Wahine with gambling problems. Narratives collected from 11 Wahine with regards to their experiences in the programme comprise part of an education thesis, which also examines the schooling experiences of the Māori Wahine.

Although the conference featured a number of methadone maintenance treatment (MMT) presentations, there was a noticeable lack of any research relating to Māori and methadone. This is echoed in the broader addiction research field and has prompted a call for more research into this area. One such project developed as part of a Summer Studentship with the Māori Indigenous Health Institute (MIHI) and the Christchurch School of Medicine and Health Sciences aims to provide a profile of Māori clients on the Christchurch Methadone Programme. The project is being undertaken by Courtney Hore (2nd year Māori medical student) and will involve qualitative analysis of interviews undertaken with Māori clients on the programme.

Recently completed research exploring costs, benefits and cost-effectiveness of alcohol and drug services used by Māori compared with non- Māori has also involved interviewing clients on the Christchurch Methadone Programme. One of the findings of the research, conducted by Ian Sheerin (Lecturer, Department of Public Health and General Practice) for his PhD, was that although monetary costs of drug use and benefits of MMT were similar for Māori and non- Māori, results indicated that MMT was associated with greater savings in life for Māori clients (Sheerin, 2004).

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It is not only inexperienced injecting drug users that are predisposed to soft-tissue infection. Because of poor venous access, experienced users on MMT programmes end up skin-popping (subcutaneous or intramuscular injection), which has a higher risk of soft-tissue infection (7). Failing to clean the skin before injection, using dirty needles and repeatedly flushing and pulling back during injection may also increase the risk of infection (9,10).

The bacterium responsible for most of the non-pulmonary infections is Staphylococcus aureus and drug users have much higher rates of nasal and skin colonization. Poor hygiene further exacerbates the risk of infection with these commensal floras. Cleaning the skin appears to halve the risk of skin abscesses, and avoiding needle licking and injecting heavily colonized sites such as the groin are also protective. Bacteria acquired from organisms contaminating the drugs, drug adulterants or paraphernalia are also thought to be responsible for these infections (11). Poor nutrition and the presence of co-existing conditions such as Hepatitis C may also impair host defences and further increase the risk of infection (12).

Unique features of drug preparation may predispose drug users to unusual infections, and pentazocine, antihistamines, buprenorphine and temazepam have all been associated with outbreaks of skin infections (14).

Septic arthritis and osteomyelitis usually result from haematogenous seeding or occasionally local extension of a skin or soft-tissue infection. Their only symptom may be pain without fever, and are more common in unusual sites such as sternoclavicular and sacroiliac joints as well as the more usual vertebral spine and may be due to injecting in high-risk areas such as the jugular and femoral veins (13).

One of the most serious infections among injecting drug users is bacterial endocarditis, which has an incidence of 1.5-3.3 cases per 1000 injection drug users per year. This risk is increased by cocaine use, possibly due to the vasoconstrictive effects of the drug (14, 15). It could be postulated that methamphetamine, which is a vasoconstrictor, would have a similar effect. There were two cases uncovered during the audit, one of whom is being considered for valvular surgery. For most injecting drug users Staphylococcus aureus is the bacteria and in 70% the tricuspid valve is involved.

It is important that the intravenous drug using community are aware of these significant risks although unfortunately experience suggests that awareness may not alter behaviour. Intravenous drug use is and should be actively discouraged, as should the intravenous injection of home-cooked substances particularly methamphetamine where the source and purity is unknown. The reinforcement of safer injection practices including cleaning the skin with alcohol, and drug paraphernalia with bleach, boiling the drug, and avoiding needle sharing and the use of the jugular and femoral veins, cannot be over-emphasised.

Dr Nick Chamberlain
Medical Officer
Northland Drug and Alcohol Addiction Services.

Please contact the editor for a copy of the references.

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As you can see the NAC has undertaken a wide range of research activities, with a substantial proportion of these related to the PhD work of a number of students, including NAC staff.

Finally it is with great pleasure that I report on the successful completion of his PhD by Dr Paul Robertson (see Korero te Hikoi above). Paul has been a member of the academic staff at the NAC almost since its establishment as the National Centre for Treatment Development, joining the Centre in 1997. Paul graduates in Christchurch this month.

Dr Simon Adamson
Senior Lecturer and Deputy Director (Research), National Addiction Centre

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Other Māori focused research undertaken last year included a review of practice models used by Māori AOD Practitioners in New Zealand, conducted by Abacus Counselling and training Services Ltd (2004). The aims of this project were to identify models and frameworks of treatment currently being used by a representative sample of Māori AOD practitioners from a range of treatment settings, and to consider the extent to which participants were willing to incorporate problem gambling into their practice. A second project committed to contributing to the development of problem gambling services for Māori was also carried out in te rohe o Ngai Tahu by Robertson, Pitama, Huriwai, Ahuriri-Driscoll, Haitana, Larsen and Uta'i (2005). The aim of the study was to identify the current capacity and willingness of local Māori health providers to engage in the provision of problem gambling services. A framework was developed to guide the advancement of Māori responsive services and interventions in the region.

In conclusion, there is a variety of Māori focused AOD research which is currently being undertaken in the sector. However, if development of the Māori addictions sector is to be sustained and nurtured, it is crucial that researchers continue to build the body of research on Māori and addiction, especially around issues that seem to have been neglected thus far, such as MMT.

Tami Cave
Assistant Research Fellow
Māori Indigenous Health Institute/National Addiction Centre

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The aging of the workforce can be partly attributed to a second change since the 1998 survey was conducted: the average time spent working in the AOD field has increased significantly, indicating that in the short-term at least, retention of staff has improved.

The second welcomed change evident in the 2004 data is the substantial increase in qualification level of the workforce, with a dramatic drop in those with pre-tertiary qualifications, and a large increase in those with post-graduate qualifications, with increases in AOD-specific and other post-graduate qualifications. One domain of qualification may have decreased between 1998 and 2004 and that is the apparent reduction in the presence of ADTWs in recovery.

Membership of a professional association was asked about for the first time in the 2004 survey. Findings from this survey indicate that professional membership is the norm. The recent establishment of DAPAANZ appears to have significantly increased the proportion of the field affiliated to a professional association. Approximately a quarter of the workforce belonged

Three key implications of this research are:

1. The value of DAPAANZ in attracting a substantial number of previously unaffiliated workers, and the disproportionate number of DAPAANZ members undertaking further study suggest that this organization should receive strong support as a mechanism for workforce development.
2. Further work should be undertaken to identify and target the small proportion of the field who are not affiliated to any professional body, a group who are disproportionately less qualified than their affiliated colleagues.
3. Given the high rate of ongoing study amongst ADTWs who are for the most part continuing to work full-time it is clearly important that training providers offer a flexible range of options at both undergraduate and post-graduate level.

Dr Simon Adamson
National Addiction Centre

Message from the Chairperson

The 2005 Addiction Treatment Research Monograph is being printed at the time of writing this and should be in the mail to all attendees of Cutting Edge 2005 by Christmas. An electronic version of the monograph will be available online at www.addiction.org.nz.
The Monograph embodies the increasing trend for the broadening of the term "addiction" to accommodate research on pathological gambling and nicotine dependence. Over the five years of the Monograph a number of research papers have been published in relation to these two areas. To what extent other putative behavioural addictions begin to emerge as areas of clinical research interest is not clear at this stage. However, it is likely that the Addiction Treatment Research Monograph would provide an early indication of such a development.

A milestone worth acknowledging is the promotion of Doug Sellman from Associate Professor to Professor. Doug will take up his personal chair in Psychiatry and Addiction Medicine in February 2006. This is New Zealand's first professorial chair in addiction medicine. This recognition of academic excellence and leadership is well deserved, and there are few readers who will not in some way have been influenced by Doug's work over the past 20 years. As well as being a great personal achievement and something that has been celebrated within the National Addiction Centre, this promotion is something that all members of the addiction treatment and research sector in New Zealand should welcome. The naming of the chair as "Addiction Medicine and Psychiatry" is significant as it provides a strong endorsement of the standing of addiction as a legitimate area of clinical research, sending a positive message to those within, and outside of, our field. On behalf of ATRIG I would like to warmly congratulate Doug on his achievement. Doug tells me that with the new title comes a sense of responsibility so that he now feels like he has to weigh his words a little more carefully when speaking in public, but I'm pretty sure that we can still expect Doug to be just as forthright in his views on how to achieve excellence in our field for the benefit of those affected by addiction.

Finally, I would like to wish all readers all the best for a great Christmas and New Year. To those holidaying over this time I hope you have a fun and safe break, and spare a thought for colleagues keeping our services running.

Dr Simon Adamson
TRIG Chairperson

My reading falls into one or other of two patterns; mostly it is simply trying to scan the journals that I think are likely to have something of relevance, but the other pattern is that of following up on an interaction with a patient that has left me puzzling. For this note, I decided to outline some recent patient based reading. Very briefly A.B. is a 42 year old man on the Nelson methadone programme who presents with intractable depression, absent libido, erectile dysfunction, weight gain and complaints of generalised weakness. It wasn't until he told me "I am just not a man anymore" that my brain began to function.

As far back as 1975 low testosterone was documented both in heroin users and those on methadone maintenance (***Azizi et al., Steroids 1975; 22: 467-472; Cicero et al., New England Journal of Medicine 1975; 292: 882-887; Mendelson et al., Journal of Pharmacology and Experimental Therapeutics 1975; 192: 211-217***). There is substantial evidence of a similar deficiency in those taking long-term morphine (***Rajagopal et al., Journal of Pain and Symptom Management 2003; 26(5): 1055-61***). At the Sixth Europad Conference, Paris 2004, a Swiss group (J-J Dégon et al., see www.phonex.ch/pres) presented a study showing a large proportion of methadone users had low testosterone, the reduction was dose related and was associated with a wide range of symptoms, both sexual and related to general energy and well-being. Testosterone replacement was shown to ameliorate these problems. A Sydney group (Hallinan and Byrne, personal communication) have shown similar results.

But what of the published literature? Daniell (***Journal of Addictive Diseases 2002; 21(4): 47-53***) provides a brief review of studies up to that year. There are two recent publications of relevance and they seem to be contradictory. Brown et al., (***Journal of Addictive Diseases 2005; 24(2): 91-106***) in a study of 92 men taking methadone maintenance reported that orgasmic dysfunction was related to methadone dose and age, but failed to find a relationship between methadone dose and either other aspects of sexual dysfunction or testosterone levels. He also found that testosterone levels were within the normal range for the ages of his subjects. Bliesener et al., (***Journal of Clinical Endocrinology and Metabolism 2005; 90(1) 203-206***), however, in a comparative study involving individuals taking either methadone or buprenorphine and controls who used no opioids, showed a significant decrease in both total and free testosterone in those on methadone, with a corresponding increase in prolactin, while levels of these hormones in those taking buprenorphine were indistinguishable from the controls. In this study, the low testosterone was shown to be related to impaired sexual function, with a significantly higher proportion of those taking methadone reporting impaired libido and/or potency.

While Brown et al., report the absence of a relationship between methadone dose and testosterone levels, as noted above, this is not consistent with several other studies where a significant relationship has been shown to occur. There were two arms to the Brown study; the first comparing the testosterone and sexual function on commencement of treatment with methadone, then 60 days later. While sexual dysfunction tended to increase after 60 days of methadone treatment, none of the changes in the sexual dysfunction scales were statistically significant. Mean hormones levels also did not vary significantly from entry to 60 days. There were, unfortunately, only 11 patients in this group with an average dose of methadone commencing at 38 mg and increasing to 83 mg during the 60 days. Thus it is unlikely that they would see a significant difference given the small dose and low number of subjects.

The other group of 76 patients in this study had been on methadone for an average of 3 years and were taking a mean of 100 mg methadone daily. Consequently any effect of methadone should have been demonstrable. Brown et al., measured only total testosterone in this group rather than free testosterone, possibly an important difference given the general elevation in acute phase proteins seen in intravenous drug users, although depression of total testosterone had been documented previously. They reported finding a direct relationship between methadone dosage and erectile dysfunction, but did not comment on any relationship between dose and other aspects of sexual dysfunction. They did not observe any relationship between aspects of sexual dysfunction and testosterone, TSH or prolactin levels. This seems surprising given that they did observe substantial proportions of patients having abnormal levels of these hormones, although the average values were within normal limits, and deficiencies are generally considered to contribute to these dysfunctions. They make no comment on this or on an alternative mechanism to explain the observed relationship between methadone dose and erectile dysfunction.

Bliesener et al., on the other hand, provide individual free testosterone levels showing clearly the reduction in the average level and the extreme reduction seen in some subjects. Those taking buprenorphine had levels indistinguishable from the non-opioid using controls, both for average value and range of levels. They used more global scales of sexual dysfunction dividing this into only two aspects: libido and potency. These were clearly significantly impaired in those taking methadone. Perhaps the attempt of Brown et al., to be over-precise in subdividing aspects of sexual dysfunction obscured the overall effect. It is difficult not to give more weight to the study of Bliesner et al., as it is consistent with previous studies, and the psychological effects of testosterone, and the benefits in energy, wellbeing and sexual function of its replacement in hypogonadal men are well established (***Yates, Archives of General Psychiatry 2000; 57: 155-6***).

Thus it is tempting to consider the possible relevance of the "irritable male syndrome" documented in male mammals and linked to falling testosterone levels (***Lincoln, Reproduction, Fertility and Development 2001; 13: 567-576***).

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He describes "a behavioural state of nervousness, irritability, lethargy and depression", which is reminiscent of a substantial proportion of our patients.

I feel we need to consider hypogonadal syndromes where our methadone maintained patients complain of this group of symptoms, and to consider dose reduction, switch to buprenorphine or hormone replacement therapy. The lack of effect in those maintained on buprenorphine may explain the popularity of this medication in patient groups who have a choice in pharmacotherapy. While the usual explanation for preference of the later medication is: "it makes me feel more normal", I wonder how often this is a euphemism for "it lets me retain or recover my sex life". A word of warning: Yates also reviews the negative effects of supraphysiological doses of testosterone, which include for a small proportion of subjects an increased aggressive response, suggesting care needs to be taken to avoid over-replacement in those with a high incidence of antisocial personality disorder.

And A.B.? He has had two doses of intramuscular testosterone so far and reports substantial improvement in subjective wellbeing, mood, strength, energy and libido. A placebo response or not?

Lee Nixon
Nelson CADS

CADS Auckland Research Update

There has been a significant amount of research activity within the Auckland Community Alcohol and Drug Services (CADS) of late. This column will attempt to outline the basic findings from some of these studies that: a) are unlikely to be widely reported elsewhere; and b) should be of interest to the New Zealand alcohol and drug treatment research community. The first of these studies was conducted in collaboration with Abacus Counselling and Training Services Ltd and sought to identify the prevalence of problem gambling amongst the CADS outpatient client population. New clients (over a three-month period) presenting to two CADS Auckland outpatient units were invited to complete an EIGHT Gambling Screen (a standardised eight-question measure of problem gambling severity) as part of the assessment process. A total of 395 clients subsequently completed the EIGHT screen with 12.15% (48/395) scoring positive for problem gambling. The prevalence rate varied between units (10.7% in one vs. 15.3% in the other) and the overall rate (12.15%) was lower than initially expected (based on International research findings). Almost two-thirds of the 48 identified problem gamblers scored six or more out of a maximum score of eight on the EIGHT screen suggesting serious levels of problem gambling.

A separate study sought to analyse patterns of outpatient client attendance over a period of five calendar years. Previous research indicated that over fifty percent of the CADS Auckland outpatient client population attend three or fewer treatment appointments prior to discharge. This study sought to identify whether this short-term population subsequently re-engage with CADS for further treatment at some point in the future. Service attendance records spanning five calendar years (2001-2005) were retrospectively reviewed for a client cohort (N = 325) who attended their first CADS treatment episode in the first three months of 2001. Once discharged, only 15% (49/325) of this cohort subsequently returned to CADS Auckland within the reference period. There were no statistically significant differences in age or gender between the 15% who subsequently returned and the 85% who did not. Similarly, clients who were discharged from the CADS service having attended three or fewer appointments were no more likely to return for subsequent treatment as compared to their longer-term peers. These results suggest that, not only is short-term outpatient attendance the norm, but also that short-term clients' are unlikely to return for further treatment at any point in the immediate future. This further emphasises the need for the AOD treatment community to make the most of every intervention opportunity afforded. Many (if not most) clients are unlikely to engage with specialist outpatient treatment services for an extended period of time.

CADS Auckland was involved in a further study that sought to develop a set of assessment guidelines suited to short-term client contact. This project also involved participation from experienced clinicians working in outpatient AOD services located across the country. In total, eighteen clinicians from six outpatient services actively participated in the creation of these guidelines. Participation was facilitated by a Delphi research methodology. This required all participating clinicians to complete a series of questionnaires, the end-result being a consensus-based decision regarding the most 'essential' assessment data to collect during the first appointment and the first three appointments of an outpatient AOD treatment episode. It was anticipated that the study results could usefully inform a minimum standard regarding short-term treatment assessment. Clinician participation in this study was fantastic and the results interesting. Opinion varied widely regarding essential assessment data and the appropriate level of assessment. A majority consensus opinion was achieved, although participant feedback in response to the consensus informed guidelines was mixed. Unfortunately space does not permit a detailed description of the study outcomes; however, readers should feel free to contact the author for further information and efforts will be made to present a detailed account of the study results in an appropriate form (e.g. conference, peer-reviewed journal). Wishing you all a merry Christmas and a happy new year.

Justin Pulford
Researcher
CADS
Auckland.

Addiction Treatment Research INTEREST GROUP (ATRIG)

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- *To support the development of improved treatment services for people with alcohol and other drugs related problems in New Zealand.*

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