

# **GAMBLING IMPACT AND BEHAVIOR STUDY**

## **APPENDIX A**

### **DEVELOPMENT OF QUESTIONNAIRES FOR THE NATIONAL RANDOM-DIGIT-DIAL, PATRON-INTERCEPT, AND SELF-ADMINISTERED SURVEYS**

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## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	<b>3</b>
<b>INITIAL STAGES OF DEVELOPMENT</b> .....	<b>3</b>
<b>ORGANIZATION OF THE INSTRUMENT</b> .....	<b>5</b>
SECTION A: DEMOGRAPHIC INFORMATION .....	7
SECTION B: GAMBLING BEHAVIOR .....	7
SECTION C: GAMBLING-RELATED ATTITUDES, MOTIVATIONS, AND HISTORY .....	10
SECTION D: PROBLEM GAMBLING DIAGNOSTIC ASSESSMENT .....	11
SECTION E: GAMBLING TREATMENT EXPERIENCE .....	13
SECTION F: FAMILY/MARITAL STATUS AND ISSUES.....	13
SECTION G: INCOME AND FINANCIAL INFORMATION .....	13
SECTION H: CRIMINAL ACTIVITY AND STATUS .....	14
SECTION J: MENTAL AND GENERAL HEALTH .....	14
SECTION K: SUBSTANCE USE .....	14
<b>YOUTH QUESTIONS</b> .....	<b>15</b>
<b>GAMBLING FACILITY PATRON QUESTIONNAIRE AND SELF-ADMINISTERED QUESTIONNAIRE</b> .....	<b>15</b>
<b>REFERENCES</b> .....	<b>16</b>
<b>ATTACHMENTS</b> .....	<b>17</b>
ATTACHMENT A: NATIONAL RANDOM-DIGIT DIAL CAPI INSTRUMENT	
ATTACHMENT B: NORC DSM SCREEN FOR PROBLEM GAMBLING (NODS)	
ATTACHMENT C: RELIABILITY AND VALIDITY QUESTIONNAIRE USED IN TESTING THE NODS)	
ATTACHMENT D: SELF-ADMINISTERED QUESTIONNAIRE	
ATTACHMENT E: GAMING FACILITY PATRON QUESTIONNAIRE	

## **INTRODUCTION**

The specific data NORC collected in the course of the Gambling Impact and Behavior Study were driven by a number of considerations: (1) the needs laid out by the National Gambling Impact Study Commission (NGISC) in its Request for Proposals (RFP); (2) a desire to collect data comparable in important dimensions to the 1975 national survey as well as other surveys of gambling behavior and attitudes; (3) the needs of other agencies working with NGISC to collect data pertinent to their research interests, namely, the National Institute on Drug Abuse (NIDA), the National Institute of Mental Health (NIMH), and the Department of Treasury; (4) needs in the field noted by NORC as well as our research partners and consultants, including Rachel Volberg, Henry Lesieur, William Thompson, Peter Reuter, Charles Clotfelter, Philip Cook, Randy Stinchfield, Howard Shaffer, and I. Nelson Rose; and (5) additional discussions with the Commission regarding its areas of interest, based on further review of the literature in the field and identification of gaps in the existing body of research.

## **INITIAL STAGES OF DEVELOPMENT**

The following survey instruments were reviewed by NORC and had some influence on the development of the our questionnaire:

- Commission on the Review of the National Policy Toward Gambling, 1976. Gambling in the United States. Part I: National Sample.
- R. Volberg, University of Montana, Missoula, 1998. Montana Gambling Questionnaire.
- H. Lesieur, 1993. The South Oaks Gambling Screen, Revised Edition.
- A. Cosby, Mississippi State University. 1995 U.S. Gaming and Gambling Survey.
- R. Stinchfield, 1997. DSM-IV Screen for Gambling Severity.
- National Opinion Research Center, 1998. General Social Survey.
- National Opinion Research Center, 1993. National Treatment Improvement Evaluation Study, Research Intake Questionnaire.
- Office of Applied Studies, Substance Abuse and Mental Health Services Administration. 1997 National Household Survey on Drug Abuse.
- University of Michigan, 1992. Composite International Diagnostic Interview. National Comorbidity Survey.

NORC first developed the questionnaire to be used in the random-digit dial (RDD) telephone survey (in English, translated, after finalization, into Spanish by a questionnaire translation specialist). This was designed as computer-assisted telephone interview (CATI) instrument, administered over the telephone by interviewers at computer workstations in NORC's Lake Park Survey Data Center in Chicago. A CATI questionnaire, although developed initially on paper, is actually implemented as a

computer program which generates screens of fixed text from which interviewers read questions and then key in response codes based on the answers. The program as developed on NORC's Instrument Development System was designed to carry out simple or complex logical instructions, such as inserting or modifying question text to reflect specific answers to previous questions, monitoring responses in order to determine what to display to the interviewer within the sequence of potential questions (the alternative branches are usually called "skip patterns" or "pathing"), and assuring that responses from a question fit within accepted limits and was consistent with earlier responses.

We then developed two condensed and revised versions of the main survey instrument for use with paper and pencil. The data elements of these versions was identical, and included a subset of about two-thirds of the main survey items. The first of these modified instruments was a self-administered questionnaire for two types of respondents: those who were not able or willing to respond to the telephone survey but were willing to fill out a questionnaire on paper; and individuals in the non-telephone households, who were identified from a list of such known households maintained by NORC from our 1998 General Social Survey. The self-administered questions and instructions were reworded appropriately for this format, and the skip patterns were greatly simplified to minimize errors and make the survey easier and quicker to complete.

The second scaled-back version was for use in the patron-intercept survey, and was written for trained interviewers to administer in person to patrons of gaming facilities, which included casinos, lottery ticket sales and video lottery outlets, and race tracks. The simplified skip patterns and item content of the patron instrument were identical to the self-administered version, but this instrument retained the question wordings and interviewer instruction sets of the CATI instrument.

We designed the instruments to provide clear, unambiguous, and interpretable data on the measures of interest, including sociodemographic information, attitudes towards gambling, gambling history and related behaviors, and other relevant concerns, which we describe in detail below. In constructing the total instrument, the questionnaire development team considered sensitivity to context, potential order effects, the proper sequencing of chronological questions, means of avoiding primacy and recency effects for long lists of response options, the need for clear transitions between themes, the logic of filter and dependent questions, and minimization of response set biases.

NORC also designed the instrument to be respondent-friendly, with content, structure, and length designed to maximize cooperation and minimize questioning of no meaning to the respondent, while still collecting all of the information needed. The question items were designed to be clearly and unambiguously understood by persons with an eighth-grade level of education and vocabulary, with or without experience as a gambler. We invested substantial attention to details of item construction, pathing logic, and minimization of respondent burden, in the expectation that our respondents would be more likely to invest their own effort in giving thoughtful and accurate responses if they experienced the interview as a meaningful, logical, and constructive task.

One critical goal was that the telephone survey instrument would not take more than 60 minutes to complete even for persons responding to virtually all of the questions due to their very extensive gambling behavior and other pertinent experiences and conditions. We planned that most respondents would be able to skip over substantial parts of the

instrument as inapplicable or redundant to their particular experience, and we found this to be the case. Our target time for the administration of the telephone questionnaire for those who did not gamble frequently was 30 minutes or less. We monitored timing carefully during our testing of the main instrument and during the initial stages of administration (discussed further below) to ensure that these time targets were met. The ease and speed with which respondents finished the questionnaire was even better than expected. The average administration time for all respondents was 25 minutes, and problem and pathological gamblers had a combined average timing of 40 minutes.

To field-test the instrument, we selected senior telephone interviewers to conduct 35 pilot interviews (32 adults and 3 youth) using our draft CATI instrument. In the past, we have found that experienced interviewing staff are particularly quick to identify and articulate the nature of problem questions, response choices, and procedures, and construct, critique, and test options for resolving these problems. To tap into this expertise, we involved them fully throughout the field-testing phase. We also sought input from the respondents themselves; interviewers asked respondents at the end of each pilot interview to comment on the questionnaire's introduction, item wordings, and the content and flow of the instrument. The interviewers wrote out their results, summarizing the respondents' comments during the interview and identifying problem questions and errors in the computerized instrument.

Following the completion of the pilot data collection, NORC conducted a debriefing with the Project Director, Telephone Center Coordinator, Telephone Center Supervisors, questionnaire writers, programming staff, and the interviewers who participated in the field test. During the debriefing, these personnel went through the questionnaire section by section, discussing the performance of each question during the field test. For example, we examined response frequencies to find items with high rates of missing or implausible responses. The interviewers provided many valuable insights into respondents' reactions to, and uncertainty about, certain items.

## **ORGANIZATION OF THE INSTRUMENT**

We organized the questionnaire into the following sections:

- A. Demographic Information
- B. Gambling Behavior (focusing on past year/last visit)
- C. Gambling-Related Attitudes, Motivations, and History
- D. Problem Gambling Diagnostic Assessment
- E. Gambling Treatment Experience
- F. Family/Marital Status and Issues
- G. Income and Financial Information
- H. Criminal Activity and Status
- J. Mental and General Health
- K. Substance Use

This ordering of sections was determined for a number of reasons. First, it is important to ask very basic demographic information such as age, sex, and race/ethnicity immediately in case the interviewee breaks off from the interview before it is complete. These simple questions also serve to put the respondent at ease, and into a “question-answering mode” before sensitive topic areas are broached. The second section, Gambling Behavior, was the most complex section of the interview. In this section, we asked questions regarding games played, distance traveled, length of time spent gambling, details of gambling expenditures, and so forth, all of which we describe in detail below. Section B was followed by a complementary section—Gambling-Related Attitudes, Motivations, and History—which was less complex and more subjective, giving respondents a “breather” before the next, section which delved into gambling problems.

Depending on how much money respondents reported ever losing on wagers on any one day or over the course of a year, selected interviewees were then taken through Section D, the Problem Gambling Diagnostic Assessment. This instrument determined whether these interviewees had ever had gambling problems conforming to the definitions advanced by the DSM-IV criteria of the American Psychiatric Association. Section E, Gambling Treatment Experience, was asked of respondents who indicated having had one or more of these problems in their lifetimes. The section queried about whether the interviewee had ever been in gambling treatment and if so, the kind of treatment they received.

All respondents were then taken through Section F, Family/Marital Status and Issues, and Section G, Income and Financial Information. These sections were placed after Section D, since we asked certain gambling-focused questions in these sections only of respondents who had indicated some kind of gambling problems. Based on pilot test experience, we knew that some questions would be inappropriate and irritating to ask of nongambling or low-risk gamblers—for example, whether their gambling problems contributed to the divorce or separation of those respondents who reported such events in their lifetimes. Sections F and G were ordered as they were for no reason other than our finding that this placement allowed us to streamline the questionnaire to a certain extent; in other words, certain responses to items in Section F allowed us to skip respondents over certain questions in Section G, more so than if the sections were reversed.

The final three sections dealt with topics of a very sensitive nature, not always as obvious in relevance to the main topic of the survey; and we therefore placed these in the latter part of the questionnaire. Although we risked asking fewer respondents these questions due to break-offs during the course of an interview (which proved to be rare, partly as a result of meeting the timing objectives), we placed these sections where we did to take advantage of gradual trust-building that ordinarily develops between a skilled interviewer and their interviewee. Questions became more sensitive gradually—for example, we asked about money spent gambling in Sections B and C; divorce in Section F; income, debt, and bankruptcy in Section G; and trouble with the law, including arrests, incarceration, and probation or parole, in Section H.

Section J asked about physical and mental health problems, particularly signs of depression and mania, including (for some respondents) questions about levels of sexual desire and suicidal thoughts and actions. All respondents were asked the two screening questions for the depression instrument, but of those who responded affirmatively to one of these questions, only respondents who reported one or more gambling problems in

their lives were asked the full instrument. Finally, Section K queries respondents on their use of alcohol and drugs; respondents indicating use beyond certain thresholds would then be asked questions to diagnose the presence of drug or alcohol dependence. We discuss each of these sections in detail below.

## **Section A: Demographic Information**

For Section A, we asked most respondents 10 items seeking very basic personal information. Items were formulated to be as compatible as possible with the 1974 survey, including age, gender, race, education, importance of faith, and others. Most of these questions were taken from NORC's General Social Survey, so that we could test for the representativeness of our sample population against this much larger sample. More detailed demographic information regarding marital status/history, household composition, and income were saved for later sections, so as not to probe into potentially sensitive areas before a level of trust has had a chance to develop between the interviewer and interviewee.

## **Section B: Gambling Behavior**

Section B is the most lengthy and complicated of the instrument. In this section, we asked respondents in a modular fashion, by type of game, about their experiences with gambling, including particular games played and preferred; frequency of play; distance traveled from home; money taken and/or budgeted for; amounts spent, won, and lost; use of credit cards, ATM machines, and other sources of gambling funds; , and other specific matters depending on the particular form of gambling being discussed.

We defined “gambling” as placing a bet on the outcome of a race or game of skill or chance, or playing a game—including for charity—in which one might win or lose money. Based on discussions with the Commission about its sphere of interest, we asked each respondent to include gambling within the United States only, including the District of Columbia and Puerto Rico, and to exclude gambling in territories such as Guam and the Virgin Islands, as well as on cruise ships, ferries, and other venues in international waters. We reminded respondents at various points throughout the section to include U.S. gaming only.

We began by developing a consecutive series of gate questions asking respondents whether they had played a particular type of game in their lifetimes, and if so, whether in the past year. Once the respondent completed the gate questions, she or he would then be asked about each game played in the past year. We wanted to be comparable to the 1974 survey; however, the dramatic changes the industry has undergone in the past 25 years obliged us to introduce a number of modifications. For example, most kinds of gambling were illegal in 1974, whereas today, most games are legal. In addition, and more significantly for the purposes of our questionnaire, the lines between various types of gaming have blurred, with hybrids being introduced on a regular basis (e.g., keno and video poker) and traditional types of gambling becoming available in a greater variety of venues (e.g., bingo can be played for money in churches, commercial bingo parlors, casinos, and on the Internet, and video gaming machines can be found in casinos, small businesses, racetracks, and on the Internet). Few games are exclusive to one venue, and similarly, seldom does a venue offer only one type of game. If we pursued the structure

used in the 1974 survey too slavishly, we risked confusing participants or miring down in minute, obsolete, and somewhat trivial detail, as well as partially completed interviews due to an overlong questionnaire.

The NORC team concluded that the best approach would first be to sort game types into the most readily distinguishable and policy-relevant types in 1998. We began with the game types of greatest stated interest to the Commission, namely, casinos and lotteries. However, even here, the boundaries are less than perfectly clear. We needed to decide whether to break out recent inventions that could be better categorized elsewhere, such as truck stops with 20 slot machines (which can legally hang a shingle identifying themselves as “casinos”) or the Internet-based U.S. Lottery run by the Coeur D’Alene Tribe of Idaho. Accessing a broad knowledge base regarding the exceptions and inclusions which might come up during the course of an interview was critical to this task.

We developed the modules by focusing on the largest reasonable grouping, while still asking for as much detail within that grouping as possible. This approach allowed us to keep the questionnaire from becoming too unwieldy, since we could keep the number of modules we took the respondent through to a minimum, while still allowing us to cover as many subtypes as we wished. However, what appeared at first glance to be a “largest reasonable grouping” often turned out not to be. Consequently, no precise logic could be utilized in categorizing games. In retrospect, we can say that the following logic was generally applied:

- If a type of gambling venue could be clearly defined and had a variety of types of games, we used this *venue or facility* for a module (e.g., casino, Internet, small business).
- If a clearly definable style of game could take place virtually anywhere, we used the style of *game* (e.g., private games of skill, unlicensed gambling, charitable gambling).
- If a clearly definable style of game could take place in a variety of locations and had a number of permutations that were individually of interest to us, we used the style of game (e.g., lottery, pari-mutuel).
- If a clearly definable style of game could take place in more than one clearly definable facility, and we ask about one or more of these facilities in another module, we chose to ask about the style of game in different modules (e.g., bingo).
- If a clearly definable style of game had a number of permutations and/or could be played in a variety of venues (such as slot machines or card games), OR if a clearly definable *type* of facility had several possible subtypes of facilities at which one can play a variety of games (e.g., “small business”), we placed the module strategically within the section so as to take advantage of the “filtering effect” of the prior modules. We used this technique for our cardroom, bingo, and small business modules.

If we chose to focus on a particular game type, but found that the facilities these game types are usually played in also incorporate types of games found in other, more traditional venues (such as pari-mutuel betting at racetracks, which can also have slot machines), we still wanted to know about respondents’ participation in these auxiliary games. Of course, this then raised the issue of how to ensure that respondents do not

answer questions in a later module with information about the same gaming experience (e.g., answering questions about charitable bingo play in both the charitable and bingo modules). To minimize this risk, we reminded respondents frequently not to include any games they had already told us about.

Because of this approach, as we mention above, the ordering of a number of the modules was critical, allowing a certain module to “catch” a subtype of gaming first, before the respondent could discuss it in another module. For example, due to the relatively rare occurrence of casino bingo play, and our belief that casinos patrons are characteristically different from bingo patrons, we decided to keep casino bingo in the casino module, and put all other types of bingo in a bingo module. Therefore, respondents were asked the casino module first, along with a question about casino bingo; they were then asked in a later module about all other kinds of bingo play. The bingo module also acted as a filter, “catching” charitable bingo before the respondent was asked the charitable gaming module. In fact, we found very few games that could not be classified in a variety of ways. We do not argue that our chosen method of grouping the various kinds of gambling is the most desirable, and we wish to emphasize that while a great deal of effort was put forth by our highly knowledgeable and experienced research team in determining the most preferable method for doing this, we ultimately found that this exercise involved more art than science.

We chose to group our questions in the following modules, in the order indicated:

- *Casino gaming*, meaning gambling in a large hall with many different kinds of games (e.g., table games, machines, keno, bingo) on a riverboat or in a resort hotel.
- *Parimutuel wagering* at horse and dog tracks and jai alai frontons, as well as in off-track betting parlors/teletheaters. We also asked if respondents played other games in these venues, such as card games or slot machines. Respondents were asked about placing bets with a bookmaker in the section on unlicensed gambling, below.
- *Lottery* products such as Lotto and Powerball (multi-state games), daily numbers (pick-3, pick-4), and instant lottery scratch-off tickets. The 1974 survey asked about illegal numbers gambling, alternately called numbers, bolita, or policy. Since these forms are still available, we asked about them as well, but in the current survey they were included in our section on unlicensed gaming. We chose not to include video lottery terminals in this section since players often may not know if the machine they are playing is actually maintained by the state lottery board. Finally, respondents were asked not to include internet or other non-state-run lotteries in this battery of questions.
- *Bingo*, including charitable and commercial. Respondents were asked not to include bingo played at a casino.
- *Charitable gaming*, including pull-tabs and Las Vegas Nights. We indicated that respondents were not to include bingo or raffles for prizes other than money.
- *Cardrooms*, or any business with premises devoted to playing card games for money. Respondents were asked not to include casinos, racetracks, or charitable operations.
- *Private games*, including games of skill, such as dice, dominos, poker in someone’s home, pool, golf, or bowling.

- *Small businesses* such as stores, bars, restaurants, or similar locations with one or two kinds of games (usually slot machines, pull-tabs, video lottery machines, or video poker). Respondents were asked not to include places they have already told us about, such as cardrooms, casinos, or places that only sell lottery tickets; they were asked to include if they played such a game in a bingo hall, whether or not they played bingo there.
- *Unlicensed games*, or types of gambling that are run like a business but probably without a license (not including any cases the respondent may have already told the interviewer about). Examples of these types of unlicensed gambling include participating in sports pools, buying a policy or playing unlicensed numbers games, playing in an unlicensed casino, or betting with a bookmaker.
- *Internet gambling* on sports, casino games, bingo, lottery, and others.

Finally, we asked respondents about *Indian gaming*, although these questions were not grouped into their own module. Early in the questionnaire development stage, we did include a separate module on Indian casinos, in response to the Commission's explicit interest in the topic of Indian gaming. At the recommendation of one of the Research Subcommittee members, we looked into the possibility of expanding this module further to inquire about differences between Class II and Class III facilities (meaning Indian casinos versus other types of facilities, such as bingo halls). NORC's research revealed that these "classes" of Indian gaming actually categorized types of *games*, not facilities. According to the Indian Gaming Regulatory Act (IGRA), Class II games include bingo and card games which are either permitted by the state or not explicitly prohibited, excluding banked card games such as baccarat and blackjack (generally, the common thread for Class II games is that the players are playing against one another for a common pot). Class III games include "electronic or electromechanical facsimiles of any game of chance or slot machines of any kind," including "banking" games where the player plays against the house.

We became concerned about both the length and complication entailed by a revised "two-class" Indian module, and the subsequent burden on our respondents; NORC consulted Indian gaming expert I. Nelson Rose on the issue. Dr. Rose provided many useful comments and suggestions regarding the Class II/Class III distinction, particularly with regard to the many variations one finds in the real world among Indian facilities. It quickly became clear that to make a true distinction between these two classes of games, we would need to repeat every module individually, just focusing on Indian-run games. Our solution was to integrate a question about tribal sponsorship into the questions concerning last play in each of the appropriate modules (i.e., casino, bingo, charitable, cardroom, and small business), such that persons who played at one of these locations in the past year were asked whether the last time they played, the game was sponsored by an Indian tribe. In this way, we would later be able to separate for analytic purposes data about last play by Indian-sponsored games and non-Indian sponsored games.

## **Section C: Gambling-Related Attitudes, Motivations, and History**

In Section C, we ask respondents for their opinion of the overall effect of legalized gambling on society, the importance of various factors in why they do or do not gamble, their favorite game, whom they gamble with, how they have spent their winnings, how they would have spent their losses, among others. We recognize that in spite of the game

preferences noted by gamblers, Types D and E in particular, many engage in multiple forms of gambling. These forms are so interdependent that it is very difficult to fully separate out the influence of one form of gambling on the overall problem for some gamblers. However, we nonetheless asked respondents to voice their preference, which was cross-referenced with their spending patterns reported in Section B

## **Section D: Problem Gambling Diagnostic Assessment**

In 1976 the Commission on the Review of the National Policy Toward Gambling reported, based on a survey conducted the year before, that 0.77 percent of a national sample were “probable compulsive gamblers,” while 2.33 percent were “potential compulsive gamblers” (Commission, 1976). One important concern with comparing these rates with those of other studies is that the original survey’s findings were based on an 18-item instrument developed from a discriminant analysis comparing 274 members of Gamblers Anonymous and 239 church members” (Kallick, Suits, Dielman & Hybels, 1976). The items discriminated quite well between these two groups, but the membership of Gamblers Anonymous has changed considerably since 1974, when this analysis was conducted, and the control group, church members, is a difficult one to evaluate for continuity over time. Six years after the 1976 Commission report, the American Psychiatric Association first recognized pathological gambling as a disorder of impulse control in the revised third edition of its Diagnostic and Statistical Manual (DSM-III-R), and it was on these later criteria that the surveys discussed in the Shaffer et al. meta-analysis were based. It is not clear whether the 1974 instrument would yield comparable findings if administered today (Lesieur, 1998).

Most recently, rates of pathological gambling have been formulated using the South Oaks Gambling Screen (SOGS), the DSM-IV criteria, and the Diagnostic Interview Schedule (DIS). The South Oaks Gambling Screen (Lesieur & Blume, 1987; 1993) is a validated and reliable measure of pathological gambling. The original version of the SOGS was highly correlated with the DSM-III-R criteria and showed high internal consistency and high test-retest reliability. Originally developed to screen psychoactive substance abuse disorder patients for a gambling problem, it is the most commonly used instrument in epidemiological surveys of problem and pathological gambling. The more recent, revised SOGS-R is highly correlated with the DSM-IV criteria for adults seeking treatment for pathological gambling (Winters, Specker & Stinchfield, 1997, June). In its revised form, it has continued to be used in studies in Michigan (The Evaluation Center, 1997) and Connecticut (The WEFA Group, 1997).

The SOGS is not without critics. Some have found that, when compared with the DSM-IV criteria, the former overestimates the rate of problem gambling in the general population (Volberg, 1996). This is given support in the Shaffer et al. meta-analysis (1997), as studies using the SOGS had higher rates of pathological gambling than studies using the DSM-IV criteria. However, according to Volberg’s analysis (1996) of a survey based on the DSM-IV criteria developed for a survey of British casino patrons (Fisher, 1996), it is possible that the diagnostic threshold for pathological gambling defined in the DSM-IV may be too stringent for the purposes of a general epidemiological survey.

The DSM-IV identifies ten signs that may be present in gambling, and requires that five be present to permit the individual to be designated as a pathological gambler; this is usually called a “cutoff score” of five. The data on which these criteria and the cutoff

score of five is based were generated in field trials using a clinical population of 453 pathological gamblers and substance abusers (Lesieur & Rosenthal, 1998). That study found there was no difference in discriminant power between a cutoff score of four or five, and its authors suggested that, if a cutoff score of five were to be adopted for pathological gambling, an additional category of problem gamblers be designated comprising individuals who met three or four of the DSM-IV criteria. The DSM-IV Task Force of the American Psychiatric Association took a conservative stance and adopted the cutoff score of five or more criteria for diagnosis, but it did not act on the proposed problem gambling” criteria.

The guidelines from the National Gambling Impact Study Commission specified that the DSM-IV criteria be used, and that we explore the use of the recommended lower threshold to define gambling that is problematic to the individual. At the time we began our search for a suitable set of questions to implement the criteria (that is, to ask questions that would decide which and therefore how many of the DSM-IV criteria the respondent met), there were four instruments based on the DSM-IV. Fisher (1996), for example, read respondents each of the DSM-IV definitions of criteria with slight word changes and offered a five-point scale for agreement or disagreement with the self-applicability each item. This revision demonstrated highly significant item discriminations, good internal consistency, and significant construct validity. Volberg (1997) used a similar procedure (with a four-point scale) in Oregon, again showing good internal consistency, good criterion validity when compared with the SOGS, and significant construct validity.

A second instrument considered was the Diagnostic Interview Survey (DIS), suggested to us by NIMH partly because the instrument was based on criteria laid out in the DSM-IV. The entire DIS for DSM-IV had been recently field-tested in the general population, but the DIS version of the pathological gambling criteria had not been examined against a known group of pathological gamblers; hence, the psychometric properties of this measure were not known (Dhana Broser, Department of Psychiatry, Washington University School of Medicine, personal communication, February 8, 1998).

The third measure of pathological gambling, the Diagnostic Interview for Gambling Severity (DIGS) (Winters, Specker and Stinchfield, 1997), included a 21-item DSM-IV screen (two items per criterion). These items had higher internal consistency than the Fisher instrument, and both lifetime and past-year versions had undergone testing. Like the British and Volberg’s version, it demonstrates significant construct validity. In addition, it is highly correlated with the SOGS in the treatment population. However, the DIGS had not been tested on a general population sample; only a modified version had been tested.

The fourth instrument was a modified version of the DSM-IV (with 19 questions instead of 10 and modified for use over the telephone); this instrument had been compared with the SOGS in three populations: a treatment sample, a telephone hotline sample, and a general population sample (Stinchfield, 1997). Stinchfield determined that a 19-item version of the DSM-IV criteria had a higher Cronbach’s alpha than the 10-item DSM-IV screen in all three samples. Furthermore, this 19-question instrument was deemed to be more internally consistent than the SOGS in general population samples. Given the higher coefficient alpha of Stinchfield’s 19-item version of the DSM-IV criteria than the 10-item version, we proposed to use this in the general population survey.

As we explored this instrument further once we began constructing our general questionnaire, we found that some of the questions in this instrument appeared to have a timeframe of the past 12 months, while others appeared to refer to lifetime issues, and some were completely nonspecific. There was concern that using this instrument might lead to the same criticisms that were raised of the original SOGS. We decided to revise the questionnaire, framing each question in terms of “lifetime” or “ever,” and for those questions receiving a positive response, asking an additional question for past year. We made other refinements, such as adding a time specifier indicating that the problem has had a duration of at least 2 weeks, for many of the items. Since the instrument was no longer identical to that tested by Randy Stinchfield and colleagues, we field-tested the new instrument (the NODS; see Attachment B) for reliability and validity (see Attachment C for the Reliability Test Questionnaire used for the NODS, and Chapter 2 of the main volume of this report for discussion of the reliability and validity tests and results).

### **Section E: Gambling Treatment Experience**

Respondents completed Section E if it was determined that in their lifetimes, they have had one or more of the DSM-IV-related problems discussed above. This section queried about whether the interviewee had ever been in gambling treatment, the kind of treatment received, age respondent first received help, and a couple questions regarding participation in Gamblers Anonymous.

### **Section F: Family/Marital Status and Issues**

All respondents, regardless of gambling status, were then taken through Section F, which asked about marital status, marital history (e.g., divorces, separations, and whether gambling played a role in such events for persons who indicated gambling problems), household composition, if gambling by others in the household has troubled or bothered the interviewee in the last 12 months, and if anyone else in the household has complained about the interviewee’s gambling in the past year.

### **Section G: Income and Financial Information**

All of our respondents then went on to Section G, where they were asked about their employment status, occupational, personal and household income, use of sick time and vacation time to gamble, past-year job loss, and questions about household budget, including amount spent on housing and gambling, household debt, and bankruptcy. Respondents who had indicated having one or more problems in their lifetimes were also asked whether their gambling had played in role in their missing nonvacation time from work or losing a job, and all respondents were asked whether their gambling, or the gambling of anyone in their household, has played a role in their debt or bankruptcy filing. Part of NORC’s originally contract was to estimate a cost to society from problem and pathological gambling using these and other related questions throughout the survey; the Commission determined that with the resources allotted, this would not be feasible, and asked that we simply determine the prevalence of these various dimensions of problems.

## **Section H: Criminal Activity and Status**

Section H queries interviewees regarding any trouble they may have had with the law, including arrests, incarceration, and probation or parole. Questions about involvement with the criminal justice and mental health systems were partially based on the 1993 National Treatment Improvement Evaluation Study's Research Intake Questionnaire, developed by NORC.

## **Section J: Mental and General Health**

Section J queried respondents about their general health, mental health, and use of mental health treatment in the past year. Respondents were then asked questions regarding symptoms of depression and mania, depending on certain criteria. All respondents were asked the two screening questions for the depression instrument. However, a respondent was only asked the mania questions if she or he had reported one or more gambling problems ever; similarly, only these respondents were asked the full depression instrument, provided they responded affirmatively to one or both of the two depression screening questions. We asked the two depression screening questions of the entire sample to obtain a baseline rate of depression in our sample; we only asked those persons who reported one or more gambling problems the entire depression instrument, as NIMH and the Commission were interested in correlating depression with gambling problems. Pathological gambling has been associated with major depression in the gambling literature (e.g., McCormick, Russo, Ramirez & Taber 1984; Specker et al. 1996).

The mania questions were only asked of persons who reported one or more gambling problems due to the DSM-IV exclusion that the gambling problems not be counted if they are the result of a manic episode. Our mania questions are based on Kessler's CIDI-UM. However, no empirical support exists for this exclusion. And none of the 106 studies reviewed by Shaffer, Hall & Vander Bilt (1997) considered the exclusion as part of their epidemiological study of pathological gambling. Although we collected data on manic signs, our view is that it is not methodologically sound to implement the manic episode exclusion until the absence of empirical support with clinical populations has been addressed

## **Section K: Substance Use**

Finally, Section K queries interviewees about their use of alcohol and drugs. Respondents indicating a certain threshold level of use of an individual drug were then asked questions, based on DSM-IV criteria as implemented in the National Household Survey on Drug Abuse, to evaluate to determine dependence on that drug. the prevalence of past-year dependence on alcohol, marijuana/hashish, cocaine/crack, stimulants (such as methamphetamine or amphetamines, used for non-medical purposes), and tranquilizers (such as Valium and Xanax, used for non-medical purposes). Nonmedical use of a substance on more than 5 days in the past 12 months was the "gate" to determine who would be asked dependence questions. We believed that a stricter gate would be appropriate for alcohol; to test this, we examined data from the National Household Survey on Drug Abuse, cross-tabulating dependent and nondependent persons against their past-year frequency of usage to determine the most appropriate cutoff. Our goal was to capture most of our alcohol-dependent respondents, while minimizing respondent

burden. As a result, we modified the gate for alcohol to ask whether the respondent has used alcohol on at least 12 days in the past 12 months.

## **YOUTH QUESTIONS**

Our youth sample was asked questions from the same instrument as the adult respondents. However, based on their age, they were pathed differently throughout the questionnaire. Because most 16- and 17-year-olds are in school, they were asked the questions that were asked of all respondents who indicated in the demographics section that they were currently enrolled in school (for example, “Has you gambling caused you any problems in school, such as missing classes or days of school, or your grades dropping?”). Based on survey experience that adolescents this age are poor informants on household income and financial information, the youth sample was skipped over the Section G questions.

## **GAMBLING FACILITY PATRON QUESTIONNAIRE AND SELF-ADMINISTERED QUESTIONNAIRE**

Patron interviews were conducted at gambling sites via face-to-face interviews. The interviewer asked respondents questions from a paper questionnaire and filled in the responses. We developed the Patron Questionnaire (see Attachment E), as well as the Self-Administered Questionnaire (see Attachment D), to contain a subset of the RDD interview questions; the two instruments are virtually identical in terms of the information solicited, but differ in terms of who is administering the questionnaire. The length of the patron instrument is shorter than the RDD interview so as to be more suitable for administration on an intercept basis. where we would not have a second chance(as can readily happen in a telephone interview) to interview at a later time the respondent who might be willing but short of time Our goal was to produce a survey that averaged no longer than 20 minutes in length, and we obtained an average of 19 minutes

The reductions we implemented for these questionnaires are as follows:

- A. Demographic Information: We took out some education questions and items on religion.
- B. Gambling Behavior: In this section we chose to ask about the forms of greatest interest—namely, casinos, pari-mutuel betting, lottery play, and gaming in small business settings.
- C. Gambling-Related Attitudes, Motivations, and History: We ask respondents’ reasons for gambling, their favorite game, and their largest win or loss in a day.
- D. Problem Gambling Diagnostic Assessment: This section is critical to our questionnaire and was cut the least. We eliminated two questions concerning gambling problems that were not part of the DSM-IV scoring.
- E. Gambling Treatment Experience: We ask whether the respondent has ever received help for their gambling and where this help was received.

- F. Family/Marital Status and Issues: This section was cut substantially. We asked respondents' marital status, and if they have ever been divorced, we asked if gambling played a role; we also asked respondents if they were living with a spouse, child(ren), and/or anyone with a gambling problem.
- G. Income and Financial Information This section was also cut substantially; we asked about respondents' employment status, main job, months worked in the past year, past-year income, whether they have ever missed work to gamble, and if they have been fired, whether this was due to gambling. We also asked about additional income such as welfare or pension, their household size, monthly housing and gambling expenditures, and whether they have any gambling debts.
- H. Criminal Activity and Status: We ask about amount of money stolen, if any, and past arrests.
- J. Mental and General Health: We limited this section to general health, mental health treatment, and the gate questions for manic and depressive episodes.
- K. Substance Use: We asked frequency questions only (no dependence questions).

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## **ATTACHMENTS**

- Attachment A: National Random-Digit Dial CAPI instrument
- Attachment B: NORC DSM Screen for Problem Gambling (NODS)
- Attachment C: Reliability and Validity Questionnaire Used in Testing the NODS)
- Attachment D: Self-Administered Questionnaire
- Attachment E: Gaming Facility Patron Questionnaire