Content analysis was used to examine the consistency of responses in self-report data obtained by a semi-structured conversational interview. It was hypothesized that a majority of the seemingly inconsistent responses would prove to be consistent when seen from the respondents' points of view. The sample consisted of 215 female homicide offenders incarcerated in New York State correctional facilities or on active parole supervision in New York City. Results indicate that of the 24 respondents initially identified as having inconsistent responses, only one was regarded as inconsistent after the content analysis was performed and a coding scheme was developed to examine the apparent inconsistency from the respondent's point of view. The coding scheme developed also predicted homicide-related variables more effectively than did the original coding scheme developed for this sample. Suggestions for improving the construction of interview questions are also presented. (Contains 3 tables and 22 references.) (Author)
Examining Consistency of Responses in Self-Reports using Content Analysis

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ABSTRACT

Content analysis was used to examine the consistency of responses in self-report data obtained from a semi-structured conversational interview. It was hypothesized that a majority of the seemingly inconsistent responses would prove to be consistent when seen from the respondents' points of view. The sample consisted of 215 female homicide offenders incarcerated in New York State correctional facilities or on active parole supervision in New York City. Results indicate that of the 24 respondents initially identified as having inconsistent responses, only one was regarded as inconsistent after the content analysis was performed and a coding scheme developed to examine the apparent inconsistency from the respondent's point of view. The coding scheme developed also predicted homicide-related variables more effectively than did the original coding scheme for this sample. Suggestions for improving the construction of interview questions are also presented.

INTRODUCTION

The use of self-report data has increased in recent years, particularly as a method of obtaining sensitive information, such as involvement in criminal activity, drug and alcohol abuse, and sexual practices (Alexander, et al., 1993; Bailey, et al., 1992; Barnea, et al., 1987; Calsyn, et al., 1993; DeMaio, 1984; Dunford & Elliot, 1984; Hser, et al., 1992; O'Malley, et al., 1983). Self-report data, however, are often retrospective and subject to recall and other types of errors, such as under- or non-reporting of socially undesirable behavior; therefore, establishing the reliability and validity of such data are of great interest to both researchers who produce these type of data and policy makers who use these data to make informed decisions.

In the field of substance use, which relies heavily on self-report data, Hubbard, Eckerman, and Rachal (1976) have proposed three major areas of concern in assessing the reliability and validity of such data: external validity, which refers to the extent to which the self-report data agree with other indicators of behavior that are presumed to be more accurate; construct validity, which is the extent to which the self-report measures of substance use relate to other measures in theoretically predicted ways; and internal validity, which refers to how internally consistent responses are to same or similar items as measured within or across time. Most studies involving substance use have been primarily concerned with issues surrounding internal validity, particularly across time (Alexander, et al., 1993; Bailey, et al., 1992; Barnea, et al., 1987; Hser, et al., 1992; O'Malley, et al., 1983). These studies typically examined the amount of drug use reported by respondents over two or more time periods, and reported a measure of validity (usually a correlation coefficient), to assess the degree to which responses were consistent across time. These studies have generally found a high degree of internal validity in self-report measures of drug use.
Studies that have focused on other sensitive topics have used similar across-time techniques to establish internal validity (Calsyn, et al., 1993; McElrath, et al., 1994), and have found self-report data to be consistent and reliable. Other researchers have combined across-time assessments of internal validity and within-time assessments, by varying setting or method of test administration across time (Needle, et al., 1989; Needle, et al., 1983) and have found that these variables had no effect on the consistency of responses. Researchers who have concentrated their efforts on assessments of external validity, however, have found little correlation between external sources of information and self-report data (Huizinga & Elliot, 1986; Dunford & Elliot, 1984; Frick, et al., 1994).

What is particularly striking about the literature available on this topic is the almost complete reliance on quantitative data analysis techniques to establish evidence of internal consistency. A few researchers have suggested ways in which an examination of inconsistencies in self-report data could be improved; ways that could lend themselves to qualitative data analysis techniques. For example, Bailey, et al. (1991) recommend the use of cognitive analyses; focusing on the thought processes behind responses. Respondents would be asked to describe the process they went through to recall past experiences in order to shed light on what might appear to be logical inconsistencies. These authors also suggest that definitions of terms used in surveys should be provided and kept consistent across measures to counteract a respondent's tendency to change definitions, especially when measures are taken across time. Other researchers have also commented on word ambiguity in a measurement instrument as a possible source of response inconsistency (Calsyn, et al., 1993), and have suggested ways that a respondent's input could be used to clarify terms. However, all of these researchers used interviews with closed-ended response formats, which, by their very nature, limit the amount of respondent input during the interview process.

The semi-structured conversational interview, which has the potential to explore research topics in greater depth, can provide powerful self-report data, especially when the potent combination of fixed-alternative items, open-ended items and scale items are used (Kerlinger, 1986; Wood, 1994). When inconsistencies arise in these data, the analyst can make use of the responses to open-ended questions to help determine the nature of the inconsistencies. Using content analysis to examine these open-ended questions is the next logical step. Content analysis is a particularly well-suited technique for examining inconsistencies in large data sets because it allows an examination of a greater number of subjects than would normally be practical in a typical case-study framework (Kerlinger, 1986; Krippendorf, 1980). Content analysis is a means of organizing qualitative data in which "themes, issues, and recurring motifs within a document can be isolated, counted, and interpreted" (Denzin & Lincoln, 1994, pg. 358). In content analysis, categories of responses to open-ended questions are
explicitly defined and codes are assigned to these categories (Miles & Huberman, 1984; Strauss & Corbin, 1990). Codes are revised as data analysis progresses until a coding scheme emerges that has conceptual and structural order (Miles & Huberman, 1984). The use of content analysis, combined with narrative analysis (whereby text is analyzed from the perspective of the respondent; Manning & Cullum-Swan, 1994) provides powerful techniques "to make better estimates of respondents' true intentions, beliefs, and attitudes" (Kerlinger, 1986, pg. 443). These techniques have been criticized on the grounds that they are inherently subjective and subject to bias. In response, researchers involved in content analysis have suggested that the stability of coding schemes be assessed by using two or more independent coders (Miles & Huberman, 1984; Westbrook, 1994).

This paper presents the results of a content analysis that was conducted to examine the inconsistency of responses in a semi-structured conversational interview. It was hypothesized that a majority of the seemingly inconsistent responses would prove to be consistent when seen from the point of view of the respondent's own perceptions.

**METHOD**

**Data Source/Sample**

The original data used in this study were obtained from semi-structured, conversational interviews conducted with female homicide offenders incarcerated in New York State correctional facilities or on parole supervision in the New York City area. Two hundred and fifteen women (72% of the total number of women who were either incarcerated or on active parole supervision) were interviewed by seven interviewers from the National Development and Research Institutes, Inc. (NDRI) between April 1992 and May 1993. Generally, each interview lasted about one to one-and-a-half hours. Questions were both open- and closed-ended. The open-ended questions allowed respondents to provide details and explanations about the killings, their involvement and the involvement of others, and about their experiences with drugs, crime, and violence prior to the homicide event.

In the original study, respondents were asked early in the interview about their histories of involvement in a variety of illegal activities. The question was worded: "Have you ever participated in the following activities?" and a list of illegal activities was presented, including "kill anyone." At a later point in the interview, respondents were asked to describe what took place on the day of the homicide for which they were convicted. These responses were initially coded to reflect the subject's own perception of their role in the homicide. The initial coding scheme consisted of seven categories: Not sure, Denies involvement, Accomplice in other crime but not in
Examining Consistency of Responses...

homicide, Bystander, Conspirator, Perpetrator, Refused/Missing. Of particular interest in this study are the women who had responded to the earlier question that they had never participated in killing anyone, and yet were coded as an accomplice, conspirator, or perpetrator in the homicide. This subset consisted of 34 women, representing 16% of the original sample. Definitions of accomplice, conspirator, and perpetrator that were originally used to code the homicide narrative from the point of view of the respondent appear below:

Conspirator: Did not personally commit the homicide but did plan it (e.g., hired a killer or went to the scene with the perpetrator, knowing that a homicide was going to take place).

Perpetrator: Committed the homicide.

Accomplice: Participated in another crime, but not in the homicide. Respondent willingly participated in a crime, but didn't know that the crime would end up as a homicide (e.g., participated in a drug deal, robbery or kidnapping that another participant turned into a homicide; gave a weapon to a friend involved in a fight that ended up as an unplanned homicide).

Of these 34 women, 17 were initially coded as accomplices, 14 were coded as perpetrators, and 3 were coded as conspirators. When the narratives were examined, however, it became apparent that the respondents who were originally classified as accomplices (N=17) actually fell into two groups. One group was made up of women who, even though they reported that they did not know a homicide was intended, actively participated in circumstances wherein a homicide was likely to occur (N=7). Another group was made up of women who, even though they were involved in criminal activity, reportedly had no idea that a homicide would occur (N=10). For example, one woman in the latter group reported the following story. (Homicide narratives were transcribed by the interviewers from respondents' tape-recorded accounts. In all of the homicide narratives presented in this paper, the respondents' use of language and grammar remain unchanged. Proper nouns, however, have been deleted):

He (the respondent's sister's friend) made a suggestion and we went along with it. He set (us) up with (a) plan to rob this place where she (the respondent's sister) had just got (a) job at and on our way there, he shot the cab driver. We took a cab. My sister was already there. Sis
worked the midnight shift. He shot the cab driver on the way there. The car crashed and that was the crime, why I'm here.

These 10 women were excluded from the analyses because it was determined that their response of 'No' to the question, "Did you ever participate in ... kill anyone?" was not inconsistent with their narrative description of the homicide. Therefore, the final sample for this analysis consisted of 24 women, representing 11% of the original sample. These women did not differ significantly from the rest of the sample in terms of race, educational experience, whether they were in prison for the first time, whether they had tried any drug, and age at time of homicide (see Table 1).

**Description of Methodology**

The homicide narratives of the 24 women in the sample were initially reviewed to determine if the stories told from the respondents' point of view would help to explain the apparent inconsistency in their responses. It appeared, from an initial content analysis, that the respondents were interpreting the verbs 'participate' and 'kill' in a very active sense; that is, if the respondent did not see her actions during the homicide as actively involved in the immediate cause of death, or did not see the death as the result of a "killing", she indicated that she had never participated in killing anyone. Based on this review, a coding scheme was developed and refined to assess a respondent's level of activity in the homicide, from her own point of view:

- **Passive:** The respondent was held responsible for what she **failed** to do, for example, failure to take a child to the hospital/doctor or failure to stop a homicide that she knew would occur.

- **Reactive:** The respondent was reacting to immediate lethal violence, or the perceived threat of immediate lethal violence from the victim.

- **Avoidant:** The respondent set up the situation, or participated in setting up the situation wherein the homicide was possible or likely to occur, but then withdrew from the situation and responsibility for it.

- **Active:** The respondent actively participated in the killing, or actively killed the victim.

The active responses are the ones that are truly inconsistent. This coding scheme was applied to the narrative data by three independent coders in order to establish the stability of the coding scheme (Miles & Huberman, 1984; Westbrook, 1994). The average agreement in coding responses among the coders was 89%.
RESULTS

Results indicate that, of the 24 respondents, 11 were coded as avoidant (46%), 8 were coded as reactive (33%), 4 were coded as passive (17%) and one respondent was coded as active (4%). An example of an avoidant response follows:

The night before, I had asked this guy to go to my house and do my parents, you know, 'cause my mother had gotten pissed off and kicked me out of the house and like that was the last straw ... so I said, 'That's it. You just gotta do them. You just gotta do both of them'. Because if my father lives eventually he's gonna find out that it was me and my relationship with him is gonna be blown away ... And so I spoke to this guy. Asked him would he go into the house when they weren't there, wait for them to come home, rip them off, he can get whatever he wanted from the house as long as he took care of my parents. He said, 'Okay, fine.' ... So he went to the house and the door was locked and he couldn't get in. So I kind of felt relief because as I started thinking about it it was like, well I really don't want to do this. Maybe if he gets there, now that he said the door is locked, now I don't have to punk out and tell him I really don't want him to do this. We can set it up for another night and I can probably stall him and say I changed my mind, we can run something else. You know, leave it alone. But he went back to the house, okay, and asked me to go back to the house to unlock the door. So I did go back to the house but I didn't unlock the door. And so I went back to the bar and told him okay, everything is hooked up. Figuring by now he'll be really pissed off at me. He'll never know I punked out you know and he'll say, 'Later for her' and leave it alone or catch me whenever he caught me to tell me, 'Yo, what you trying to do to me? You set me up. I went there and the door was locked', whatever. So I really didn't think about it after that and I went out to sleep at my girlfriend's house like I normally would. Unbeknownst to me, he decided to break into the house when the door wasn't open. Figuring that, for whatever reason, the door jammed or whatever and that just wasn't good enough and he thought it was an oversight. So he went around the house to the back door, broke in through another door and then took care of business. So I really thought everything was cool. When the next morning the next door neighbors' daughter came over and got me and said, 'Hey you gotta come to the house. Your parents are dead.' I was like, 'What?' You know, that was like the last thing I expected because I really thought it was cool and that nothing was going to happen.
An example of a reactive response follows:

A friend of mine asked me to watch his apartment for him. He was a driver. His roommate came back and an argument started with a neighbor over a TV set. I argued with the lady; told her to wait for my friend then talk about the TV set. After I got rid of her, we started arguing. He was high. I saw him reach in his back pocket - I knew it was a knife. I took it from him, and used it on him.

An example of a passive response follows:

My boyfriend, the guy that I was living with because my husband was in jail. He fractured her arm [the subject's two year old daughter]; no, dislocated her shoulder, that's what happened. I wrapped it up, I didn't take her to the doctor, so the infection spread through her body...they said that I was neglectful...I should have taken her to the doctor.

As can be seen from an examination of the narratives, none of the avoidant, reactive, or passive women regarded themselves as killers because their perception of the role they played in their particular crime is different from that of an active participant or perpetrator. The first woman sets her parents up to be murdered, but then fails to follow through. She seemed genuinely surprised to hear of her parents' death. Although she initially wanted her mother dead, she avoided full responsibility for the homicide (from her point of view) by not holding up her end of the bargain (i.e., not leaving the door unlocked). The second woman sees herself as acting in self-defense. She seems to think that if she had not used the knife on the victim, it would have been used on her. This woman did not feel active in the crime so much as reactive to the situation. The third woman was passive. When her child was injured at the hands of another, she failed to seek appropriate medical attention. These three different roles, avoidant, reactive and passive, were not part of the original coding scheme but they do serve to help us understand why the above responses are not inconsistent with the previous response of "No" to the question "Have you ever participated in ... kill anyone?". These women were not intentionally misleading the interviewer; the inconsistencies they displayed shed light on their point of view. The information that they provided can certainly be regarded as consistent.

The only response that was coded as active, and therefore can be considered truly inconsistent, was the case of a woman who suffocated her child shortly after the child's birth. Although it was clear from the narrative that the woman was suicidal, the response was coded as active because of the respondent's description of her actions, that appeared quite deliberate.
Further analyses were conducted to compare level of activity as indicated by the newly created coding scheme (avoidant, passive, reactive, and active) and role in homicide as indicated in the original coding scheme (accomplice, conspirator, and perpetrator) for this sample. Both coding schemes were used to examine the relationship of role in homicide and level of activity with variables associated with the homicide, such as motive for homicide, method used in homicide, and whether the respondent believed the victim did anything to bring about his or her own death. An examination of Tables 2-4 reveals that none of these homicide factors varied as a function of role, but did vary as a function of level of activity. Reactive respondents were much more likely to kill in self-defense or in defense of others (88%), while avoidant respondents committed homicide more often because of jealousy or revenge (28%), or in order to obtain money and/or drugs (27%). In terms of method used to kill, level of activity was used to examine the use of guns, knives, or other methods. Reactive respondents were more likely to use a knife (75%), while the other respondents tended to use other methods, such as blunt instruments, strangulation, or by abuse or neglect. When respondents were asked if the victim did anything to bring about their own death, reactive respondents were overwhelmingly likely to respond ‘Yes’ (88%), while only 30% of avoidant respondents and none of the passive or active respondents replied ‘Yes’.

DISCUSSION

Previous research on examining consistency of response in self-report data fails to take into consideration the perspective of the interview subject. Due to the many facets of human nature, responses that on the surface appear to be inconsistent may very well prove, on further examination, to reflect a consistent world view. This research suggests a qualitative method for exploring these inconsistent responses that takes the subject’s perceptions into account. The research presented illustrates the benefits of utilizing content analysis as a strategy for examining inconsistencies in self-report data. The results suggest that the coding scheme which resulted from the content analysis not only served to reduce the number of truly inconsistent responses, (thereby increasing the usable data set), but also functions as a better predictor of homicide-related variables for these respondents than did the original coding scheme.

This research also has implications for item construction in semi-structured conversational interviews. It is recommended that future studies that require respondents to answer sensitive questions, such as involvement in homicide, use language that is less open to subjective interpretation by the respondents. For example, instead of asking the question, ‘Did you ever participate in ... kill anyone?’ the interview schedule could include the following questions:

Have you ever deliberately and directly caused someone else’s death?
Have you ever accidently but directly caused someone else's death?

These questions can be repeated to probe for indirect involvement in the cause of death, such as in the neglect cases, or in the conspiracy cases. While it may seem burdensome to ask so many questions, it has been our experience that respondents can tolerate being asked similar types of questions when interviewers are properly trained to vary voice, inflection and posture.

It is clear from the results of this research that content and narrative analyses are useful methodologies for examining the inconsistencies of responses in self report data. It is hoped that future research will examine the generalizability of these methodologies to similar types of problems in self report data. For example, content analysis might also be used to examine construct validity, if the operational definition of the construct in the validating measure is used in conjunction with the content analysis in developing the coding scheme.
References


Table 1

Demographic Comparison of Sub Sample (N=24) with Balance of Sample (N=191)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Sub Sample</th>
<th>Balance of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>White</td>
<td>38%</td>
<td>21%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12%</td>
<td>14%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>7%</td>
</tr>
</tbody>
</table>

χ² = 3.9,(3),p=.272

<table>
<thead>
<tr>
<th>Education</th>
<th>Sub Sample</th>
<th>Balance of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jr high or less</td>
<td>9%</td>
<td>8%</td>
</tr>
<tr>
<td>Jr High - High School</td>
<td>82%</td>
<td>87%</td>
</tr>
<tr>
<td>More than High School</td>
<td>9%</td>
<td>5%</td>
</tr>
</tbody>
</table>

χ² = 4.6,(2),p=.793

<table>
<thead>
<tr>
<th></th>
<th>Sub Sample</th>
<th>Balance of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>First time in prison? (percent who responded &quot;Yes&quot;)*</td>
<td>100%</td>
<td>93%</td>
</tr>
<tr>
<td>Ever use any drug? (percent who responded &quot;Yes&quot;)**</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td>Age at time of homicide***</td>
<td>30.9</td>
<td>27.1</td>
</tr>
</tbody>
</table>

*χ² = 1.8,(1),p=.184; **χ² = .014,(1),p=.905; ***t=1.8,(136),p=.074
Table 2

Motive by Role in Homicide and Level of Activity

<table>
<thead>
<tr>
<th>Motive by Role in Homicide and Level of Activity</th>
<th>Accomplice</th>
<th>Conspirator</th>
<th>Perpetrator</th>
<th>Passive</th>
<th>Reactive</th>
<th>Avoidant</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Motive</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Self-Defense/Defense of Others</td>
<td>29%</td>
<td>33%</td>
<td>43%</td>
<td>0%</td>
<td>88%</td>
<td>18%</td>
<td>0%</td>
</tr>
<tr>
<td>Get money/Drugs</td>
<td>14%</td>
<td>33%</td>
<td>14%</td>
<td>25%</td>
<td>0%</td>
<td>27%</td>
<td>0%</td>
</tr>
<tr>
<td>Jealousy/Revenge</td>
<td>29%</td>
<td>34%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>28%</td>
<td>0%</td>
</tr>
<tr>
<td>Discipline/Scare Tactic</td>
<td>0%</td>
<td>0%</td>
<td>14%</td>
<td>0%</td>
<td>12%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0%</td>
<td>22%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Missing</td>
<td>28%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>18%</td>
<td>0%</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 14.2, (12), P=.287 \]

\[ \chi^2 = 35.2, (18), P=.009 \]
Table 3
Method by Role in Homicide and Level of Activity

<table>
<thead>
<tr>
<th></th>
<th>Accomplice</th>
<th>Conspirator</th>
<th>Perpetrator</th>
<th>Passive</th>
<th>Reactive</th>
<th>Avoidant</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gun</td>
<td>14%</td>
<td>33%</td>
<td>7%</td>
<td>25%</td>
<td>13%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>Knife</td>
<td>14%</td>
<td>0%</td>
<td>36%</td>
<td>0%</td>
<td>75%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>72%</td>
<td>67%</td>
<td>57%</td>
<td>75%</td>
<td>12%</td>
<td>91%</td>
<td>100%</td>
</tr>
</tbody>
</table>

$\chi^2 = 3.26, (4), P=.516$

$\chi^2 = 17.7, (6), P=.007$

Table 4
Victim Precipitation by Role in Homicide and Level of Activity

<table>
<thead>
<tr>
<th></th>
<th>Accomplice</th>
<th>Conspirator</th>
<th>Perpetrator</th>
<th>Passive</th>
<th>Reactive</th>
<th>Avoidant</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responded 'Yes'</td>
<td>50%</td>
<td>33%</td>
<td>50%</td>
<td>0%</td>
<td>88%</td>
<td>30%</td>
<td>0%</td>
</tr>
</tbody>
</table>

$\chi^2 = .286, (2), P=.87$

$\chi^2 = 9.07, (2), P=.010$