

# SOME EFFECTS OF QUESTIONNAIRE DESIGN ON REPORTED RATES OF VICTIMIZATION

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## Abstract

**KEY WORDS:** Question Order Effects.

Estimates from Statistics Canada's survey on Violence Against Women show some gratifying agreements and striking disagreements with estimates from other surveys that attempted to measure similar characteristics. The discrepancies can often be explained by obvious differences in the questions asked, but even when the questions are very similar, large differences between estimates can be observed. This paper examines the similarities and differences between estimates and relates these to the design of the questionnaires. Patterns of response are examined for internal inconsistencies that indicate response errors and this analysis is used to evaluate the questionnaires. The advantages and disadvantages of the various questionnaire designs are discussed and recommendations are made for future surveys of violence against women.

## 1 Introduction

Statistics Canada's Violence Against Women survey (VAW) was designed to measure the nature, extent, and some of the effects of male violence against women in the Canadian population. While it was the first national survey directed at these issues, there are a number of recent related surveys conducted on a smaller scale such as those described by Smith (1987, 1990, 1991), DeKeseredy and Kelly (1993), and Haskell and Randall (1993). From these surveys a number of estimates of the same concepts have been produced and can be compared. For instance, these three sources and the Violence Against Women Survey provide four estimates of the prevalence of sexual violence: 19.1%; 45.8%; 67%; and 39% respectively. These estimates span a disturbing range, so long as they are really estimates based on the same concepts. A careful examination of the differences in the questions used and the differences in the estimates obtained may provide some insight into better ways of designing questionnaires to examine violence against women.

In this paper, I compare a number of estimates,

concepts, and methodologies from these surveys.

## 2 The Surveys

Smith (1987, 1990, 1991) describes a survey (the Toronto Woman Abuse Survey (TWAS)) on violence against women conducted in Toronto in 1987. The target population for this survey consisted of women aged 18 to 50 years who were living with or who had recently lived with a male partner. The sample was selected using random digit dialing (RDD) and the interviews were conducted by telephone. The response rate was 56.4%, with 604 responses obtained.

DeKeseredy and Kelly (1993) describe a survey (the Canadian Dating Violence Survey (CDVS)) on violence against women (dating violence) conducted in college and university classrooms across Canada in 1992. The target population for this survey consisted of people attending universities and colleges who had ever been involved in a dating relationship. The sample was a complex multistage one with a sample of classes selected from a sample of institutions. The questionnaires were self completed in the classroom with the researchers present. No response rate is given and the analysis was based on responses from 1,835 women and 1,307 men.

Haskell and Randall (1993) describe a survey (the Women's Safety Project (WSP)) on violence against women conducted in Toronto in 1991. The target population for this survey consisted of women aged 18-60. The sample was selected from a list of residential addresses. The interviews were conducted face to face. No response rate is given and the analysis used responses from 420 women.

The Violence Against Women Survey (VAWS) was conducted by Statistics Canada in 1993. Its target population consisted of women aged 18 and older living in the ten provinces of Canada. The sample was selected using random digit dialing and the interviews were conducted by telephone. The response rate was 63.7%, with 12,300 responses obtained.

### 3 The Questions Used

While all of these surveys were interested in collecting data on the respondents' experiences of violence, they collected the data using different questions.

Three of the surveys used sequences of questions derived from the Conflict Tactics Scale (CTS) of Straus and Gelles (1986). This scale consists of 19 questions that ask about types of behaviour that might be used in the context of a disagreement. The respondents may be asked about their experiences as victims of these types of behaviour and/or about their use of these types of behaviour. The first questions asked are those that refer to nonviolent behaviours such as 'discussing the issue', 'getting information to support his point of view', or 'refusing to talk about it', followed by questions about behaviour of increasing violence, from 'threatening to hit you' to 'beating you up' to 'using a gun or knife on you'. Respondents are asked, for each category of behaviour, whether it had happened in the past 12 months, and if it had not, whether it had ever happened. The CTS has been widely used to attempt to measure marital violence. It has been used to interview both male and female respondents and to ask respondents about their experiences as both victims and perpetrators of violence. The scale has both advocates (eg Strauss and Gelles 1990) and detractors (eg Dobash et al 1992). One obvious type of violence not addressed by the CTS is forced sexual activity.

Smith's 1987 survey (TWA) used the CTS but additionally asked four supplementary questions about i) physical abuse by a male stranger in public, ii) 'experiences as a victim of abuse by a husband, partner, boyfriend or date', iii) 'being forced to have sex against your will by a husband, partner, boyfriend or date', and iv) 'anything else that might help us understand the problem'. When incidents were reported in response to the supplemental questions, a description of the incident was collected and based on this description the incident was classified as abuse or not.

DeKeseredy and Kelly's 1992 survey (CDV) used the questions from the CTS that refer to violent behaviour and added a slightly reworded version of the Sexual Experience Survey of Koss et al (1987) to include various forms of sexual assault. No questions were included about violence other than in dating relationships.

To collect information on violent behaviour of current or previous husbands and partners the Violence Against Women Survey used the CTS questions that refer to violent behaviour, with an ad-

ditional question on forced sexual activity. Some of the CTS questions have been criticized as being somewhat ambiguous about the seriousness of the violence reported, such as "Did he ever throw something at you?". The VAWS modified these questions slightly to try to reduce the ambiguity: "Did he ever throw something at you that could hurt you?" In addition, the questions were introduced as relating to women's experiences of violence rather than being about things that might have happened in the course of an argument. Violence by strangers, by dates or boyfriends, and by other men was investigated through a series of questions on i) forced sexual activity, ii) unwanted sexual touching, iii) physical attacks, and iv) credible face to face threats of physical attack. The questions were designed to identify incidents that fit the Canadian Criminal Code definitions of assault and sexual assault. The questions were asked separately for strangers, for boyfriends and dates, and for other men known to the respondent. For all types of violence, the VAW questionnaire asked first whether it had ever happened, and then determined the number of times it had happened and when the most recent incident occurred.

The Women's Safety Project questionnaire did not use the CTS but rather a series of questions about unwanted childhood (under 16) sexual experiences and a series of questions about unwanted adult sexual experiences. Each question in the series asked about a very specific type of unwanted sexual experience such as i) attempted or actual forced sexual intercourse, ii) unwanted sexual experience because of a physical threat, and iii) unwanted sex while incapacitated (drugs, alcohol, sleep). A further question was asked about physical attacks by husbands, partners, dates, and boyfriends. For these types of violence the WSP asked if it had ever occurred, and then collected details about each occurrence.

### 4 Comparing the Results

Tables 1a, 1b, and 1c present a number of estimates of statistics based on similar concepts from these four surveys. Immediately apparent are the large number of cells in the tables without entries; the suite of published statistics differs considerably from survey to survey. There are also two groups of estimates: those that are available from the WSP, the VAWS, and the CDVS (Tables 1a and 1b); and those available from the TWAS and the VAWS (Table 1b).

Examining the first group of estimates, it is clear that there is considerable disagreement between them,

Type of Violence	Survey		
	VAW	WSP	VAWa
Unwanted Sexual Touching	25.0	44	28.1
Forced Actual or Attempted Intercourse		51	
Sexual Assault	39.0	67	43.6
Sexual Assault (partner or date)	16.7		18.7
Physical Assault (partner or date)	28.1	27	31.2

**Table 1a. Rates of Violence (%) (Since the age of 16 except where noted) as reported by four surveys of violence against women.**(VAWa rates are for women aged 18-59.)

Type of Violence	Survey		
	VAW	CDV	VAWb
Unwanted Sexual Touching	25.0	33	27.9
Forced Actual or Attempted Intercourse		6.7-15.7	
Sexual Assault	39.0		42.8
Sexual Assault (partner or date)	16.7	45.8	17.0
Physical Assault (partner or date)	28.1	34.9	24.2

**Table 1b. Rates of Violence (%) (Since the age of 16 except where noted) as reported by four surveys of violence against women.**(VAWb rates are for women aged 18-24.)

especially for the sexual abuse estimates. Differences in the target populations could account for some of the differences, especially those of the CDVS. In this survey of students the median age was 20 and so the number of years of exposure to the risk of violence was lower for these respondents. (However, only students exposed to the risk of violence through dating experience were included in the survey.) Column VAWb in the table presents VAWS estimates for women aged 18-24. The VAWb sexual assault and physical attack estimates are both much lower than those from the CDVS. There were differences in

Type of Violence	Survey		
	VAW	TWA	VAWc
Sexual Assault	39.0	19.1	44.6
Physical or Sexual (stranger)	23.4	20.2	28.1
Sexual (stranger)	19.3	8.6	23.3
Physical or Sexual (partner or date)	33.9	36.4	38.1
Sexual (partner or date)	16.7	11	19.3
Physical or Sexual (partner)	25.3 (29.3)	29.8	27.3 (33.7)
Sexual (partner)	6.9 (8.0)	9	7.6 (9.4)
CTS only (partner)	23.7 (27.5)	25	25.9 (32.0)
CTS only (partner) Last 12 months	2.8 (3.3)	14.4	3.9 (4.8)

**Table 1c. Rates of Violence (%) (Since the age of 16 except where noted) as reported by four surveys of violence against women.**(VAWc rates are for women aged 18-49. Rates in ( )'s are restricted to women who have ever been married or lived in a common-law partnership. )

the questions used that may be responsible for these differences. The CDVS included in sexual assault any unwanted sexual activity where the victim was "overwhelmed by a man's continual arguments and pressure"; the VAWS included only unwanted sex as a result of the use of physical force. The high rate of physical attack reported by the CDVS may be due to its use of the CTS item 'has anyone pushed, grabbed, or shoved you'. The CDVS asked this question about the behaviours of boyfriends and dates and found the prevalence of this type of physical attack to be 31.4%; other types of physical attack thus added only 3.5% to the total prevalence of physical attack. The VAWS only asked this question about the behaviour of current and previous spouses and partners. It seems to be important to use this question to promote disclosure of this type of violence in dating relationships.

The remaining differences between WSP and VAWS estimates of sexual violence need to be explained. Both the unwanted sexual touching estimate and the sexual assault estimate from the WSP are much higher than those from the VAWS. The represen-

tativity of the WSP sample is unclear. The study started with a random sample of residential addresses, but no indication of the response rate or the pattern of non-response is published. It is noted that the interviews took from 45 minutes to 25 hours to complete, with a typical interview lasting two hours. Victims of violence may be more committed to studies like this and hence more likely to complete long questionnaires, leading to a bias due to differential non-response. There is also a significant difference in the collection methods: the VAWS was by telephone, the WSP was face to face. Both surveys tried to establish a rapport with respondents and draw them into the subject of violence against women by asking questions about safety, fear, self-protection, and harassment before asking about violence. The WSP asked more questions before reaching the violence section, while both surveys asked many questions that allowed the respondent to recall and report violence. The questions asked were not the same. For instance the WSP included questions explicitly referring to unwanted sexual activity while asleep, unconscious or drugged while this type of activity was only referred to implicitly by the VAWS. However the differences in questions do not seem striking enough to explain the differences in estimates, so the indication remains that either in-depth face to face interviews may elicit higher rates of disclosure of victimization than do telephone interviews or that some bias in the WSP sample is responsible.

The second group of estimates is particularly interesting because the differences between the two surveys involved (VAW and TWA) are more subtle than those between the three surveys represented in the first group. There were differences between the target populations (18-50 vs 18+, Toronto vs Canada), but both surveys were RDD with telephone interviewing, and both used the CTS with supplementary questions. Estimates based on the population 18-49 from the VAW survey are presented in column VAWa of Table 1.

For many of the estimates there is either considerable agreement or the differences can be reasonably explained by the differences in the questionnaires. The TWAS captured violence by strangers through two questions, one specifically about physical attacks:

For this survey, abuse means being pushed, grabbed, slapped, punched, kicked, beaten up, attacked with a weapon, or physically attacked in any other way. Since you were 16 years of age, has any male stranger abused you, or tried to abuse you, in public?

and another general open question:

So now that you have had a chance to think about the topic, can you tell me anything (anything more) from your own experience that may help us understand this problem?

Physical assaults in non-public places and any sexual assaults the respondent did not report in the open question through fatigue, reluctance to disclose, or misunderstanding of the nature of "this problem" would not contribute to the estimates. In contrast the VAW survey asked two questions explicitly about sexual assaults (forced sexual activity, unwanted sexual touching) and two questions about physical assaults (actual physical attacks, credible face to face threats) by strangers.

Similarly, the TWA survey asked about violence by dates and boyfriends through three questions; one was the general open question described above, and the other two were:

Have you had any (any other) experiences as a victim of abuse by a husband, partner, boyfriend or date, or any man you are, or were, having a relationship with that I have not asked about?

Now, Back to yourself, have you ever been sexually assaulted? By that I mean forced to have sex against your will by a husband, partner, boyfriend or date?

The VAWS asked the same two sexual assault and the same two physical assault questions for dates and boyfriends as were asked for strangers.

Considering the more explicit questions used by the VAWS it is not surprising that its estimates for stranger and partner or date violence are generally the same or higher than those from the TWAS.

When comparing estimates for abuse by partners only it is important to note the difference in the populations surveyed: the TWA survey only interviewed women who had recently lived with a husband or common-law partner (in the previous two years); from the VAW survey one can identify those women who currently live in or who have ever lived in, but not those who have recently lived in such a relationship. The estimates in round brackets in the VAWa column of Table 1 are for those women who have ever lived with a husband or common-law partner. Comparing the estimates we find considerable agreement for physical or sexual abuse, sexual abuse, and CTS abuse, but a striking disagreement between the estimates of annual incidence of physical (CTS) abuse.

This disagreement is particularly interesting because of the similarity of the prevalence estimates. The ages contributing to the two estimates are the same, the same CTS items were used, the same prevalence was estimated; how then can the incidence estimate of 58% of prevalence from the TWA survey be reconciled with the estimate of 15% of prevalence from the VAW survey? Why was violent victimization over-reported for the past 12 months by the TWAS and/or under-reported by the VAWS.

A variety of hypotheses can be formulated to explain this phenomenon. One possibility is that the difference represents a real change. Perhaps the public awareness programmes about the unacceptability of spousal violence have had an effect between the 1987 TWAS and the 1993 VAWS; 12 month incidence rates would be affected first, with lifetime prevalence declining more slowly.

A second possibility is that 12 month incidence is over-reported by the TWAS. This could happen in several ways. One mechanism is based on an interaction between the importance to the respondents that their experiences be counted by the survey and a difference in question ordering between the two surveys. The TWA survey asked for each of the types of violence in the CTS: "how many times he did it in the past 12 months." If the answer was never to all types of violence the respondent was asked whether it had ever occurred. The VAWS asked if each of the types of violence had ever occurred; later, details about the number of violent incidents and the time of the first and most recent incidents were asked. If respondents to the TWA survey said yes to the 12 month question to ensure that their experience would be counted, even though the incident took place more than 12 months before, a discrepancy like that observed would occur. Another mechanism would be that respondents were not always applying the "in the past 12 months" restriction when responding. This qualifier was read in the introduction to the series of items in the scale; before the 19 item scale was completely administered, some respondents may have forgotten the reference period and so may have unintentionally reported events outside of the reference period.

Alternatively, VAWS respondents, having disclosed that they have been victims of spousal violence and in so doing having made their voices heard, were "free" to deny the ongoing nature of that violence by placing the most recent incident more than 12 months before, leading to under-reporting of the 12 month rate.

Choosing among these hypotheses seems difficult. The VAWS collected information about how

many times spousal violence had occurred as well as when it had started and when it last occurred. This data can be used to look for consistencies and inconsistencies in the data, but this would provide only weak support for the VAWS.

To attempt to provide some indirect confirmation of this hypothesis, the distribution in time of the first instance of abuse by a partner as collected by the VAWS was examined. Table 2 gives these estimates. If we assume that the categories 'Last 12 months' and 'A year ago' cover the first 12 months and the last six months of the 18 months preceding the survey these data show a gradual dropoff in the number of new cases of abuse in each year with a bump at 8 years ago (this could be explained by respondents who answered with the year of the incident choosing 1985 more often than 1984 or 1986) and 10 years ago. These data are consistent with the constant rate of new abuse that would be observed in a population that remained relatively homogenous over time, with a gradually increasing level of recall bias over time.

A problem with Table 2 is that the at risk population is not the same for each time period. Those who married two years ago are included in the population for each of the estimated rates, even though for the estimates for the earlier time periods they may not have known their eventual partner. To alleviate this problem, the estimates in Table 3 were produced. For this table, the analysis used only currently married women who married in the ten years before the survey and who experienced no violence at the hands of their partner before their marriage. For each time period the population at risk is those who were married and who had not previously been victimized by their partner. A similar pattern is observed, with rates of new victimization being quite high (3-4%) for the first two years, then stabilizing between 1.5-2 %, with a peak at 10 years.

## 5 Conclusions

The first suggestion is that researchers develop a standard minimum suite of estimates that would be used when reporting results of surveys on violence against women. This suite should include estimates of physical assaults, sexual assaults and of all assaults. These should be presented for strangers, dates and boyfriends, acquaintances, husbands and partners, and all men. If the CTS is used with supplementary questions, the CTS only rates should be given. Useful other categories of perpetrators would be current husbands and partners, previous

Time of First Violence	Percentage of Ever-married Women
Last 12 months	2.05
A year ago	1.01
2 years ago	1.94
3 years ago	1.69
4 years ago	1.36
5 years ago	1.24
6 years ago	1.15
7 years ago	.96
8 years ago	1.19
9 years ago	.61
10 years ago	2.19
More than 10 years ago	13.88
Unknown	.37
Never Abused	70.35

**Table 2. Time of first abuse by a husband or partner, VAWS.**

husbands and partners, all intimates (including dates, boyfriends, and current and previous husbands and partners), and all non-strangers.

Further study of the differences in disclosure rates between telephone and face to face interviewing needs to be done. The same questionnaire should be used to isolate the effect of the collection method.

The effect of question ordering when asking about lifetime prevalence versus 12 month incidence needs to be investigated in a controlled setting. The evidence presented here suggests that asking the 12 month question first may bias the estimates towards high 12 month incidence, and thus that the lifetime question should come first. An additional benefit is that the pair of questions 'Has it ever happened? When did it happen most recently?' provides more detail than the pair 'Has it happened in the past 12 months? Has it ever happened?'

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Time of First Violence	Number of Married Women Without Previous Abuse	Rate (%)
Last 12 months	2,003,230	4.07
A year ago	1,832,243	1.50
2 years ago	1,661,294	3.09
3 years ago	1,479,914	2.10
4 years ago	1,248,876	1.57
5 years ago	1,064,535	2.11
6 years ago	867,435	1.92
7 years ago	710,580	1.54
8 years ago	543,173	2.08
9 years ago	356,347	2.10
10 years ago	222,531	3.10

**Table 3. Annual rates of new violence by a husband or partner for currently married women married ten or fewer years and no violence before start of union, VAWS.**

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