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ABSTRACT

Understanding the misuse of drugs by the elderly has become an area of increasing concern to the drug abuse field. As part of a larger exploration of drug use and health issues among the elderly, a random sample of Houston's noninstitutionalized elderly population (N=1,101), aged 55 and older, were interviewed to determine the extent of their drug use and misuse. From mid-1979 through early 1980, participants completed telephone interviews gathering data on general health issues, morale, and activity levels. In-depth home interviews were conducted which focused on current use of all prescription drugs, and on respondents' total history of psychoactive drug use. Analyses of results showed that 17.6% of those interviewed were using prescribed psychotropic drugs; 6.9% reported deviating from their prescriptions, with 86.8% of these taking less than the prescribed amount. Fewer than 2% reported using any illicit drug in their lifetime. In addition, 60% reported that they had not drunk any alcoholic beverages in the month preceeding the interview, although 6.6% reported consuming 5 or more drinks on those occassions when they did drink. The results coincide with earlier findings that portray the elderly as responsible consumers of psychoactive substances. (MCF)

National Institute on Drug Abuse

TREATMENT RESEARCH REPORT

DRUG TAKING AMONG THE ELDERLY

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A portion of the data from this study has appeared in the Journal of Psychoactive Drugs, 1981, Volume 13, No. 2., under the title, "Psychoactive Drug Use and Potential Misuse Among Persons Aged 55 and Older."

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Preface

Understanding the abuse or misuse of drugs by the elderly has become an area of increasing concern to the drug abuse field. In 1975, the National Institute on Drug Abuse sponsored a conference on drug use by the elderly that resulted in a programmatic thrust to explore the dangers of drug misuse in that population. Subsequently, a grant was awarded to the Department of Sociology, University of Houston, for research on the use of psychoactive substances by the elderly and the problems associated with such use.

The resulting study, conducted by Dr. Stephens, Dr. Haney, and Ms. Underwood, clarifies the significance of psychoactive drug use in the lives of the elderly and the extent to which the elderly engage in inappropriate use of these substances, as well as alcohol and tobacco. The report that follows forms a part of the authors' larger exploration of drug use and health issues among the elderly.

In large part, the study makes the case for a responsible and cautious approach to psychoactive drug taking by the elderly. Nonetheless, the differences found in drug taking and reported healthfulness within subgroups of the elderly population should interest service delivery and research personnel who work with the elderly.

Summary

In 1979, a study was made of the extent of drug use and misuse by a random sample of 1,101 of Houston's noninstitutionalized elderly population, stratified by age. Individuals had to be 55 years old or older to qualify for inclusion in the sample.

Overall, 17.6 percent of the Houston elderly were found to be using prescribed psychotropic drugs at the time of the interview. Of the persons sampled, 6.9 percent were found to deviate from their prescriptions by taking either more or less than had been prescribed. Of those persons who deviated from their prescriptions, 86.8 percent stated that they took less than the amount prescribed by their physician. Thus, less than 1 percent (0.9 percent) of the persons sampled reported themselves as taking psychotropics in excess of physicians' prescriptions.

Not surprisingly, fewer than 2 percent reported using any illicit drug in their lifetime. Moreover, 60 percent of the sample reported that they had not drunk any alcoholic beverages in the month preceding the interview, although 6.6 percent reported consuming five or more drinks on those occasions when they did consume alcohol. The 5.7 percent of the sample who reported using a psychoactive substance some time in the past month also reported using alcohol at some time in the past month. Thus, the study coincides with earlier findings that portray the elderly as responsible consumers of psychoactive substances.

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Review of the Literature

The literature on the use of psychoactive substances among older persons is divided into two major categories. The first category consists of studies examining psychoactive drug use among the general population, of whom older persons constitute a relatively small part. Until very recently, these studies have been the principal source of data in assessing the extent of drug use in older populations. In the late 1970s, however, a second major category of studies emerged, focusing on the older person's drug use patterns.

Most studies dealt with a number of issues, including the extent of drug use in both the general population and selected subpopulations, predictors and correlates of such use, drug misuse, and the use of alcohol and tobacco. This chapter deals with each of these issues sequentially.

General Population Studies - Extent of Drug Use

Table 1 summarizes the characteristics of relevant studies. Mellinger et al. (1974) present data collected in a national survey by Parry et al. (1970-71) on the use of psychoactive drugs. They found the following distribution of type of drug use (prescription or over-the-counter drugs) by sex for respondents aged 60 to 74 for the year prior to interview.

Type of drug use	Male	Female	Total
Prescription psychotherapeutic drug use only	19%	28%	24%
Over-the-counter and prescription psychotherapeutic drug use	2%	3%	3%
Over-the-counter psychotherapeutic drug use only	7%	4%	5%
Use of neither psychotherapeutic drug type	72%	65%	68%

The use of prescription psychotherapeutic drugs, the type most commonly taken, was distributed as follows:

Type of psychotherapeutic drug	Male	Female
Minor tranquilizer/sedative	11%	25%
Stimulant	1%	3%
Hypnotic	7%	8%
Antidepressant	4%	2%
Major tranquilizer	0.5%	2%
No psychotherapeutic drugs used in the past year	79%	68%

The data show that the majority of persons had not used psychotherapeutic drugs of any type in the previous year and that females used psychoactive substances much more frequently than did males. This finding is particularly evident for the minor tranquilizer/sedative category.

In a survey of the general adult population conducted in San Francisco, Mellinger et al. (1971) found the following percentages of prescription psychotherapeutic drug use in the prior year among persons aged 60 and over.

Category of drug	Male	Female
Stimulant	--	3%
Minor tranquilizer	5%	10%
Sedative	4%	9%
Hypnotic	9%	13%
No use of the drugs listed above	77%	66%

This study corroborated the findings of the Mellinger study previously cited. In addition to noting that the majority of those 60 and over had not used these classes of psychotherapeutic drugs in the past year and that more females than males used such substances, Mellinger found that virtually all the users 60 and older reported receiving their drugs from medical sources.

Table 1.--Characteristics of relevant studies

Researcher	Subjects: Type	Subjects: Number	Year conducted
General population studies			
D. Fejer and R. Smart (1973)	Adults in Toronto, Canada	1,200	1971
D. Manheimer et al. (1968)	Persons aged 21 or older in California	1,026	1967
G. Mellinger et al. (1971)	Household survey of persons aged 18 or older in San Francisco, California	1,104	1967-68
G. Mellinger et al. (1974)	National sample of persons aged 18-74	2,552	1970-71
G. Warheit et al. (1976)	Household survey of persons aged 18 or older in Florida	1,633	1970s
Studies of older persons			
K. Back and D. Sullivan. (1978)	Insurance company records of whites aged 45-70	502	
C. Chein et al. (1978)	Persons aged 60 or older in Washington, D.C.	242	1977
B. Frank et al. (1979)	Persons aged 60 or older in New York City	146	1979
C. Green (1977)	Household survey of persons aged 60 or older in Osceola County, Florida	100	1977
D. Guttmann (1977; 1978)	Household survey of persons aged 60 or older in Washington, D.C.	447	1976
W. Hale et al. (1979)	Patients 65 and older in hypertension clinic in Florida	1,711	1977-78
M. Maultsby and R. Fortier (1981)	Registered voters aged 60 and older in Fayette County, Kentucky	323	1978(?)
P. Raffoul et al. (1981)	Registered voters aged 60 or older in Fayette County, Kentucky	67	1979
A. Vener et al. (1979)	Retired persons aged 60 and older in Central Michigan	55	1978(?)

Manheimer et al. (1968) conducted a study of psychotherapeutic drug use among a sample of Californians aged 21 and older. He found the following percentages of persons aged 60 and over reporting "frequent" use of psychotherapeutic drugs (both prescription and over the counter):

Category of drug	Male	Female	Total
Stimulant	0%	4%	2%
Sedative	10%	13%	11%
Tranquilizer	7%	10%	8%
Any of the three	13%	19%	16%
Number	(135)	(93)	(228)

The data shed additional light on the relationship between sex and psychotherapeutic drug use. Apparently females are more likely to use these drugs than are males, but they also use the drugs more frequently than males.

Warheit et al. (1976) found that 17.5 percent of persons aged 60 and older reported current use of stimulants, sedatives, or tranquilizers. About half (50.5 percent) of those 60 and older reported using at least one of these substances during their lifetime (34.0 percent had used sedatives, 35.3 percent tranquilizers, and 3.5 percent stimulants). A period of frequent use (daily or often) at some point in their lives was reported by 20.0 percent of the sedative users, 83.1 percent of the tranquilizer users, and 9.1 percent of the stimulant users.

Fejer and Smart (1973) reported the prescribed use of tranquilizers, barbiturates, or stimulants over a

1-year period for a sample of persons aged 56 and older who were residents in Toronto, Canada.

	Age	
Category of drug	56-60	61 and over
Tranquilizer	12.3%	12.0%
Barbiturate	6.2%	14.4%
Stimulant	0.0%	1.8%

Studies of Drug Use among Older Persons

Probably the most comprehensive study of an elderly group that has been conducted to date is Guttmann's study (1977; 1978) of 447 older residents of Washington, D.C. He examined the use of all prescription and over-the-counter drugs in the 24-hour period before the interview was conducted. In addition, he gathered data on the physical condition of respondents, as well as on life satisfaction and other measures of morale. He found that the three categories of drugs most frequently used were cardiovascular (39.3 percent), sedative/tranquilizer (13.6 percent), and antiarthritic (9.4 percent).

Guttmann (1978) presented the following data (left-hand column) on use of prescription psychoactive drugs. The categories were combined (right-hand column) to determine the percentage of the total sample that currently used each type of drug.

Type of drug	Number of persons	Percentage of total sample who use drug type
Sedative/tranquilizer		16.6
Daily use	28	
1 or more times weekly	16	
As necessary	30	
Antidepressant		1.6
Daily use	6	
As necessary	1	
Nervous system		2.7
Daily use	10	
As necessary	2	
Analgesic		7.8
Daily use	18	
1 or more times weekly	1	
As necessary	16	

Guttmann's subjects showed the following usage patterns.

1. Almost all users of psychotropic drugs (98.7 percent) obtained their prescribed sedative/tranquilizer and antidepressant drugs from a physician.

2. More users of psychotropics (50.7 percent compared with 39 percent of the users of all prescription drugs) could not perform regular daily activities without prescription drugs.

3. The same percentage (90.6 percent) of psychotropic and other prescription drug users had no difficulty in obtaining prescription drugs.

4. A considerably higher proportion of users of psychotropics took several kinds of drugs in combination than did users of prescription drugs in general (38.6 percent vs. 26.4 percent).

5. Users of psychotropic drugs consulted more frequently with a physician prior to taking drugs in combination than did users of all prescription drugs (75.8 percent vs. 62.4 percent).

Frank et al. (1979) found that 72 percent of respondents chosen primarily from New York senior citizen centers reported having taken at least one prescription drug (of any type) in the week preceding the interview. They found that 28 percent had taken a sedative/tranquilizer, and 29 percent had taken an analgesic/antiarthritic in the week prior to the interview. One-fourth of the subjects had taken some sedative within their lifetimes, while 44 percent had used a tranquilizer. Four percent reported ever taking stimulants. Almost three-fourths (71 percent) of the sample currently used at least one over-the-counter preparation.

Hale et al.(1979) reported the following data for regular use (respondent's definition) of psychoactive substances by a sample of 1,711 patients of a hypertension-screening program who were aged 65 or older.

Drug type	Male	Female	Total
Hypnotic	5.1%	6.4%	5.9%
Tranquilizer	7.2%	9.5%	8.7%
Sedative	0.7%	1.0%	0.9%
Antidepressant	0.9%	1.3%	1.1%
Analgesic	17.7%	27.8%	24.0%

Back and Sullivan (1978) in a study of 502 persons aged 45-70, reported the following rates of current use of psychoactive substances.

Tranquilizers	15.7%
Sleeping pills	8.8%
Pain killers	11.2%
Alcohol	46.4%
Tobacco	50.0%

In a study of retirees aged 60 or older, Vener et al. (1979) found 33 percent had taken no drugs in the week before the interview. Sixty-five percent of the sample had used some over-the-counter preparation in the same period.

Green (1977) found that 80 percent of a sample of 100 persons aged 60 and older reported using a drugs in the week before the interview. The following percentages used prescription psychotropic drugs.

Analgesic	6%
Antidepressant	3%
Sedative/tranquilizer	19%

Of psychoactive over-the-counter preparations, 38 persons (38 percent) used analgesics, one used a sleeping aid, and three used antihistamines.

Chein et al. (1978) studied 242 persons aged 60 and older residing in Washington, D.C. and found the following drug usage.

Analgesic	66.6%
Antianxiety	22.3%
Hypnotic	12.0%
Antipsychotic	4.1%
Antidepressant	2.5%
Antihistamine	1.2%

They concluded: "The results of the study did not reveal any significant abuse of substances, including alcohol and self-prescribed drugs, if abuse is defined as the intentional use of illegally obtained mind- or behavior-altering substances. No nonmedical use of amphetamines, barbiturates, or narcotics was found, nor was a single instance of marijuana usage reported. The common suspicion that a significant number of elderly people might be unreported alcoholics was not verified...."

Maultsby and Fortier (1981) found that 82 percent of 323 registered voters 60 and above were currently using central nervous system drugs. Over 50 percent of the sample reported current use of two or more psychotropics, including over-the-counter preparations. The most popular psychotropic drugs were nonnarcotic analgesics; minor tranquilizers and barbiturates were the distant second and third most popular.

Summary

While the studies cited varied widely in sampling, period during which drug use was assessed, and methodology for collecting the data, four generalizations can be drawn. First, the great majority of elderly persons do not use psychoactive substances. Second, analgesics and antianxiety agents are the most frequently used substances, and third, the elderly use those drugs with care. Fourth, males are less likely to use psychoactive substances than are females.

Correlates of Use

Some of the studies described above focused on correlates of all drug use. Both Green (1977) and Vener et al. (1979) found that poor health was a predictor of drug use.

Other studies focused directly on correlates of psychoactive drug use. Both Chein et al. (1978) and Guttmann (1978) found that poor health was a correlate of psychoactive drug use. Mellinger et al. (1974) noted that the use of medically prescribed psychotherapeutic substances was associated with psychic distress and the experiencing of a life crisis (death of spouse, etc.) in the past year. Similarly, Guttmann found that psychoactive drug users scored significantly lower on life satisfaction than did nonusers and looked upon the present as the worst time of their lives.

Misuse of Drugs

A number of studies touched upon the subject of the potential misuse of drugs. Raffoul et al. (1981) reported that 28 (43 percent) of their subjects committed 36 instances of drug misuse, i.e., use of drugs not in accord with medical prescription. This amounted to noncompliance with 16 percent of all prescriptions. Twenty-one subjects misused one drug each, 6 misused two drugs, and 1 misused three drugs. The types and percentages of occurrences of misuse were:

		N
Underuse	72%	26
Use after need completed	11%	4
Alcohol/drug or drug/drug interaction	11%	4
Prescribed for another person	3%	1
Improper storage	3%	1

Underuse comprised the overwhelming number of instances of misuse. To understand this, the researchers contrasted misusers with users on number of prescribed and over-the-counter drugs, medical condition, mental status, age, sex, race, education, income, living status, self-rating of health, number of dispensing pharmacies, and number of prescribing physicians. Only the latter two variables were found to be significantly related to misuse.

Maultsby and Fortier (1981) defined misuse of drugs as "nonprescribed or nonrecommended use." They reported the following:

1. As the total number of drugs taken per person increased, frequency of drug misuse increased. This relationship was stronger for prescription drugs than for over-the-counter preparations.

2. As daily alcohol consumption increased, both the number of other drugs taken and the misuse of these drugs decreased.

3. For most of the subgroups in this study (defined by age and education), misuse correlated positively with number of psychoactive drugs taken.

4. High levels of psychological discomfort, as measured by the Derogatis Symptom Checklist 90, correlated positively with multiple drug use. Moreover, psychoactive drugs were apparently ineffective in lessening psychological discomfort.

The authors suggest: "It then seems logical to suspect strongly that some of the psychological discomforts of our subjects were probably caused by undiagnosed ADR's (adverse drug reactions) secondary to multiple drug use."

Chein et al. (1978) reported that about 14 percent of their subjects evidenced misuse of drugs, defined as use for reasons other than those stated in the *Physician's Desk Reference*. The researchers reported psychoactive drug misuse as follows.

Type of drug	Use	Misuse[1]
Analgesic	66.6%	9.0%
Antianxiety	22.3%	4.0%
Hypnotic	12.0%	0.0%
Antipsychotic	4.1%	10.0%
Antidepressant	2.5%	16.7%
Antihistamine	1.2%	33.3%

Chein et al. and others have pointed to the use of multiple medications as a serious problem. Chein found that 83 percent of his sample took two or more drugs. Fourteen percent were regularly using 7-15 drugs, and only 8 percent were medication free. "Interestingly, many of the most commonly used drugs and substances mentioned in our data are cited to have interaction effects" (Chein et al. 1978, p. 367).

Finally, Green (1977) found that her subjects had made the following adjustments to their medication schedules occasionally.

Taken more than the recommended dose	16%
Taken less than the recommended dose	36%
Stopped when started to feel better	47%
Stopped when felt medication not working	23%

In addition, 30 percent had shared their drugs with someone else (16 percent with a family member, 7 percent with a friend, and 7 percent with a neighbor). Sixty-seven percent felt that they had not receive adequate instructions from the physician.

Use of Alcohol

A large number of researchers have attempted to assess the extent of alcohol use among the elderly. In one study (Chein et al. 1978), 47 percent were nonusers, 36 percent had less than one drink per day, 9 percent had one drink per day, and 8 percent had more than one drink per day. Vener et al. (1979) determined that 58 percent of the males and 23 percent of the females in his sample had used alcohol in the week before the interview. One- fourth of another sample (Frank et al. 1979) had used alcohol in the past month, and 17 percent reported use in the past week. Green (1977) found that 25 percent drank alcohol in the week before the interview and 25 percent sometimes drank alcohol when using prescription medications. Maultsby and Fortier (1981) discovered the following distribution in their study population: abstainers (less than one drink per year), 39 percent; light drinkers (up to 12 drinks per month), 38 percent; moderate (58 per month/2 a day), 11 percent; and heavy (more than 2 a day), 12 percent. Guttmann also looked in some detail at the use of alcohol and he found that "the majority of respondents (56.2 percent) reported little or no use of alcohol." Frequent users of alcohol (daily use) comprised less than a fifth (18.6 percent) of the respondents, while close to one-fourth (24.6 percent) were infrequent users (drank a few times a week to a few times a month). He also found that income was positively and significantly correlated to alcohol use. Users of psychotropic drugs indicated somewhat less moderate drinking of alcoholic beverages than did users of nonpsychotropic drugs (40.5 percent vs. 35.1 percent). Warheit et al. (1976) determined that 40.3 percent of the respondents aged 60 or older reported ever using alcohol, while 22.2 percent reported periods of frequent alcohol use. Overall, the literature indicates low to moderate use of alcohol among the elderly.

Use of Tobacco

Finally, a few studies explored the use of tobacco among the elderly. Maultsby and Fortier (1981) found that 23 percent of their sample smoked, and 5.6 percent smoked more than one pack of cigarettes per day.

Methodology

Sampling

The basic goal of the sampling procedure was to obtain a representative sample of noninstitutionalized persons aged 55 and older who resided in Harris County (Houston), Texas. A telephone survey was devised that included unlisted telephone numbers, generating a random sample of 20,000 numbers. Each number was called, and it was determined that 9,299 were not residential. The remaining 10,701 numbers were screened to determine if anyone 55 years of age or older was resident in that home. The screen question was answered by 8,616 households, and 1,835 contained a person 55 years of age or older. If the household had more than one eligible person, a procedure developed by Kish (1965) was used to select the respondent. Both telephone and household interviews were completed by 1,101 persons, making the final response rate for completed interviews 60 percent.

Table 2 presents the demographic characteristics of the final sample of 1,101 respondents and comparable data from the 1980 census for Harris County. The sample does not appear to be truly representative of the underlying population from which it was drawn. Males, whites, and persons in the age category 55-64 seem to be underrepresented whereas females, minorities, and those over 65 seem to be overrepresented. However, the census data include persons who reside in nursing homes, hospitals, and other institutional settings. The study sample contains only persons who live in residences. Nonetheless, the reader should be

[1] Percent of misusers relative to all persons using that category of drug.

Table 2.--Demographic characteristics of study sample and 1980 Harris County census data for persons aged 55 and older

(in percentages)

	Harris County	Study sample
Sex		
Male	44.2	37.9
Female	55.7	62.1
Ethnicity		
White	80.5	74.0[a]
Black	19.5	25.1
Other	--	.9
Age		
55 - 64	53.4	46.8
65 - 74	29.9	35.3
75 and above	16.6	17.9

[a]Includes Mexican-American

cautioned that the sample appears to be somewhat biased.

Initially, the dependent and principal independent variables were weighted on the basis of the probability of a respondent being chosen when there was more than one eligible respondent in the household. As suggested by Kish (1965), weighted vs. unweighted estimates of the variables were analyzed. The frequency distributions were found to vary by at most a percentage point or two. The only characteristic that varied somewhat more was marital status. Because the unweighted estimates were so close to the weighted ones and because of the statistical and analytical difficulties of dealing with such weighted estimates, the unweighted estimates were used. This decision should not affect the major substantive conclusions of this study.

Finally, one additional potential bias in the data lies in the fact that not all residences have telephones. The telephone company estimates that fewer than 6 percent of the households in Houston that contain someone in the over-55 age group are without phone service.

Data Collection

The data were collected from mid-1979 to early 1980 using two different interview instruments. The first was a telephone interview[2] that lasted approximately 45 minutes to 1 hour.[2] This interview focused on general health issues and also contained the questions from which the morale and activity scales (to be discussed later) were built. Drug usage was not addressed in the telephone interview.

At the termination of the telephone interview, the respondents were asked if they would permit an additional interview at home (for which they would be paid $5) that would include more detailed questions on health issues and use of medicines. The in-home interview focused on the current use of all prescription drugs and on the respondent's total history of psychoactive drug use. The in-home interview also lasted about an hour.

An effort was made to keep refusals to a minimum. All interviewers were extensively trained to deal with refusals. In addition, after respondents completed the telephone interview, they were sent a letter that once again outlined the general purposes of the study and encouraged the respondent to participate in the in-home interview. The respondents were also given the telephone number of the principal investigators so that they could call and verify the legitimacy of the study. If the respondent refused to allow a home interview, a mailgram requesting his or her cooperation was sent. This mailgram also contained a phone number that the respondents could call if they had any questions about the study. Shortly thereafter, another phone call was placed to the respondent in an attempt to set up an appointment for a home interview. This phone call usually was made by an interviewer supervisor who tried to respond to the respondent's reason(s) for refusal. If the respondent still refused, no further attempts were made to contact that person. As noted above, the final response rate for completed interviews was 60 percent.

The primary reason given for refusal was lack of time. There is no reason to believe that respondents were trying to hide anything about their use of drugs (or any other subject) since they did not know in detail about the kinds of data to be collected in the in-home interview. Thus, it appears unlikely that psychoactive drug users or misusers selected themselves out of the sample.

Various quality control measures were used to assure the validity and consistency of the data. These included extensive training of interviewers, editing of interviews, and random call-backs to make certain interviews had been conducted. Interviewers and interviewees were matched by race and language. (Spanish-speaking interviewers conducted a translated version of the interview.)

Variables

Use of psychoactive drugs.--In this study, psychoactive drugs were defined as those mood-altering substances that affect the central nervous system. For purposes of the study, the drugs were divided into six categories: sedative/hypnotic, antipsy-

[2] It should be noted that throughout this sampling and interviewing procedure, repeated call-backs were made to busy numbers or phones that were not answered. Call-backs were made throughout the day and evening.

Table 3.--Categories of psychoactive drugs used in this study

Drug category	Drug	Brand name
Sedative/hypnotic	Phenobarbital	Nembutal
	Secobarbital seconal	
	Ethchlorvynol placidyl	
Antipsychotic	Chlorprothixene	Taractan
	Thioridazine hydrochloride	Mellaril
	Chlorpromazine hydrochloride	Thorazine
Antidepressant	Imipramine hydrochloride	Tofranil
	Amitriptyline hydrochloride	Elavil
	Perphenazine and ametriptyline hydrochloride	Triavil
Antianxiety	Diazepam	Valium
	Chloridiazepoxide hydrochloride	Librium
	Meprobamate	Miltown
Stimulant	Phentermine hydrochloride	Fastin
	Diethylpropion hydrochloride	Tenuate
Analgesic	Propoxyphene hydrochloride	Darvon
	Aspirin, codeine phosphate	Empirin with Codeine

chotic, antidepressant, antianxiety, stimulant, and analgesic. Table 3 lists these categories along with representative drugs that appeared as the most frequently used in that category.[3]

Some commonly prescribed antihistamines were also included in the sedative/hypnotic category as they are often used as mild sedatives for older patients . The only one of these that occurred with any frequency was Benadryl.

To ensure that all use of psychoactive drugs was reported, each respondent was asked to show the interviewer the containers of all prescription drugs currently being used. All respondents agreed. The interviewer then recorded all the information from the prescription label onto the interview form. (Interviewers checked with the respondent and made certain that the medicine bottle in fact contained the medication shown on the container.) The interviewer then used a code book to determine whether the substance was a psychoactive drug. This determination was necessary because many questions in the interview were dependent on whether a psychoactive drug had been used. In this way, all psychoactive substances currently being used were identified.

In addition to current use of psychoactive substances, both recent use (in the last 3 months and in the past year) and lifetime experience with the psychoactive substances were assessed. Psychoactive substance picture charts were employed for this part of the study.

Compliance with prescription directions.--In this study the definition of potential misuse was keyed to the question of whether the individual followed prescription orders. If a respondent reported that he or she did not always follow the prescription, that person was labeled a misuser. There are, of course, problems with this particular definition. Many persons in the sample may feel that they know their prescription directions, but in actual fact they do not understand--or follow--the directions. Thus, the actual number of misusers may be underestimated and limited to only those persons who knowingly violate their prescription directions.

Available studies report the elderly as showing a high degree of prescription noncompliance.[4] However, the major error made in these instances is overwhelmingly omission of a medication (Blackwell 1972; Clinite and Kabat 1969; Schwartz et al. 1962).

Data from the in-home interview itself indirectly reflects on the question of patient knowledge of and compliance with prescription directions. Pre-

[3]Brand names are used throughout this report because most responses were given by brand name.

[4]At least one study has shown "that the patients over 70 had the lowest (medication) error rate. This was probably due to fewer daily distractions in their lives, permitting greater attention to their therapy requirements" (Clinite and Kabat 1969, p. 450).

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Table 4.--Respondents who used psychoactive drugs for selected time periods by demographic characteristics

(in percentages)

Demographic characteristic	Psychoactive drug use				N
	Currently	In past 3 months	In past year	Ever	
Sex					
Male	10.3*	17.7*	20.6*	39.1*	417
Female	22.1	32.2	37.4	61.7	684
Ethnicity					
Anglo	18.7	29.5*	35.5*	58.2*	749
Black	15.9	21.0	26.8	43.9	276
Mexican-American	12.1	15.2	18.2	34.9	66
Age					
55 - 64	17.1	26.2	31.3	57.5*	515
65 - 74	17.5	26.8	31.2	51.3	388
75 and above	19.3	27.9	30.5	45.6	197
Annual household income					
Less than $4,481	18.8	25.8	30.6	48.9	229
$4,481 - 9,487	15.4	26.6	29.3	47.9	188
$9,488 - 20,085	13.0	23.8	26.4	51.3	193
More than $20,085	14.3	24.3	30.9	60.0	210
Marital status					
Married	16.8	25.8	29.7	51.7	565
Widowed	17.7	28.0	33.3	55.6	372
Other	20.1	26.8	30.5	52.5	164
Education					
Less than high school	18.7	28.6	31.9	49.6*	433
High school graduate	15.1	23.7	29.1	56.5	279
One or more years of college	20.6	31.0	37.7	62.4	287
Percent of total sample	17.6	26.7	31.1	53.1	1,101

* χ^2 significant at .05 level.

sumably, if a client were not following prescription directions, he or she might report some physical or emotional problem arising from the over-, under-, or non-use of the medication. Yet the data showed that less than 5 percent of the sample associated some physical or emotional problem with any medication (including all the nonpsychoactive drugs) they were taking.

Other variables.--Large amounts of data were also collected on demographics and morale. These included measures of depression, alienation, and involvement in life. These measures were developed and standardized on a Texas elderly population in a previous study (Stephens et al. 1978; Blau et al. 1979). In addition, the number of life crises (loss of spouse, divorce, retirement, death of children, child leaving home, loss of parent, or change of life) experienced by the respondent were determined.

Measures of social activity included scales built to assess use of leisure time and interaction with friends (Stephens et al. 1978). General health status was assessed through a detailed health-status scale developed on a sample of elderly Texans (Haney et al. 1981).

Psychoactive Drug Use and Potential Misuse

Psychoactive Drug Use

Table 4 presents data on the use of prescribed psychoactive drugs among demographically defined subgroups of the sample for four different time periods: currently, in the past 3 months, in the past

year, and ever in the respondent's lifetime. The data show that 17.6 percent (194) of the sample reported current use,[5] 26.7 percent reported use in the last 3 months, 31.1 percent reported use in the past year, and 53.1 percent reported having ever used a psychoactive substance. Females were significantly more likely to report experience with psychoactive substances than were males. Similarly, the three ethnic groups differed significantly; for three of the four time periods significantly more Anglos reported use than did Blacks or Mexican-Americans. There were no significant differences by annual household income or marital status. However, younger and better educated persons were significantly more likely to report any experience with psychoactive substances.

Most persons who reported using prescribed psychoactive drugs currently, used only one such substance. Of current users, 85.1 percent were taking one psychoactive drug, 11.3 percent were taking two, and 3.6 percent were taking three.

Table 5 shows both the types of psychoactive drugs currently being used and the total number of days they were taken in the past 3 months. The antianxiety drugs were by far the most frequently used--9.4 percent of the total sample were currently using them. The next most frequently used category--used by less than half as many people (4.2 percent)--was sedative/hypnotic. Then followed analgesics (3.0 percent), antidepressants (2.7 percent), antipsychotics (1.2 percent), and finally the stimulants (0.2 percent).

[5]In an additional 22 cases (2.0 percent of total sample) the respondent provided a medicine bottle which contained a psychoactive substance. However, for methodological reasons (possible interviewer, interviewee, or coder error) these persons were not listed as current users. They are counted as using in the past 3 months, in the past year, and of course as ever users. Thus, current use may be 19.6 percent or a possible error of 2.0 percent.

Also noteworthy is the U-shaped distribution of number of days drugs were used. Most respondents reported use either for the entire 3-month period or for less than 30 days. Relatively large percentages of the users of antipsychotic and antidepressant drugs, in particular, took them every day in the past 3 months. However, these findings should be moderated to some extent by the fact that small percentages of the total sample were currently using any psychoactive substances at all. The only possible exception to this statement can be found for the antianxiety drugs; nearly one-tenth of the entire sample used this drug category, which contained the single most frequently used of all the psychoactive substances--diazepam (Valium).

Use of illicit substances.--Only 21 persons (1.9 percent) reported any use of illicit substances in their entire lifetimes. Thirteen persons (1.2 percent) reported using marijuana at least once, six (0.5 percent) had used cocaine, one used LSD, and one person reported use of methadone. Thus, as with earlier studies, it was found that these illicit substances simply present no problem for this age group.

Comparison with other studies.--Caution must be used in comparing these findings to those of other studies. Age groups examined are not identical, different categorizations of drugs are used, and different periods of time are examined in various studies.

Table 6 compares the results of this study with those of other studies having roughly comparable prevalence data. In most cases, the findings were within a few percentage points of each other. In general, the estimates from this investigation were slightly higher, possibly because this study, unlike most others, included the analgesics and persons in the 55-60 year range.

The present study also corroborated many of the findings of prior studies:

Table 5.--Number of days of psychoactive drug use in past 3 months by drug category

(in percentages)

Drug category	Under 30 days	30-59 days	60-89 days	Every day in past 3 months	N	Percentage of sample who use drug category
Sedative/hypnotic	43.5	6.5	4.3	45.7	46	4.2
Antipsychotic	23.1	0.0	7.7	69.2	13	1.2
Antidepressant	23.3	13.3	0.0	63.3	30	2.7
Antianxiety	36.9	17.5	5.8	39.8	103	9.4
Stimulant	0.0	0.0	0.0	100.0	2	0.2
Analgesic	59.4	9.4	6.3	25.0	32	3.0

Table 6.--Comparison of study findings

(in percentages)

Study	Current use			Used in past 3 months			Used in past year			Ever used		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Present study	22.1	10.3	17.6	32.2	17.7	26.7	37.4	20.6	31.1	61.7	39.1	53.1
Mellinger (1974)							31.0	21.0	27.0			
Mellinger (1971)							34.0	23.0				
Manheimer (1968)	19.0	13.0	16.0									
Warheit (1976)			17.5									50.5
Maultsby (1981)			82.0									

1. The majority of elderly persons do not use psychoactive substances.

2. Females are more likely to use psychoactive substances than males.

3. The most frequently used substances are the sedative/hypnotic, antianxiety, and analgesic agents.

Potential Misuse of Psychoactive Substances

Failure to follow prescription directions.--Reported failure to follow prescription directions was explored by asking each respondent, for each psychoactive drug they were currently taking, "Do you always follow the prescription?" If they answered that they did not (even if only once), they were asked why they did not and whether they had taken more or less of the drug than the prescription called for. Seventy-six persons or 6.9 percent of the overall sample reported that they did not follow the prescription directions. Of these, 86.8 percent said that they took less than that prescribed, and 13.2 percent reported taking more. Thus, .9 percent of all respondents reported taking more of a psychoactive drug than was prescribed for them. Given that .9 percent represents a ceiling in terms of possible drug abuse, the danger of the elderly using more psychoactive substances than prescribed appears to be small.

When asked why they did not follow their prescription, the respondents said:

I don't like the medication or the prescription dosage	48.6%
I take them only when I feel I need them	23.0%
The drug is too expensive	9.4%
I get better results taking them my own way	6.8%
The doctor told me I could deviate from the prescription	5.4%
I get bad side effects	4.1%
I sometimes forget or am too busy	2.7%

It was clear that the majority of those who did not comply were doing so by deliberate choice and in an effort to limit drug taking.

Table 7 presents the demographic correlates for those who followed and did not follow their prescription directions. The table shows that more than twice as many women as men did not follow prescription directions, although the differences were not statistically significant. Interestingly, while those aged 75 and above were more likely to be currently using psychoactive substances, they also were least likely to misuse them; although, again, differences were not statistically significant. There was no pattern of misuse by income group. While also statistically insignificant, married persons seemed slightly less likely to follow prescription directions.

Comparison with other studies.--These findings seem to be consonant with the results of the few studies that explored issues surrounding misuse. Like Raffoul et al. (1981) and Green (1977), the vast amount of prescription noncompliance in the Harris County sample was underuse. And like Raffoul, no demographic variables were found that predicted misuse at a statistically significant level.

Use of Alcohol and Tobacco

Use of Alcohol

Although this study focused primarily on psychoactive drug use, a series of questions was asked to determine the extent and nature of alcohol use. About three-fifths of the sample (59.6 percent or 656 persons) reported that they had not drunk any alcoholic beverages in the month before the interview was conducted. In fact, 43.1 percent (283) of these persons volunteered that they had never been consumers of alcoholic beverages. Of those who did drink, over 70 percent averaged only one or two drinks per day on the days that they did drink. Only a small percentage of persons overall (6.6 percent) consumed five or more drinks on the occasions that they did drink. When asked what type of alcoholic beverage they mainly used in the

Table 7.--Psychoactive drug prescription adherence among psychoactive drug users by selected demographic characteristics

(in percentages)

Demographic characteristic	Follow prescription	Do not follow prescription	N	Percent of total sample which does not follow prescription
Sex				
Male	65.1	34.9	43	3.6
Female	59.6	40.4	151	8.9
			$x^2 = 0.23$ n.s.	
Ethnicity				
Anglo	59.3	40.7	140	7.6
Black	65.9	34.1	44	5.4
Mexican-American	50.0	50.0	8	6.1
(Ethnicity collapsed to Anglo vs. other)			$x^2 = 0.13$ n.s.	
Age				
55 - 64	55.7	44.3	88	7.6
65 - 74	61.8	38.2	68	6.7
75 and above	71.1	28.9	38	5.6
			$x^2 = 0.13$ n.s.	
Annual household income				
Less than $4,481	65.1	34.9	43	6.6
$4,481 - $9,487	65.5	34.5	29	5.3
$9,488 - $20,085	48.0	52.0	25	6.7
More than $20,085	63.3	36.7	30	5.2
			$x^2 = 3.03$ n.s.	
Marital status				
Married	54.7	45.3	95	7.6
Widowed	65.2	34.8	66	6.2
Other	69.7	30.3	33	6.1
			$x^2 = 3.09$ n.s.	
Education				
Less than high school	60.5	39.5	81	7.4
High school graduate	64.3	35.7	42	5.4
1 year or more of college	57.6	42.4	59	8.7
			$x^2 = 0.46$ n.s.	
Total sample	60.8	39.2	194	6.9

past month, 41.5 percent (183) of the drinkers reported using mainly beer, 16.5 percent (74) wine, and 41.7 percent (184) hard liquor or mixed drinks.[6]

Respondents were also asked whether and to what extent they drank on the day before the interview was conducted. Only 17.7 percent of the respondents reported drinking an alcoholic beverage on the day before their interview. The great majority of the drinkers (70.7 percent) reported using no more than one drink on that day.

Table 8 shows the extent of drinking on the day before the interview, cross-tabulated by demographic characteristics. Males were significantly more likely to be drinkers and to drink more heavily than females, and Anglos were significantly more likely to be drinkers than other groups. The prevalence and extent of drinking declined with age, and those with lower incomes were less likely

[6]Unfortunately, because of the interview time which would have been needed to ascertain a complete assessment of alcohol use, alcohol equivalency data (stated in terms of ounces of alcohol) were not computed. Thus, only broad characteristics of drinking behavior are discussed here.

Table 8.--Number of drinks consumed on day before interview by selected demographic characteristics

(in percentages)

Demographic characteristics	None	1	2	3+	N
Sex					
Male	70.3	9.8	9.1	10.8	408
Female	89.6	5.9	3.1	1.5	682
			$\chi^2 = 78.82$*		
Ethnicity					
Anglo	80.3	8.9	5.9	4.8	743
Other	87.2	3.9	3.9	5.0	337
			$\chi^2 = 11.23$*		
Age					
55 - 64	75.9	8.8	8.8	6.5	510
65 - 74	85.1	7.1	2.6	5.2	382
75+	93.9	4.1	1.5	0.5	197
			$\chi^2 = 43.19$*		
Annual household income					
Less than $9,488	88.5	3.4	3.6	4.5	358
$9,488 or more	71.9	12.3	8.6	7.2	374
			$\chi^2 = 34.37$*		
Marital status					
Married	77.5	9.5	5.9	7.0	556
Widowed	88.7	5.4	4.0	1.9	371
Other	84.7	4.3	6.1	4.9	163
			$\chi^2 = 34.36$*		

*Significant at .05 level.

to drink or drank less. Also, marital status was related to drinking patterns; married persons were more likely to drink and drank heavier than widowed or other.

How did the drinking patterns of the respondents relate to their use and potential misuse of psychoactive drugs? Table 9 provides data on current psychoactive substance use and alcohol use in the past month. It illustrates a point supported elsewhere in this report, namely, that the respondents were responsible consumers of psychoactive substances. A large percentage (47.6 percent) of the sample used neither alcohol nor psychoactive substances. And just as importantly, only 5.7 percent of the sample currently using a psychoactive substances had also used alcohol in the past month. Further analysis revealed that only 24 persons (2.2 percent of the sample or 12.4 percent of current psychoactive users) were current users of psychoactive substances and also drank alcohol on the day before the interview.

Further documentation of the relationship between extent of alcohol use and psychoactive drug use is found in table 10. This table depicts the number of drinks consumed on the day before the interview and various measures of psychoactive drug use.

The variables "current use of psychoactive drugs" and "psychoactive drug use in the last 3 months" show a slight and insignificant inverse relationship between use of alcohol and current psychoactive drug use; nonusers of psychoactive drugs were somewhat more likely to be users of alcoholic beverages. The same relationship holds when the number of psychoactive drugs used in the past 3 months is examined.

Overall, the following conclusions can be drawn about alcohol use in the sample.

1. The majority of persons in the sample did not drink any alcoholic beverages in the past month.

2. A majority of those who did consume alcoholic beverages in the past month drank only one or two drinks on the few occasions that they did drink.

3. Less than a fifth of the respondents drank an alcoholic beverage on the day before the interview was conducted.

4. Heavier drinking was found among males, younger persons, and those who were either currently married or divorced.

5. Extremely small percentages of persons seemed to be consumers of alcohol while using psychoactive substances.

6. There was no relationship between use of a psychoactive substance and number of drinks consumed either in the month before or the day before the interview was conducted.

Thus, the general picture that emerges from this analysis is that the subjects of this study either did not use alcohol or, if drinkers, were responsible consumers of alcoholic beverages.

Comparison with Other Studies

Again, one must use caution in comparing these findings on alcohol use with those of other studies. In the studies cited in this paper, more than half of

Table 9.--Current psychoactive drug use by use of alcohol in past month

(in percentages)

Currently use a psychoactive drug	Used alcohol in past month		
	Yes	No	Total
Yes	5.7	12.0	17.7
No	34.7	47.6	82.3
Total	40.4	59.6	100.0

(N = 1,098)

the respondents did not use alcohol. This investigation found that almost three-fifths of the sample had not drunk any alcoholic beverages in the month before the interview was conducted. Other studies have shown very small percentages of persons reporting even relatively moderate use of alcohol. For instance, Chein et al. (1978) found that 17 percent of their sample reported having at least one drink per day, and 23 percent of another sample (Maultsby and Fortier 1981) had two or more drinks per day. In the present study, 11 percent of the total sample reported having two or more drinks on the day before the interview. All of these studies also found males and upper income respondents more likely to be consumers of alcohol.

Use of Tobacco

Respondents were also asked about their use of tobacco products for the month prior to the interview. A sizable proportion of the sample (42.5 percent) reported that they had never used tobacco products. Another 19.4 percent noted that they had used tobacco in the past, but had not used any in the month before the interview was conducted. In fact, most (94 percent) of these former users had ceased their use of tobacco more than a year prior to the interview. This left a net total of 419 persons or 38.1 percent of the sample who had used tobacco in the past month.

Analysis of data on these individuals revealed the vast majority (88.8 percent) of smokers used a single type of tobacco product in the last month. Of the tobacco users, 77.0 percent were cigarette smokers. The majority of the cigarette smokers (61.0 percent) smoked one or more packs per day. Other types of tobacco used included cigars--4.4 percent; pipes--3.0 percent; chewing tobacco--3.7 percent; and snuff--2.7 percent. The extent of chewing-tobacco and snuff users may reflect the regional nature of the sample.

Table 11 presents the demographic characteristics of those who had never used tobacco, those who were former tobacco users, and current tobacco users (as defined by use in the month before the interview was conducted). Analysis of the percentages yielded some interesting if not unexpected findings. First, use of tobacco was significantly linked to sex. Males were much more likely either to be current or former users of tobacco. Females were much more likely to report that they never used tobacco. Anglos were significantly more likely than the other ethnic groups to report never having used tobacco, but were also more likely to be current users. Minority groups were more likely to contain individuals who had once smoked, but had since quit. Age was also significantly related to tobacco use. Older respondents were much more likely to report that they had never used tobacco and were also much more likely to report that they were not current tobacco users. Almost half (47 percent) of those under 65 years of age were current users of tobacco products. There were no

Table 10.--Number of drinks consumed on day before interview by selected indices of psychoactive use and potential misuse

(in percentages)

	Number of drinks consumed on day before interview				
	None	1	2	3+	N
Current psychoactive drug use					
Use	87.6	5.7	4.1	2.6	194
Do not use	81.3	7.7	5.6	5.5	896
		χ^2=5.01 n.s.			
Use of psychoactives in last 3 months					
Used	84.3	7.5	5.1	3.1	293
Did not use	81.7	7.3	5.4	5.6	806
		$\chi^2$3.09 n.s.			
Number of psychoactives used in last 3 months					
None	81.7	7.3	5.4	5.6	797
One	84.5	6.4	5.6	3.4	233
Two or more	83.3	11.7	3.3	1.7	60
		χ^2=5.63 n.s.			
Psychoactive drug prescription adherence					
Follow	87.3	6.8	4.2	1.7	118
Do not follow	88.2	3.9	3.9	3.9	76
		χ^2=1.58 n.s.			

significant differences between income groups. Marital status was also related to tobacco use. Widowed and never married respondents emerged as nonusers; they were much more likely to say they had never used tobacco and also were much less likely to be current users than were the married, separated, or divorced. Of course, this finding may be related to the fact that the widowed were more likely to be older.

No significant relationships were found between the use of tobacco in the past month and a number of indices of psychoactive substance use, including current psychoactive drug use, use of psychoactives in the past 3 months, and psychoactive prescription adherence.

To summarize tobacco use:

1. A sizable minority of persons reported never having used tobacco.

2. Cigarette smoking was the predominant pattern of tobacco use among tobacco users.

3. Use of tobacco products appeared to be particularly noteworthy among males, younger

Table 11.--Use of tobacco products in past month by selected demographic characteristics

(in percentages)

Demographic characteristic	Never used	Previously used but not in past month	Used in past month	N
Sex				
Male	19.9	30.5	49.6	417
Female	56.3	12.7	31.0	684
			$\chi^2=146.26$*	
Ethnicity				
Anglo	44.5	35.4	20.2	749
Other	38.0	44.2	17.8	342
			$\chi^2=7.69$*	
Age				
55 - 64	33.4	19.6	47.0	515
65 - 74	47.4	19.3	33.2	388
75 and above	56.3	19.3	24.4	197
			$\chi^2=44.01$*	
Income				
Less than $9,488	43.4	40.1	16.6	362
$9,488 or more	37.2	41.2	21.6	379
			$\chi^2=4.28$	
Marital status				
Married	37.2	22.7	40.2	565
Widowed	52.4	16.1	31.5	372
Other	38.4	45.7	15.9	164
			$\chi^2=78.68$*	

*Significant at .05 level.

respondents, and those who were currently married, divorced, or separated.

4. There was no statistically significant relationship between tobacco use and use of psychoactives (either currently or in the past 3 months) or potential misuse of psychoactives as defined in this study.

Health and Drugs

Self-Assessment of Health

National data would indicate that a substantial proportion of persons aged 55 years and older suffer from one or more chronic diseases or health problems. Virtually all older people are beset to some degree by metabolic and/or hormonal changes, stresses related to role changes and situational problems of changing life circumstances, and the normal loss of the body's regenerative and/or autoimmune responses. Nonetheless, as depicted in table 12, approximately one-third of the respondents rated their own health as very good, another one-third as good, and roughly onethird as either fair or poor. Remarkably, only 8 percent of the subjects rated their own health as poor.

The percentage of elderly in the minority ethnic groups reporting their health status as no better than fair was higher than that of the Anglos, while over 45 percent of the Anglo group reported their health as very good, and only 20 percent of the minority group did so. The differences between the sexes were not impressive. Regarding age the results were as expected--a somewhat higher percentage reporting poor health was found among the oldest respondent group. Few clear trends emerged from the data on marital status. The percentage of subjects reporting very good health rose with level of education.

General Health Scale

The present study revealed that reports of ill health tended to be related to certain demographic characteristics and other health behaviors including drug taking. Following this reasoning, poorer health as reported on the General Health Scale (GHS) (Haney et al. 1981) could be anticipated among the older, minority, female, and widowed or never-married respondent groups. Table 13 supports this expectation.

Two-thirds of those who reported taking four or more drugs were in the poorest GHS category. Of

those taking no drugs the corresponding percentage was 15.3. The percentage of cases in the healthiest category decreased fairly consistently as number of drugs used increased, from a high of 24.3 percent for those not using drugs to 7.4 percent for those using four or more. This same situation obtained regarding psychoactive drug use; 22.4 percent of those not using psychoactives reported good health as opposed to 13.5 percent of those who used psychoactives.

Attention was also focused upon those behaviors and characteristics associated with problems in taking medication. Subjects reported the following problems with medication taking.

Type of problem	Percent of all subjects	N
Trouble taking medicine at right time	8.0	86
Trouble remembering to take medicine	22.9	248
Trouble opening bottle/jar/container	36.5	396
Trouble separating or breaking tablets	4.6	50
Trouble mixing/preparing medications	1.1	12
Trouble keeping adequate supply	6.2	67
Trouble reading label	9.0	98
Taking more or less than specified on label	4.3	47
Medications which look alike	1.1	12
Other	2.3	25

Number of Physicians Contacted

Fifteen percent of the subjects had seen no physician in the last year. Over 40 percent saw one physician, 25 percent saw two physicians, and nearly 20 percent saw three or more physicians. Five percent (or 1 percent of the total sample) of those who had seen no physician in the last year reported themselves as currently taking a psychoactive drug. These data were consonant with the findings of Raffoul et al. (1981) that indicated an association of extent of drug use and misuse with the number of physicians prescribing for this group.

Polypharmacy has been argued to be a particularly significant potential problem among the elderly. Health status, the use of multiple physicians, reliance upon multiple drug use, and the number of medication problems all seem to be associated and further, these associations appear to be strong among the most disadvantaged and marginal members of the study group. For this reason, two questions were asked of all subjects:

1. Has your physician asked if you are going to any other physician?

2. Has your physician asked about the other medications you are taking?

Table 14 displays these data. The percentage of subjects reporting that their physician had asked if they were seeing other physicians increased from 7.9 percent for those not taking medication to 21.5 percent for those taking four or more medications. Thus, more than three-fourths of the subjects taking four or more medications had not been questioned about other physicians they might be seeing.

When asked if their physician was aware of the other medications they were taking, a somewhat brighter picture emerged; 42.9 percent of those taking four or more drugs indicated that their

Table 12.--Self-assessment of health and major demographic characteristics

(in percentages)

Characteristic	Very good	Good	Fair	Poor	N
Sex					
Male	35.4	33.0	22.7	8.9	415
Female	38.9	30.5	23.3	7.4	679
Age					
55 - 64	37.3	34.6	20.7	7.4	512
65 - 74	40.1	27.9	25.8	6.3	384
75 and over	33.0	30.5	23.9	12.7	197
Ethnicity					
Anglo	45.5	31.4	16.1	7.0	745
Other	20.0	32.1	38.2	9.7	340
Marital status					
Married	39.3	32.3	20.5	7.9	560
Divorced	38.0	33.3	23.1	5.6	108
Separated	23.1	30.8	38.5	7.7	26
Never married	44.8	31.0	20.7	3.4	29
Widowed	35.3	29.6	25.9	9.2	371
Educational level					
Less than high school	28.3	30.9	30.6	10.2	431
High school graduate	42.2	30.3	22.7	4.7	277
Some college	45.2	37.3	9.5	7.9	126
College graduate	55.1	30.4	10.1	4.4	158
Number of prescription drugs currently taking					
None	51.2	29.2	17.4	2.2	408
One	41.2	38.2	17.2	3.4	233
Two or three	30.1	32.6	29.7	7.5	279
Four or more	12.6	25.9	33.3	28.2	174
Number of psychoactives currently taking					
None	40.8	32.4	22.1	4.7	90
One	25.2	27.0	27.6	20.2	10
More than one	7.1	25.0	25.0	42.9	28
Total	37.6	31.4	23.0	8.0	1094

Table 13.--General Health Scale score by major demographic characteristics

(in percentages)

Demographic characteristic	GHS score				N
	No symptoms	Low	Medium	High	
Sex					
Male	24.9	26.7	27.7	20.8	390
Female	16.3	16.8	31.3	35.6	649
Age					
55 - 64	24.3	24.5	28.1	23.1	494
65 - 74	18.1	19.2	33.0	29.7	364
75 and over	9.4	12.2	28.3	50.0	180
Ethnicity					
Anglo	20.6	22.4	31.9	25.1	714
Other	17.5	16.5	25.7	40.3	315
Marital status					
Married	24.5	24.5	27.2	23.8	534
Divorced	17.0	23.0	35.0	25.0	100
Separated	21.7	26.1	39.1	13.0	23
Never married	21.4	32.1	14.3	32.1	28
Widowed	12.4	12.4	33.3	41.8	354
Educational level					
Less than high school	17.0	15.8	29.6	37.6	399
High school graduate	19.9	20.3	35.8	24.0	271
Some college	15.3	23.4	29.8	31.5	124
College graduate	30.9	28.9	24.8	15.4	149
Number of prescription drugs currently taking					
None	29.9	24.3	30.4	15.3	391
One	22.9	25.7	29.8	21.6	218
Two or Three	11.9	18.7	32.8	36.6	268
Four or More	2.5	7.4	24.1	66.0	162
Number of psychoactive drugs currently taking					
None	22.4	22.4	30.2	25.1	858
One	6.4	13.5	28.2	51.9	156
More than one	4.0	0.0	32.0	64.0	25

physician had asked about the medication regimen they were following. This percentage declined to approximately 35 percent for those taking one to three medications. Among subjects using psychoactive drugs, 35.1 percent of those taking one and 44.1 percent of those taking more than one had been queried by their doctors.

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Table 14.--Elements of physician's prescribing patterns by selected variables
(in percentages)

	Yes	No	N
Has your physician asked if you are going to any other physician?			
Number of medications currently being taken			
None	7.9	92.1	390
One	12.9	87.1	225
Two or three	12.4	87.6	274
Four or more	21.5	78.5	172
Number of psychoactives taken in last months			
None	10.7	89.3	775
One	16.3	83.7	227
More than one	18.6	81.4	59
Psychoactive use/misuse			
No psychoactive use	14.3	85.7	483
Psychoactive use	18.1	81.9	95
Psychoactive misuse	13.9	86.1	62
Has your physician asked if you are using other drugs?			
Number of medications currently being taken			
None	24.3	75.7	391
One	36.3	63.7	223
Two or three	35.0	65.0	271
Four or more	42.9	57.1	170
Number of psychoactives taken in last 3 months			
None	31.0	69.0	774
One	35.1	64.9	222
More than one	44.1	55.9	54
Psychoactive use/misuse			
No psychoactive use	37.0	63.0	481
Psychoactive use	39.8	60.3	113
Psychoactive misuse	37.1	62.9	70

Conclusions

Because of severe space limitations, the mass of data that were presented in this report cannot be discussed fully. However, the goals of the project have been achieved.

Clearly, the data indicate that the use of psychoactive substances does not pose a major public health problem to persons aged 55 and older. The study showed, within its ability to generalize, that less than a fifth of the sample currently used any psychoactive substance and that only a little over half reported having ever used a psychoactive substance in their lifetimes. These data were remarkably similar to data reported by others.

If misuse is defined as failure to follow prescription directions, almost 40 percent of the users (but less than 7 percent of the total sample) had failed at least once to follow prescription directions. However, the vast bulk of these persons (86.8 percent) reported that they took less drug than directed. While this can have important clinical implications for some disorders, for most psychoactive substances, medication error was probably in the safe direction. Moreover, less than 1 percent of the total sample reported themselves as taking more of a psychoactive than was prescribed. In short, noncompliance with physicians' prescriptions was far more likely to be in the direction of avoiding drug effects than of seeking those effects.

Less than 2 percent reported any lifetime use of an illicit drug. Indeed, only about 40 percent of the sample had drunk any alcoholic beverages in the month preceding the interview, and only 17.7 percent reported drinking an alcoholic beverage on the day before being interviewed. Only 5.7 percent of the total sample reported themselves as having currently used both a psychoactive substance and alcohol (this does not imply concurrent or simultaneous use). In short, the ambulatory elderly appear to be responsible consumers of psychoactive substances.

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