

**THE HIV RISK-TAKING
BEHAVIOUR SCALE (HRBS)
MANUAL**

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1. INTRODUCTION

The HIV Risk-taking Behaviour Scale (HRBS) is a brief, 11 item questionnaire developed to measure the behaviour of intravenous drug users that puts them at risk of either contracting, or passing on, human immunodeficiency virus (HIV). Two predominant areas of concern exist in relation to the spread of HIV amongst this population and, via this route, to the broader community: needle use behaviour and sexual behaviour.

Research up until the present has found that high rates of needle sharing have been a common practice for some intravenous drug users (IVDU) (Morlet, Darke, Guinan, Wolk, & Gold, 1990; Skidmore, Robertson, & Roberts, 1989; Stimson, Donoghoe, & Dolan, 1988). It is now well known that the sharing of needles and syringes puts the IVDUs concerned at risk for HIV via the transmission route of HIV-contaminated blood (Centers for Disease Control, 1989). Although moves have been made in some countries to provide IVDU with easily available needles and syringes through the setting up of agencies like needle and syringe exchanges, this has not been a universally accepted practice on the part of governments. Even where needles and syringes are freely available, it has been found that some IVDU continue to share their injection equipment regardless of this availability and regardless of the risk they pose to themselves and to others (Darke, Hall, & Carless, 1990).

Given the high incidence of needle sharing among IVDU, injection equipment cleaning practices are of critical importance. Bleach has been shown to be viricidal and there have been education campaigns in many countries to encourage IVDU to clean their equipment with bleach if they are going to share. Clearly, if a person is sharing, then the decontamination procedures they have been using will need to be assessed to gain a proper impression of their risk for HIV.

The sexual behaviour of IVDU is also of major

importance, both from the perspective of the spread of HIV within that population, and in relation to the spread of the virus to the non-intravenous drug using population (Feucht, Stephens, & Roman, 1990; Robertson, Skidmore, & Roberts, 1988). Again there has been a widespread emphasis on education to reduce risk in the area of sexual behaviour, though of course this has been focussed at the general population, not just at IVDU. The use of condoms has been encouraged as a form of safe sex. For IVDU, it could be argued that due to the added risk of needle sharing, the use of condoms should also be encouraged even with regular, monogamous sexual partners.

It is not uncommon for female, and to a lesser extent male, IVDU to support their drug use by prostitution (Philpot, Harcourt, & Edwards, 1989). Engaging in prostitution is another potential area of risk for IVDU, not only for themselves, but for their customers if they engage in unsafe sexual practices. Finally, one sexual practice that has consistently been shown to be a high risk activity in relation to the spread of HIV is penetrative anal sex (Turner, Miller, & Moses, 1989). IVDU are as much at risk if they engage in anal sex as any other group.

In order for an instrument to thoroughly assess the HIV risk-taking behaviour of IVDU, all of the issues discussed above would have to be covered. It is not sufficient to address just those behaviours directly related to intravenous drug use. A group of people who are at risk for HIV due to their drug use practices may put others at risk if they engage in unprotected sex with them. They will, in addition, be at the same risk as anyone else of contracting and spreading the virus through sexual activity. Also, to be of utility in clinical settings, both as a screening instrument and as an indicator of behavioural change, an instrument to assess these HIV risk-taking behaviours should be brief, easy to administer, and acceptable to IVDU. The HRBS was constructed to provide such an instrument.

2. THE STRUCTURE OF THE HRBS

The HRBS consists of 11 items, each item having been chosen to address a specific HIV risk-taking behaviour (a copy of the HRBS can be found in Appendix 1). The items cover both injecting and sexual behaviour. All are scored on 0-5 scale, with a higher score indicating a higher degree of risk-taking. These scores are added up to provide measures of drug use risk-taking behaviour, sexual risk-taking behaviour, and a global HIV risk-taking behaviour score. Scores on the whole test range then from 0-55, with higher scores indicating a greater degree of risk-taking behaviour.

The HRBS measures HIV risk-taking behaviours in two sections, one for drug use and one for sexual activity, and takes into account both the risk to IVDU themselves and the risk they pose to others. Research to date indicates that these two areas of risk-taking behaviour are independent of one another; that is, because a person engages in risky needle use practices doesn't mean they will necessarily be taking risks in their sexual activities (Darke, Hall, Heather, Ward, & Wodak, 1990).

Specifically, behaviours addressed in relation to needle use are: injection frequency, number of episodes of injecting with borrowed equipment, number of people who had used a needle before the subject, number of episodes of lending used equipment to others, cleaning of equipment, and the use of bleach as a cleansing agent. Questions relating to sexual behaviour are: number of sexual partners, condom use with regular partner(s), condom use with casual partners, condom use in paid sex, and participation in anal intercourse. All questions concern behaviour in the month prior to the day of interview. This period was selected to gain a measure of a subject's current risk-taking behaviour, and to maximize the accuracy of recall. Asking subjects to recall over longer periods was considered likely to produce less accurate responses.

The scale was designed for administration by an interviewer because piloting indicated IVDU have difficulty in self-administration of the scale.

Interviewer administration was also thought to enhance the collection of accurate information through clarification of the responses given. The HRBS has been shown to be a valid and reliable instrument and is acceptable to IVDU. For information concerning its reliability, validity, and other psychometric properties see Darke, Hall, Heather, Ward, & Wodak (1990).

3. USES OF THE HRBS

Although the HRBS could be used clinically as a structured interview for identifying areas of concern in an individual client's risk-taking behaviour, its primary usefulness is in research and evaluation. A number of strategies have been proposed and implemented to reduce the spread of HIV infection in IVDU, including education campaigns, counselling within existing treatment programs, and increasing the availability of sterile needles and syringes. The HRBS has been designed to evaluate the efficacy of such interventions. The advantages of using the HRBS for such evaluations are that it has been shown to be valid and reliable and that it is sensitive to both injecting and sexual behaviour. Accurately measuring the degree of a user's risk-taking behaviour, both prior to and subsequent to any of the above interventions, is essential in the evaluation of their impact on the behaviour of IVDU.

4. ADMINISTERING THE HRBS

The HRBS is in the form of a structured interview and usually takes about ten minutes to administer. As with any interview, it is important to inform the person being interviewed why they are being interviewed, how long the interview will take, and what will happen in the interview. It is also important in the case of the HRBS to inform the interviewee that the questions they are going to be asked are private and concern the way in which they use needles and some aspects of their sexual life.

In order to gain truthful answers, it will also be

necessary to guarantee the complete confidentiality of the information provided. Obviously, if a client's treatment, e.g., methadone, depends on them not having injected during the last month, then it is very unlikely that he or she will be willing to reveal much about their drug use. In an anonymous research interview these issues do not arise, and it has been found that IVDU are willing to be frank about their drug use and sexual behaviour. However, in clinical settings where treatment staff are conducting the interviews, the veracity of the responses elicited will depend on the rapport between the client and interviewer and on the client's perception of what the consequences of their being truthful will be.

Before beginning each of the two sections of the scale, it is helpful to focus the subject's attention on the topic and the time frame of one month by saying something like: *I'm going to ask you a few questions about your drug use for the last month*, and, *The next part of the questionnaire concerns your sex life over the last month*. This introduces the topic to the subject and prepares them for the questions that follow.

It is important that the questions be asked in language that IVDU understand and feel comfortable with. Street language appropriate for time and place should be used. Details of the rationale for each question and the definition of what terms mean are set out below question by question. The first six questions are concerned with drug use, the latter five with sexual behaviour.

a) Drug Use Section

Question 1.

How many times have you hit up (injected any drugs) in the last month?

This question asks the subject to estimate how often they have injected in the last month. If the subject has trouble answering the question then a prompt like, *How often have you hit up? Once a week? Once a day? etc.*, will help

them to understand what kind of frequency information is required. When the subject answers, circle the number at the end of the line corresponding to the response that most closely approximates their frequency of injecting in the month prior to the interview. If the subject has not injected in the month prior to the interview, record zero for Drug Use Sub-total and go on to the Sexual Behaviour Section.

Question 2.

How many times in the last month have you used a needle after someone else had already used it?

This question asks the subject to estimate how many times they have injected with a needle that another person has already injected with. Record the number of times this occurred whether the needle shared had been cleaned before re-use or not. Questions 5 and 6 are concerned with cleaning needles before re-use as a separate risk factor. If the subject has a sexual partner, it is important to clarify for all the questions concerned with needle sharing that sharing includes their partner as well. Many IVDU do not regard sharing with their sexual partner as 'true' sharing. It may be necessary to probe for this information. Question 2, then, asks the subject about any risk to themselves by using the contaminated needles of others.

Question 3.

How many people have used a needle before you in the last month?

Whereas Question 2 asked the subject about how many times they used a needle that was passed on to them, Question 3 is concerned with how many *different* people had used any needles before them. This means the total number of different individuals in the month prior to the interview who used a needle before the subject. Question 3 takes account of the number of possible contaminated others the subject may have been exposed to via needle sharing.

Question 4.

*How many times in the last month has someone used a needle **after** you have used it?*

Question 4 asks the subject how many times in the month prior to the interview he or she had used a needle and then passed it on to someone else who then used it. Again, record the number of times the subject passed on a needle whether the needle was cleaned or not. As with Question 2, it may be necessary to question the subject further concerning their sexual partner. This question is concerned with the risk the subject might pose to other IVDU through sharing needles.

Question 5.

How often, in the last month, have you cleaned needles before re-using them?

This question is concerned with any needles the subject has re-used in the last month, not only those that were used by other people. The subject may be living in circumstances where the integrity of their own needles cannot be guaranteed, e.g., in the case of a couple who live together, or in the case of shared accommodation where the subject lives with other users who may have used one of the subject's needles without his or her knowledge. Question 5 assesses the added risk of not cleaning injection equipment before re-use.

Question 6.

Before using needles again, how often in the last month did you use bleach to clean them?

Given that bleach is known to be viricidal, Question 6 asks whether the subject has used bleach to clean their needles before re-using them. Again record any re-use regardless of whether the needle was known to be used by another person or not. Question 6 assesses the way in which any used needles were cleaned before use.

b) Sexual Behaviour Section

Questions 7 - 11 are concerned with sexual behaviour, and because this is a new topic it is suggested that this is signalled to the subject by saying something like, *The next few questions are about your sex life over the last month.* Depending upon the nature of the rapport already established, it may be necessary to inform the subject that the questions are going to be about very private matters and to reaffirm the confidentiality of the interview.

Question 7.

How many people, including clients, have you had sex with in the last month?

Question 7 asks the subject about the number of *different* sexual partners they have had in the last month. The rest of the questions in the Sexual Behaviour Section cover different types of partners and kinds of sexual activity. All questions in the Sexual Behaviour Section refer to penetrative sex, i.e. sex where there is some penetration of the vagina or anus with the penis. If the subject hasn't had penetrative sex in the month prior to the interview, record zero for sexual behaviour and terminate the interview.

Question 8.

How often have you used condoms when having sex with your regular partner(s) in the last month?

'Regular partner(s)' in this question refers to any person the subject regularly has sex with, i.e., the subject may have more than one regular sexual partner. Do not include sexual activity that does not involve penetration with the penis. The risks associated with other sexual activities like unprotected oral sex are at this time uncertain.

Question 9.

How often did you use condoms when you had sex with casual partners in the last month?

'Casual partners' means any person that the

subject had penetrative sex with in the month prior to the interview who is not a regular sexual partner and is not a paying client. Prostitutes are regarded as casual partners.

Question 10

How often have you used a condom when you have been paid for sex in the last month?

Question 10 asks the subject about any instances where they have exchanged sex for money or drugs in the month prior to the day of interview. Again include only anal or vaginal penetrative sex.

Question 11

How many times did you have anal sex in the last month?

Anal sex refers to the insertion of the penis into the anus. Record instances of both active and passive anal sex, both with and without a condom.

5. SCORING THE HRBS

The HRBS is easy to score. For each of the two sub-sections merely add up the score for each of the questions; for the total score add up the two sub-totals. The HRBS provides three scores: a total score indicating level of HIV risk-taking behaviour; a Drug Use Sub-total indicating level of risk due to drug taking practices; and a Sexual Behaviour Sub-total indicating level of risk associated with unsafe sex. In all cases the higher the score, the greater the risk the subject has of contracting and passing on HIV.

REFERENCE LIST

- Centers for Disease Control. (1989). Acquired immunodeficiency syndrome associated with intravenous drug use - United States, 1988. *Morbidity and Mortality Weekly Report*, 38, 165-170.
- Darke, S., Hall, W., Heather, N., Ward, J., & Wodak, A. (in press). The reliability and validity of a scale to measure HIV risk-taking behaviour amongst intravenous drug users. *AIDS*.
- Darke, S., Hall, W., & Carless, J. (1990). Drug use, injecting practices and sexual behaviour of opioid users in Sydney, Australia. *British Journal of Addiction*, 85 (12).
- Feucht, T.E., Stephens, R.C., & Roman, S.W. (1990). The sexual behavior of intravenous drug users: Assessing the risk of sexual transmission of HIV. *Journal of Drug Issues*, 20, 195-213.
- Morlet, A., Darke, S., Guinan, J.J., Wolk, J., & Gold, J. (1990). Intravenous drug users who present to the Albion St (AIDS) Centre for diagnosis and management of human immunodeficiency virus infection. *Medical Journal of Australia*, 152, 78-80.
- Philpot, C.R., Harcourt, C.L., & Edwards, J.M. (1989). Drug use by prostitutes in Sydney. *British Journal of Addiction*, 84, 499-505.
- Robertson, J.R., Skidmore, C.A., & Roberts, J.J.K. (1988). HIV infection in intravenous drug users: A follow-up study indicating changes in risk-taking behaviour. *British Journal of Addiction*, 83, 387-391.
- Skidmore, C.A., Robertson, J.R., & Roberts, J.J.K. (1989). Changes in HIV risk-taking behaviour in intravenous drug users: a second follow-up. *British Journal of Addiction*, 84, 695-696.
- Stimson, G.V., Donoghoe, L.A., & Dolan, K. (1988). HIV transmission risk behaviour of clients attending needle exchange schemes in England and Scotland. *British Journal of Addiction*, 83, 1449-1455.
- Turner, C.F., Miller H.G., & Moses L.E. (Eds.). (1989). *AIDS: Sexual Behavior and Intravenous Drug Use*. Washington: National Academy Press.

APPENDIX 1

THE HIV RISK-TAKING BEHAVIOUR SCALE

Drug Use Section:

1. How many times have you hit up (i.e. injected any drugs) in the last month?

- Hasn't hit up..... 0
- Once a week or less..... 1
- More than once a week..... 2
(but less than once a day)
- Once a day..... 3
- 2-3 times a day..... 4
- More than 3 times a day..... 5

N.B. IF SUBJECT HASN'T INJECTED IN THE LAST MONTH, SCORE ZERO FOR THE DRUG USE SECTION, AND GO TO QUESTION 7.

2. How many times in the last month have you used a needle after someone else had already used it?

- No times..... 0
- One time..... 1
- Two times..... 2
- 3-5 times 3
- 6-10 times 4
- More than 10 times 5

3. How many different people have used a needle before you in the last month?

- None 0
- One person..... 1
- Two people 2
- 3-5 people..... 3
- 6-10 people..... 4
- More than 10 people..... 5

4. How many times in the last month has someone used a needle after you have used it?

- No times..... 0
- One time..... 1
- Two times..... 2
- 3-5 times 3
- 6-10 times 4
- More than 10 times 5

5. How often, in the last month, have you cleaned needles before re-using them?

- Doesn't re-use..... 0
- Every time..... 1
- Often..... 2
- Sometimes..... 3
- Rarely..... 4
- Never..... 5

6. Before using needles again, how often in the last month did you use bleach to clean them?

- Doesn't re-use..... 0
 - Every time..... 1
 - Often..... 2
 - Sometimes..... 3
 - Rarely..... 4
 - Never..... 5
-

Drug Use Sub-total

Sexual Behaviour Section:

7. How many people, including clients, have you had sex with in the last month?

- None..... 0
- One..... 1
- Two..... 2
- 3-5 people..... 3
- 6-10 people..... 4
- More than ten people..... 5

N.B. IF NO SEX IN THE LAST MONTH, SCORE ZERO FOR SEXUAL BEHAVIOUR

8. How often have you used condoms when having sex with your regular partner(s) in the last month?

- No reg. partner..... 0
- Every time..... 1
- Often..... 2
- Sometimes..... 3
- Rarely..... 4
- Never..... 5

9. How often did you use condoms when you had sex with casual partners?

- No cas. partners 0
- Every time..... 1
- Often..... 2
- Sometimes 3
- Rarely..... 4
- Never 5

10. How often have you used condoms when you have been paid for sex in the last month?

- No paid sex..... 0
- Every time..... 1
- Often..... 2
- Sometimes 3
- Rarely..... 4
- Never 5

11. How many times did you have anal sex in the last month?

- No times..... 0
- One time..... 1
- Two times..... 2
- 3-5 times 3
- 6-10 times 4
- More than 10 times 5

Sexual Behaviour Sub-total

TOTAL SCORE

(Total Score = Drug Use Sub-total + Sexual Behaviour Sub-total)