

# Ethnic Differences in Psychiatric Symptoms Reported in Community Surveys

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A SCREENING instrument to measure psychiatric impairment was developed from the Midtown Manhattan Study (1), conducted in 1954, for use in community surveys. The instrument, containing 22 questions about symptoms usually associated with psychiatric impairment (2), was used in one community survey of a representative sample of adults living in the Washington Heights Health District of New York City and with another representative sample of adults from all five boroughs of New York City. The results of these two surveys were analyzed to examine, in particular, the distribution of responses among ethnic subgroups.

## Background

The first study, the Master Sample Survey, was conducted in 1960-61 by Columbia University School of Public Health and Administrative Medicine in Washington Heights (3). One of the five participating research groups was the Community Mental Health Project, Columbia University department of psychiatry. Among the data included in the Master Sample Survey at the request of this group were the 22 midtown symptom items which appeared in supplementary schedules administered to a representative subsample of 1,883 persons 21 years and over, comprising 60 percent of all adults in the sample families. These 1,883 respondents

were predesignated on a random basis, so that sometimes there was more than one respondent in the same family. Interviews were obtained in a weighted total of 2,014 housing units, including 126 hard-to-obtain units given triple weight, a total which was considered to represent 89.8 percent of the eligible housing units.

The second study, the Public Image of Mental Health Services, a joint project of Columbia University and the New York City Community Mental Health Board, was conducted in 1963 in the five boroughs of New York City (4). One of the three survey questionnaires containing all 22 midtown symptom items was administered to a representative citywide subsample of 706 adults. In this survey, separate interviews were

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sought with all adults in every sample household, and the same questionnaire was used with each respondent in the same household. A response rate of 78.1 percent of the estimated sample of eligible respondents was obtained with the questionnaire containing the 22 midtown items.

The questions about symptoms usually associated with mental disturbance were selected from approximately 120 items taken primarily from the U.S. Army's Neuropsychiatric Screening Adjunct and the Minnesota Multiphasic Personality Inventory (1, 2). The 22 items selected for the screening instrument demonstrated the highest validity in distinguishing between a "known ill" group of 139 hospitalized and clinic psychiatric patients and 72 persons rated as "well" in personal interviews with two psychiatrists.

As additional evidence validating the midtown study data, both 182 ex-patients and 40 current outpatients among the midtown respondents clearly reported a larger number of the 22 symptoms than did 1,438 nonpatients. Likewise, correlations between the absence or presence of symptoms and impairment ratings suggested a high reliance on the particular 22 items in the screening instrument by the two psychiatrists in making their judgments (2). Several other investigators have also reported findings on the validity of the 22 midtown symptom items (5-10).

A cutting point of four symptoms most adequately discriminated between persons rated impaired and those rated unimpaired by the two psychiatrists making overall judgments based on interview protocols (2). A score of four or more symptoms identified only 1 percent of those psychiatrically evaluated as "well" but 74 percent of the impaired group.

### Findings

*Symptom items and proportions impaired.* Overall, adults living in Washington Heights had an average of 2.2 (median, 1.7) symptoms and respondents in the citywide sample an average of 2.4 (median, 1.9) symptoms (table 1). Four or more symptoms—the cutting point used to designate a moderate degree of disturbance—were reported by 22.4 percent of the respondents in Washington Heights and 24.9 percent of the

**Table 1. Psychiatric symptom scores of respondents in Washington Heights and citywide surveys, in percentages**

Psychiatric symptom scores	Washington Heights (N=1,865) <sup>1</sup>	New York City (N=706)
0.....	35.3	29.9
1.....	21.1	22.4
2.....	13.0	13.5
3.....	8.2	9.3
4.....	6.8	7.2
5-6.....	7.6	8.2
7 or more.....	8.0	9.5
Total.....	100.0	100.0
4 or more.....	22.4	24.9
Average.....	2.2	2.4
Median.....	1.7	1.9

<sup>1</sup> Excludes 18 respondents who did not answer symptom questions.

New York City residents. Thus, somewhat more symptomatic responses were reported citywide than in Washington Heights.

Table 2 presents the 22 symptom items and the proportions in the Washington Heights and New York City surveys with positive or pathological responses. There are significant differences between the two samples on five of the 22 items, with the citywide sample having a higher percentage of positive responses to each. However, four of the five items for which there are significantly more positive responses in the New York City sample were worded differently.

The following variations occurred in the schedule used with New York City residents.

8. The statement about fainting spells had the parenthetical, explanatory phrase, "lost consciousness," added. (The phrase, "lost consciousness," was not included in the schedule used originally with the midtown Manhattan study respondents.)

10. The statement about spirits had the parenthetical word, "high," added to the code category, "very good spirits." (The code category was "high" in the schedule used in the midtown Manhattan study.)

16. "I seem to have trouble with my memory," keyed true, was substituted for item 16 in table 2. (The statement about memory was keyed false in the schedule used in midtown Manhattan.)

**Table 2. Percentage of respondents in Washington Heights and citywide surveys giving symptomatic responses to 22 midtown Manhattan items**

Midtown Manhattan symptom items	Washington Heights (N=1,883)	New York City (N=706)
1. Have you ever been bothered by your heart beating hard? Would you say: <i>often</i> , sometimes, or never?-----	3.1	3.0
2. Have you ever been bothered by shortness of breath when you were not exercising or working hard? Would you say: <i>often</i> , sometimes, or never?-----	3.5	3.5
3. Are you ever bothered by nervousness, i.e., by being irritable, fidgety, or tense? Would you say: <i>often</i> , sometimes, or never?-----	10.6	11.9
4. Do you ever have trouble in getting to sleep or staying asleep? Would you say: <i>often</i> , sometimes, or never?-----	11.2	9.9
5. Have you ever been bothered by "cold sweats?" Would you say: <i>often</i> , sometimes, or never?-----	1.9	1.4
6. Do your hands ever tremble enough to bother you? Would you say: <i>often</i> , sometimes, or never?-----	1.4	1.8
7. Are you ever troubled with headaches or pains in the head? Would you say: <i>often</i> , sometimes, or never?-----	6.5	6.5
8. Have you ever had any fainting spells? Would you say: never, a few times, or <i>more than a few times</i> ? <sup>1</sup> -----	1.8	7.5
9. Would you say your appetite is <i>poor</i> , fair, good, or too good?-----	3.7	3.8
10. In general, would you say that most of the time you are in very good spirits, good spirits, <i>low spirits</i> , or <i>very low spirits</i> ? <sup>1</sup> -----	5.0	8.4
11. I feel weak all over much of the time-----	8.6	9.3
12. I have had periods of days, weeks, or months when I couldn't take care of things because I couldn't "get going"-----	11.8	12.7
13. Every so often I suddenly feel hot all over-----	14.7	14.4
14. I have periods of such great restlessness that I cannot sit long in a chair-----	15.1	17.8
15. I am bothered by acid or sour stomach several times a week-----	9.6	10.9
16. My memory seems to be all right (good) <sup>1</sup> -----	4.6	15.2
17. There seems to be a fullness or clogging in my head or nose much of the time-----	11.2	9.8
18. I have personal worries that get me down physically; i.e., make me physically ill-----	12.2	10.2
19. Nothing ever turns out for me the way I want it to <sup>1</sup> -----	10.5	13.3
20. I sometimes can't help wondering if anything is worthwhile anymore <sup>1</sup> -----	15.4	20.7
21. Do you feel somewhat apart or alone even among friends?-----	13.9	13.3
22. Are you the worrying type—you know, a worrier?-----	37.5	36.4
Average for 22 items-----	9.7	11.0
Average for 18 items (excluding items 8, 10, 16, and 20)-----	10.4	10.6

<sup>1</sup>Significantly more symptomatic responses at the 0.05 level (*t* test) in New York City than in Washington Heights.

NOTE: Italicized words denote symptomatic response to items 1-10; response of "true" to items 11-15 and 17-22 and "false" to item 16 denotes symptom.

20. The statement about "anything being worthwhile anymore" had "you" not "I" as the subject. (The subject was "you" in the schedule used in midtown Manhattan.)

For all four items, the differences would tend to yield more responses indicating symptomatology in the citywide survey. Adding the phrase, "lost consciousness," broadens the scope of "fainting spells." Adding the word, "high" to the code category, "very good spirits" seems to make low spirits a more popular response, perhaps because "high" might be interpreted negatively to mean high on liquor or drugs. When the statement about having trouble with memory was keyed "true," more positive responses were evinced, probably due to a tendency to give affirmative answers (11). Thus,

differences in item wording seemingly account for most of the margin of positive or symptomatic responses in New York City, as indicated in the last line of table 2.

*Screening scores by demographic subgroups.* In table 3, the demographic characteristics of respondents in the two surveys and the proportions among population subgroups with symptom scores indicating impairment are presented. In both surveys women, more often than men, had symptom scores of four or more, although the sex difference was greater in New York City. Symptom scores in both surveys varied indirectly with education and family income, corroborating the relationship with the SES (education, occupation, income, and rent paid) score reported in the midtown study. When

respondents were categorized by marital status, those previously married in the Washington Heights and citywide surveys most often reported four or more symptoms.

The overall proportions of impairment scores in both surveys did not vary much according to age, contrary to the midtown Manhattan study findings. High symptom scores were positively related to older age among the midtown study respondents, who ranged from 20 through 59 years. Ethnic diversity in reported symptomatology may be one explanation for the lack of correlation between impairment scores and age in the two surveys.

For the ethnic and religious groups in Washington Heights and New York City, both the rank order and proportion of respondents in subgroups having impairment scores were similar. The Irish had the smallest proportion with four or more symptoms in both surveys, followed in order by other white Protestants and Negroes. The Puerto Ricans had the highest scores—their reported symptomatology was even more striking since they were considerably younger than other respondents. Three-fifths of the Puerto Ricans in both surveys were under 40 years of age and less than 5 percent were 60 or over, compared with the approximately

**Table 3. Percentage of respondents with scores indicating impairment (4 or more symptoms) Washington Heights and citywide surveys, by demographic characteristics**

Characteristic	Washington Heights		New York City	
	Total sample (N=1,865) <sup>1</sup>	4 or more symptoms	Total sample (N=706)	4 or more symptoms
<b>Sex:</b>				
Men.....	41.5	18.2	45.6	14.9
Women.....	58.5	25.3	54.4	33.3
<b>Education:</b>				
Grade school graduate or less.....	32.3	31.0	29.8	32.9
Some high school.....	20.9	24.6	22.4	25.9
High school graduate.....	27.8	15.4	23.6	21.1
Some college or more.....	18.9	14.3	24.1	18.2
<b>Family income:<sup>2</sup></b>				
Under \$3,000.....	19.8	29.4	16.0	37.1
\$3,000-\$4,999.....	24.4	27.1	19.3	26.0
\$5,000-\$7,499.....	32.4	17.8	20.4	21.6
\$7,500-\$9,999.....	13.4	19.5	23.4	24.7
\$10,000 or more.....	10.0	16.4	20.9	16.1
<b>Marital status:</b>				
Currently married.....	63.2	19.3	66.9	25.8
Previously married.....	20.2	32.5	17.6	28.2
Never married.....	16.6	21.2	15.6	17.3
<b>Age group (years):</b>				
20-39.....	36.2	20.6	43.2	24.3
40-59.....	38.9	22.5	36.8	25.8
60 or over.....	24.9	24.8	20.0	24.8
<b>Ethnic and religious groups:<sup>3</sup></b>				
Negro.....	23.2	19.4	16.1	20.2
Puerto Rican.....	9.2	36.6	10.1	40.8
Irish.....	14.4	13.1	4.1	17.2
Italian.....	2.5	21.3	14.7	26.9
Other white Catholic.....	12.7	30.1	18.0	24.4
Other white Protestant.....	7.7	17.4	11.5	19.8
Jewish.....	26.1	23.3	23.2	23.8
<b>Total.....</b>		22.4		24.9

<sup>1</sup> Excludes 18 respondents who did not answer symptom questions and other respondents with no demographic characteristics reported.

<sup>2</sup> Income categories in New York City were \$5,000-\$7,000 and \$8,000-\$9,999 rather than \$5,000-\$7,499 and \$7,500-\$9,999.

<sup>3</sup> See text for method of determining national origin in each survey. Also excludes whites whose religion was Eastern Orthodox, none, or other and Orientals, a total of 4.2 percent in Washington Heights and 2.3 percent in New York City.

two-fifths of all respondents who were under 40 and one-fourth (one-fifth in New York City) of all the respondents 60 or over.

Within each ethnic or religious group, the proportion with symptom scores of four or more varied as expected with age and education. However, the overall proportion of impairment scores—without ethnic controls—did not show the expected direct relationship to age because of ethnic differences in reported symptoms. To illustrate this, symptom scores varied directly with age for both Puerto Ricans and Irish in Washington Heights, but scores indicating impairment occurred more frequently among younger Puerto Ricans than among older Irish respondents. Thirty-three percent of Puerto Ricans in the 20–39 age group, but only 17 percent of 40–59-year-old Irish respondents, had scores of four or more.

Being older, having less education, and being women or unmarried were directly related to higher symptom scores, as the following data on 1,660 respondents in the midtown Manhattan study indicate.

<i>Characteristics</i>	<i>Percent with 4 or more symptoms</i>
Men, aged 20–39.....	25.1
Women, aged 20–39.....	29.8
Men, aged 40–59.....	25.6
Women, aged 40–59.....	40.1
Low SES <sup>1</sup> .....	44.6
Middle SES.....	27.7
High SES.....	22.5
Married.....	29.3
Not married.....	33.3

<sup>1</sup>SES score determined by education, occupation, income, and rent paid.

SOURCE: Unpublished tables, department of psychiatry, Cornell University Medical College.

On the basis of the disparity between these salient demographic characteristics of the two survey samples, Washington Heights would be expected to have a larger proportion of respondents with impairment scores than New York City, despite the variations in item wording. The Washington Heights sample was older, less educated, and had more women or unmarried persons than the New York City sample, as indicated in table 3.

One explanation for the less-than-anticipated

symptomatology reported in Washington Heights compared to New York City is the difference in ethnic composition of the two samples. Irish respondents had the fewest impairment scores and Italians had a moderately high proportion of impairment scores in both surveys. These two ethnic groups, in particular, affected the overall symptom differences since the two samples contained disproportionate numbers of such respondents. There were proportionately three and a half times more Irish in Washington Heights than in the citywide sample and almost six times more Italians in the citywide sample than in Washington Heights.

National origin in the Washington Heights survey was determined by birthplace of respondent, birthplace of father of head of household, or country of origin of head of household's family; in the citywide survey birthplace of respondent or his father was used. Either method used to establish national origin, however, would result in virtually the same respondents in both surveys being classified as Puerto Rican due to the recency of their migration to New York City. (Approximately nine of 10 adults classified as Puerto Rican in both surveys were born in Puerto Rico.) In addition, differences as a result of using the father of the head of household's birthplace (in Washington Heights) or the birthplace of the respondent's father (in New York City) to determine ethnicity were small.

About one-third of the persons in both surveys were one-adult families in which the respondent and head of household were the same person; citywide, roughly three-quarters of the married men classified as Puerto Rican, Italian, and other white Catholic (including Irish) have spouses with the same national origin (12). In the New York City survey, because citywide ethnic determination was based only on birthplace of respondent or respondent's father, other white Catholics included some Irish-American respondents who would be considered Irish under the determinations used in the Washington Heights survey, with no data on country of origin of head of household's (or father of respondent's) family being available.

If the Irish (overrepresented in the Wash-

ington Heights Survey) and the Italians (over-represented in the citywide survey) are eliminated from both samples, the proportions of the remaining respondents with scores indicating impairment were as follows.

<i>Ethnic group</i>	<i>Number</i>	<i>Percent with 4 or more symptoms</i>
Irish and Italian:		
Washington Heights.....	315	14.3
New York City.....	133	24.8
All others: <sup>1</sup>		
Washington Heights.....	1,550	24.1
New York City.....	573	24.9

<sup>1</sup> See text for method of determining national origin in each survey.

The proportion of impairment was unchanged—24.9 percent—in New York City (table 3) but rose to 24.1 percent in Washington Heights, demonstrating the effect of ethnic composition in the survey samples on overall symptom differences.

#### Discussion

The differences between the two surveys which are attributable to the wording of four questions demonstrate the sensitivity of sample responses to seemingly minor variations in phraseology. For complete comparability in cross-survey analyses such as those reported here, it is therefore necessary for substantive items to be identically worded.

The proportions who gave responses to the 22

symptom items in the two surveys—both overall and among demographic subgroups—were equivalent; this provided some evidence of the reliability of the screening instrument on a sample frequency basis. If the variation in proportions of ethnic groups having symptom scores of four or more was due in part to differences in response style (and not only to differences in rates of illness), the use of a single cutting point to indicate impairment in heterogeneous communities such as Washington Heights and New York City must be seriously questioned.

Cross-tabulations between midtown symptom scores and those reporting limitations on daily activities in both surveys (table 4) did not support the selection of a score of four as the cutting point for impairment due to psychiatric symptoms. Limitation on daily activities was adapted from the term "limitation of activities" as used in the U.S. National Health Survey (13, 14). As expected, limitations on daily activities were directly related to the number of symptoms reported. In terms of activity restrictions, however, several other cutting points seem equally adequate as a line of demarcation designating a moderate degree of disturbance.

Interviews with psychiatric outpatients of different ethnic backgrounds, used as criterion groups, have provided some evidence supporting the assumption that variation among ethnic groups in rates of symptoms is due in part to response style. Among ethnic subgroups of pa-

**Table 4. Percentage of respondents in the Washington Heights and citywide surveys reporting limitations on daily activities by psychiatric symptom scores**

Psychiatric symptom scores	Washington Heights, 1,542 respondents <sup>1</sup>			New York City, 687 respondents <sup>2</sup>		
	Percent by score	Cumulative percent	Number of respondents	Percent by score	Cumulative percent	Number of respondents
0.....	5.9	5.9	388	14.1	14.1	205
1.....	7.0	6.4	374	13.5	13.9	155
2.....	13.9	8.2	230	23.6	15.8	89
3.....	22.0	10.0	150	27.7	17.3	65
4.....	20.3	11.0	123	28.0	18.3	50
5 to 6.....	23.3	12.2	133	35.7	19.8	56
7 or more.....	53.5	16.0	144	49.3	22.7	67

<sup>1</sup> Excludes 195 respondents not asked and 146 not answering question on activity limitations in Washington Heights. Question was not asked of respondents denying any symptomatology in their responses to the 22 midtown items or to 5 supplemental psychiatric symptom items.

<sup>2</sup> Excludes 19 respondents not answering question on activity limitations in New York City. Question was asked of all respondents and was not linked to the effects of specific symptom responses, as in Washington Heights.

tients (as among ethnic subsamples in Washington Heights and New York City), Puerto Ricans have been observed to have the highest rate of symptoms, seemingly because an affirmative answer to the items is less socially undesirable in the Puerto Rican culture (11). Similarly, among the major ethnic groups in New York City, Puerto Ricans have been found to be the least likely to perceive deviant behaviors as signs of illness (15).

A comparison of symptom scores among groups of Puerto Ricans in Puerto Rico and those in New York City or among Puerto Ricans residing in New York City for different lengths of time would provide additional data on the reasons for their responses to the symptom items. If the scores among the more "Americanized" Puerto Ricans were lower after controlling for relevant background characteristics, such as age and sex, the concept of culturally patterned differences in response style would be supported. The two samples in this analysis, however, had an insufficient number of Puerto Ricans who had resided in New York City for varying lengths of time to permit age-controlled comparisons.

The use of different cutting points to indicate impairment among certain ethnic groups, rather than a single cutting point, is one possible means of compensating for culturally patterned differences in response style. Thus, on the 22-item screening instrument, a score of six or more for ethnic groups reporting a relatively large number of symptoms, such as the Puerto Ricans, might be comparable to a score of three or more for Negroes and Irish, who acknowledge having relatively few symptoms. Parenthetically, midtown Manhattan at the time of the midtown study (1)—in contrast to Washington Heights and New York City—had virtually no Negro or Puerto Rican residents. Additional research with criterion groups, for example psychiatric patients of different ethnic backgrounds, would help in establishing where cutting points should be set for various ethnic groups.

### Summary

Representative samples of 1,883 adult residents of the Washington Heights Health District of New York City and 706 adult respondents in a citywide sample were asked

questions about symptoms usually associated with psychiatric impairment. The questions included 22 items from the Midtown Manhattan Study. The absolute and relative proportions giving symptomatic responses to the midtown items in the two surveys—both overall and by demographic subgroups—were similar. The proportions giving symptomatic responses varied inversely with social class, as indicated by educational level and family income. Women, previously married persons, and, among ethnic groups, Puerto Ricans reported the most psychiatric symptoms. Differences between the two surveys, for the most part, were attributable to differences in wording of questions and ethnic composition of the samples—disproportionately more Irish in Washington Heights reported the least symptoms and disproportionately more Italians in New York City reported a moderately high number of symptoms. The use of a single cutting point to indicate impairment in surveys of heterogeneous communities is questioned. Different cutting points for various ethnic groups is suggested as a possible means of compensating for their variation in response style.

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#### Tearsheet Requests

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## Tracing Migrant Children

Since it has been difficult for school officials and health officers to keep track of the children of migrant workers—their whereabouts, educational level, and special needs—the Arkansas State Department of Education, under contract to the U.S. Office of Education, has developed the Uniform Migrant Student Record Transfer System. The system will make background information on any migrant student available to any of the 48 mainland States within 24 hours.

This system is expected to be ready by July 1, 1970, when seven States—Arkansas, Colorado, Kansas, Missouri, New Mexico, Oklahoma, and Texas—will participate in it on a pilot basis.

The computer-generated records on each migrant student—specific patterns of mobility; family, school attendance, and health data; special test scores; information on the child's special interests, abilities, and needs; and general demographic data—will be fed into the system to test its programming and output capability.

The data system, to insure success, will undergo an extensive improvement process at the central bank in Little Rock, Ark., utilizing sample data from 20 States. This process will encompass 6 months of correcting any flaws

in the data bank and training personnel from the seven pilot States to receive and transmit information. Other pilot States will join the system after 6 months. Eventually all 48 mainland States will be phased into the system on a scheduled basis.

Previously, States operated the record transfer system manually. Migrant students enrolled in schools with a federally financed educational program carried identification forms with them from place to place. These forms, however, were often lost. Thus, many students were misplaced in grade level, and their required childhood immunizations often were duplicated.

Title I of the Elementary and Secondary Education Act, passed by Congress in 1965, provides Federal assistance for programs designed to meet special educational needs of educationally deprived children living in poverty areas. The Uniform Migrant Student Record Transfer System is financed under a special amendment to title I which made migrant children eligible. In fiscal year 1970, U.S. Education Commissioner James E. Allen, Jr., set aside \$650,000 of the funds allotted to this act to continue the data system. More than 200,000 migrant children participate in title I programs.