CORRELATES OF AGE IN A SAMPLE OF SUICIDE ATTEMPTERS KNOWN TO AN AGENCY

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ABSTRACT

Canada's suicide rate has almost doubled during a quarter of the century, i.e., from 1951-1977. The suicide rate for British Columbia is higher than the national average. Canadian age-specific suicide rates are also high among the elderly. In the Vancouver downtown district, suicide rate has reached alarming proportions.

S.A.F.E.R., as part of its program for prevention of Suicide Attempts, Follow-up, Education and Research, had an on-going data-collection project from mid 1977 to the end of 1981. During the 4 1/2 years, information on 5,358 cases of attempted suicide was collected by S.A.F.E.R. Workers for clinical and programmatic purposes. The present study has analyzed the data collected and stored in S.A.F.E.R. Tape Files.

The main objective of the present study has been to construct recognizably different profiles for S.A.F.E.R. Clients by classifying them into various age-groups. Increased awareness of age as a factor may appear relevant to the planning and on-going evaluation of suicide prevention programs.

The assumed relationship of age with the variables of the study was formulated in separate hypotheses. Tests of significance were applied to find the significance of association between the variables as well as to see the strength of association between age and other variables.

Statistically significant relationships were found between age and most of the variables tested. Tests of association, however, showed consistently weak relationships; most were in the neighbourhood of zero. Since the sample was large enough in most analyses to yield statistically significant findings even when actual differences were small, interpretations of the findings were based primarily on the strength of association rather than on statistical significance.

No significant differences were found between the 'young' and the 'old' elderly in patterning of suicide attempts or in the utilization of S.A.F.E.R. services.

Highlights of recommendations include: a more restrictive policy on the monitoring and sale of drugs mostly used in suicide attempts, identification of high-risk suicide attempters, including the elderly through vigorous out-reach efforts, use of volunteers, special focus on working with the family of attempters, dispelling negative images and stereotyping against the elderly through education and training programs for professionals and volunteers, integration of suicide prevention education with the school curricula as focus on prevention of high incidence of suicide among the teen-agers, evaluation of suicide prevention services, developing a sound data base to achieve reliability in research and recognizing and strengthening the many roles of social workers in suicide prevention.

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A C K N O W L E D G E M E N T S

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DEDICATED

To

Khalid, Sohail and Lina

Who volunteer to help save

lives in despair & in crisis

CHAPTER I

INTRODUCTION

Statement of the Problem

Man's innate drive for self-preservation has been affirmed as the most predominant factor in running the course of human existence. The process of survival records man's struggle against odds and his continuing search for evolving and innovating safer and more improved ways of living. In fact, the growth and development of human cultures and the progress of civilizations have been primarily motivated by the drive to make life more secure and at its best on-going. Nevertheless, there have been counter-forces throughout the course of human history causing some people to be predisposed to or to drift toward self-destruction. Denys deCatanzaro (1981:X), in his Preface to 'Suicide and self destructive behavior' remarks "self-preservation is readily explained through biological concepts, but self-destruction is quite anomalous." The act of self-destruction or suicide is considered a threat to society, but to the individuals who attempt or complete suicide, it is said to be the only way to avoid the problem of pain, failure, unhappiness and the like. Such ambivalence has both puzzled and fascinated the inquiring minds. Sigmund Freud commented on the mystery of suicide as to how it becomes possible for the extraordinary powerful life instinct to be overcome by deliberate acts of self-annihilation. He suspended his judgement on the issue for many years.

A highly paradoxical situation in general confronts the more developed* countries which have attained higher life expectancy, yet have increasing rates of suicide. Scientific and technological advancement has made it possible for them to gain control over diseases, to have access to better health measures, to life-saving drugs, improved nutrition and to have more adequate housing and other amenities of life. In addition an adequate income distribution has made it possible for everyone to avail of the advantages and benefits, which the more affluent nations can provide for their people. All these factors may account for the longevity of life in those countries. Canada is included among such countries with higher life expectancy, which yet has a higher suicide rate. Tables 1 A, B and 2 provide figures to substantiate the statement.

TABLE 1 - A

Life Expectancy in More Developed Countries

Country	Male	Female	Year
Austria	68.54	75.60	1977
Canada	69.34	76.46	1977
Sweden	72.23	78.14	1974-78
U.K.	69.62	75.82	1974-76
U.S.A.	68.7	76.5	1975

*The More Developed Countries are also characterized by greater industrialization and urbanization.

TABLE 1 - B

Life Expectancy in Less Developed Countries

Country	Male	Female	Year
Angola	37.0	40.1	1970-75
Chile	60.48	66.01	1969-70
Mexico	62.76	66.57	1975
Phillipines	56.9	60.0	1970-75
Saudi Arabia	44.2	46.5	1970-75

Source: Demographic Year Book 1978. United Nations, 1979.

TABLE 2

Rate of Suicide in More Developed and Less Developed Countries. (per 100,000 Living Population) All Ages.

Country	Rate	Year
Austria	22.7	1976
Canada	12.5	1976
Sweden	20.8	1975
U.S.A.	12.2	1976
West Germany	21.7	1976
Angola*	1.0	1972
Chile*	5.4	1976
Egypt*	0.1	1975
Mexico*	0.7	1975
Phillipines*	1.1	1974

Source: Ibid. United Nations, 1979.

*Denotes Less Developed Countries

In Canada, the rate of suicide has almost doubled in twenty six years. According to calculations by Health and Welfare Canada, based on Vital Statistics, the overall suicide rate in 1951 was 7.8 per 100,000 inhabitants. In 1977, it swung up to 14.3. There were three times as many males as females who committed suicide as seen from Table 3.

TABLE 3

Standardized*[1] Suicide Rate, by Sex and Selected Years, Canada
(per 100,000 inhabitants)

Year	Male	Female	Total
1951	11.3	3.9	7.8
1961	12.9	3.3	8.2
1966	14.1	5.0	9.6
1971	18.3	6.8	12.5
1973	18.7	7.4	13.1
1975	18.2	7.0	12.6
1977	21.2	7.3	14.3

Source: Rates calculated by Health and Welfare, Canada based on Statistics Canada, Vital Statistics, 1951-77, Statistics Canada Revised Annual Estimates of population by sex and age, 1951-77 and Estimates of population by sex and age, 1977. (Lepine, Lorraine, 1982:41)

*Standardized to Canadian Population (male and female separately)

1 Standardized Rate takes into account variations in different population groups by adjusting the structure of the population group to some corresponding population group. (Lepine, 1982:4)

Among the causes of death in 1977, suicide ranked fourth in terms of the Potential Years of Life Lost (PYLL) between 0 - 70 years. (Ibid.:1)

Of all the provinces of Canada, British Columbia had the second highest rate for male suicides in 1977, which was 25.5 per 100,000 male inhabitants. The rate for females appeared highest of all the provinces at 9.6 per 100,000 female inhabitants. The suicide rate for British Columbia stood higher (17.5) than the national average, as seen in Table 4.

TABLE 4

Crude suicide rate by Sex, Canada and Regions, 1977
(per 100,000 inhabitants)

Canada & Regions	Male	Female	Total
	21.2	7.3	14.3
Atlantic	14.7	3.2	9.0
Quebec	18.3	6.5	12.3
Ontario	20.8	8.3	14.5
Prairies	27.1	7.4	17.3
British Columbia	25.5	9.6	17.5

Source: Rates calculated by Health and Welfare, Canada, based on Statistics Canada Vital Statistics, 1977 and Estimates of population for the same year. (Ibid.:39)

In suicide, statistics for the adult population aged 15 and over are regarded as more accurate as suicide is usually not recorded before age 15. "Prior to this age, regardless of findings the act is usually deemed as accident". (Ibid.:16)

Based on calculations of the suicide rate for the population aged 15 and over, the overall rate for Canada changes from 14.3 to 18.8 for the adult population. The figures for the male rate rise to 28.3 per 100,000 males in the total population and for females to 9.6. Table 5 represents the suicide rate by sex and selected years for Canada for the population aged 15 years and over.

TABLE 5

Standardized* suicide rate for the population aged 15 and over, by sex and selected years, Canada (per 100,000 inhabitants)

Year	Male	Female	Total
1951	15.3	5.1	10.3
1961	17.2	4.3	10.9
1966	18.9	6.5	12.7
1971	24.4	8.9	16.6
1973	25.0	9.8	17.3
1975	24.3	9.1	16.6
1977	28.3	9.6	18.8

Source: Rates calculated by Health and Welfare Canada, based on Statistics Canada Vital Statistics, 1951-75. Statistics Canada Revised Annual Estimates of population by Sex and Age. 1977. (Ibid.:42)

*Standardized to 1977 Canadian population (male and female separately).

If the suicide rates are calculated for the adult population 15 - 64 only, the rate in 1977 rises to 19.1. This is shown in Table 6.

The Age Specific Rates in Canada record high percentage rates among the old. In 1977, suicide rate for those 65 years and older for Canada as a whole was calculated to be 26.9 for males and 7.8 for females per 100,000 male and female inhabitants respectively. Table 6 provides comparative suicide rates of the population aged 65 and over, with the adult population 15 - 64 years.

TABLE 6

Standardized Suicide Rate by sex and selected years, Canada
(per 100,000 inhabitants)

	Adult Population[1] aged 15-64			Population Aged 65+[2]		
Year	Male	Female	Total	Male	Female	Total
1966	18.2	6.8	12.6	24.9	4.2	13.6
1969	21.7	9.1	15.4	27.4	6.5	16.0
1971	24.4	9.1	16.1	24.7	7.2	15.1
1973	24.9	9.8	17.3	26.1	9.6	16.2
1975	24.2	9.3	16.8	25.0	7.8	15.3
1977	28.4	9.8	19.1	26.9	7.8	16.2

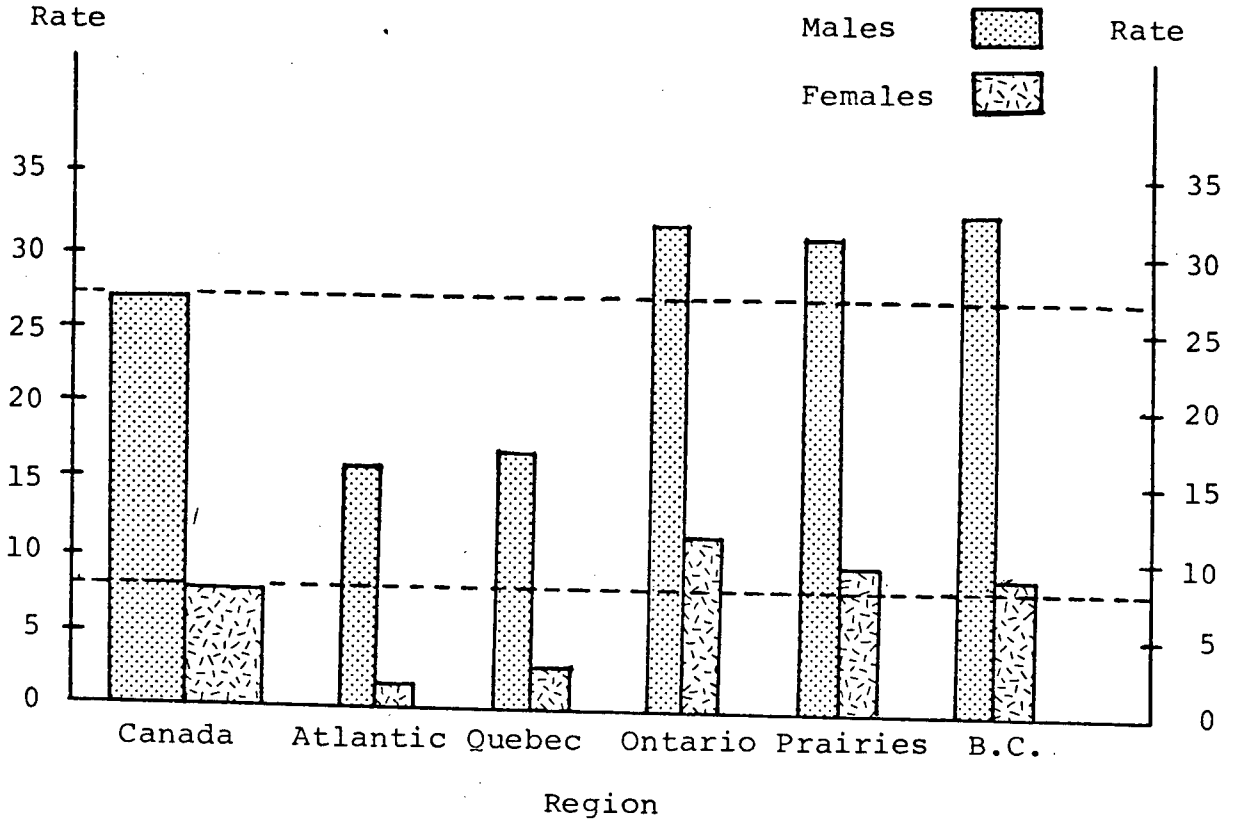
Sources 1 & 2: Rates calculated by Health and Welfare Canada, based on Statistics Canada Vital Statistics, 1977, Statistics Canada Revised Annual Estimates of Population by Sex and Age, 1966-75, and Estimates of Population by Sex and Age, 1977 (Ibid.:44-45).

The Standardized Suicide rate for males aged 65 and over was higher than the standardized rates for the adult male population from 1966 to 1975. In 1977, the suicide rate for elderly males dropped slightly. The Standardized rate of suicide for women 65 years and over increased from 1966 to 1977, although it remained slightly below the female adult population (aged 15 - 64). The increase within the two age groups was higher by .6 for the elderly female group 65 and over.

A comparison of suicide rates by regions puts British Columbia among the provinces with the highest suicide rate among both males and females 65 years and older. Chart 1 on the next page depicts the highest rates among the elderly males in British Columbia, i.e. 65 years and older. For the elderly females the rate in British Columbia ranks third after the Ontario and Prairies Regions respectively.

CHART I

Crude Suicide Rate for the Population Aged 65 and Over, by Sex, Canada and Regions, 1977 (per 100,000 inhabitants)



Source: Rates calculated by Health and Welfare Canada, based on Statistics Canada Vital Statistics, 1977, and on Statistics Canada Estimates of Population by Sex and Age, 1977.

An examination of Canadian suicides by local areas and urban centers revealed as early as 1970-72 a significantly high ratio, both for males and for females in the Greater Vancouver Area. The Chi-Square Values for males stood at 11.20 and for females at 52.64. For the Vancouver City, the value of Chi-Square was calculated as 41.90 for males and as 63.59 for females with 99% probability. Table 7 on the next page provides a comparison of ratios for local and urban areas.

In summary, the National, regional (Provincial) and the local rates on suicide lead one to conclude that: (1) there are sex and age differences in the suicide rate for the total Canadian population, (2) the rate in British Columbia is higher than most provinces and regions, both for males as well as for females, (3) the high rate of suicide among the elderly i.e. those 65 years and above places them in the category of high risk groups, (4) the situation in the Vancouver area, particularly in the downtown district has reached too alarming proportions of suicide.

More recently attention has been directed toward prevention of incidence of suicide by finding effective ways of treatment and aftercare of suicide attempters. Those who killed themselves were mostly found to have a history of prior attempts. Similarly findings of several research studies have indicated that one in three suicide attempters eventually kill themselves. (Roberts, 1975:23). Cutter and Pokorney's (Roberts, Ibid.:26) Follow-up Study of 618 suicidal patients disclosed that, "the greater the number and period of time for suicidal attempts in the history of

TABLE 7

Suicides and ratios for local areas, 1970-72, by Provinces

X^2_2 Values between 3.84 & 6.65 are marked with one asterisk
X^2 Values over 6.65 are marked with two asterisks.

Provinces	Actual Suicides		Expected Suicides		Significantly High		Significantly Low		Standard Mortality Rate		Census Population	
	M	F	M	F	M	F	M	F	M	F	M	F
Newfoundland	49	10	136	51			56.63**	33.41**	36.16	19.75	266,107	255,997
Prince Edward Island	29	11	29	11				9.10**	101.29	9.12	56,226	55,415
Nova Scotia	198	37	202	78	6.94**		5.23*	22.08**	98.06	47.66	396,467	392,493
New Brunswick	100	30	163	62			24.89**	17.28**	61.47	48.12	319,422	315,135
Quebec	1,261	433	1,225	600			63.27**	63.95**	82.69	72.33	2,994,547	3,033,217
Ontario	2,062	973	1,956	764	8.90**	89.11**			105.41	127.35	3,840,906	3,862,200
Manitoba	292	92	252	98	6.69**				115.92	94.21	494,610	493,637
Saskatchewan	262	65	240	90			7.31**		110.96	72.13	470,724	455,518
Alberta	477	132	422	158	7.89**		4.71*	4.71	113.15	83.40	827,785	800,089
B.C. Local Areas	489	248	374	143	39.57**	85.55**			130.89	173.44	1,100,375	1,084,246
Greater Vancouver					11.20**	52.64**						
Vancouver City					41.90**	63.59**			124.86	185.62		

Source: Canadian Suicide Ratio by Local Areas and by Urban Centers, 1970-72
Statistics Canada, Catalogue No. 84-530 (occasional)

the victim, the greater is the likelihood of his death during the course of a self-injurious act or its consequences". It is apparent from such findings that the increased 'recidivism' among suicide attempters can be prevented through improvement in after-care programs.

Experience with cases of suicide attempters and research findings has brought about a growing realization among administrators of hospitals, medical practitioners, psychiatric workers and professionals in service programs that the after-care programs for suicide attempters needed careful review in planning and management of cases to prevent their precipitating into completed suicides. It is recognized that the lack of follow-up after their discharge from the emergency wards of hospitals or after some treatment and long intervals between therapeutic sessions lead to an increase in recidivism of further attempts. Assuming attempters to be likely high risk groups, continuity of care through follow-up services at short intervals through out-reach programs is beginning to be regarded as a more effective approach for prevention of further attempts. Shneidman (1957:3) in his experimental study: 'Clues to Suicide' aptly remarks, "Professional, psychiatric, psychologic and social services might save many potentially suicidal persons if the dangers were anticipated".

Rationale for the Study

The need for community-based support services for suicide attempters has been perceived by S.A.F.E.R. As an acronym, S.A.F.E.R. stands for Suicidal Attempts, Follow-up, Education and Research. As early as February 1972, it established a pilot project. Being an autonomous organization until April 1981, S.A.F.E.R. collaborated with the Greater Vancouver Mental Health Service since November 1979 in providing clinical services for suicide attempters. Since April 1981, S.A.F.E.R. Program functions as part of the support service components of the Greater Vancouver Health Service (G.V.H.S., 1982:2).

In pursuance of its research objectives, S.A.F.E.R. launched a research project in the summer of 1977. The two researchers, namely, Ron Peters and Michael Rand developed a set of forms for the proposed project. The purpose was to collect information on the incidence and patterning of suicide in the Vancouver area. The report of the Project was completed in September, 1977. It is entitled "Suicide and Attempted Suicide in Vancouver Area". The set of forms on which information was collected are referred to as the S.A.F.E.R. Information Sheet (SIS). Some minor modifications were made in the SIS during the data collection phase. The modifications kept in view the enhanced utility of the data for clinical work and service programs. S.A.F.E.R. has continued its research function using the SIS as data base from mid 1977 up to the end of 1981. (G.V.M.H.S., 1982:4)

The present study is designed with a view to analysing the data for the period which is stored in the S.A.F.E.R. Tape Files. Being the legal property of the S.A.F.E.R. Program, formal permission has been obtained by the School of Social Work, University of British Columbia, for fulfilling the particular objective of the study.

The data collected by the S.A.F.E.R. workers over an extended period of time (4-1/2 years) is impressive in its scope as well as in its content. It affords an excellent opportunity for this study as well as for any subsequent analyses by other researchers to develop empirical frameworks in order to acquire deeper insights into the clinical and programmatic aspects of suicide attempts.

Elderly as High-Risk Group

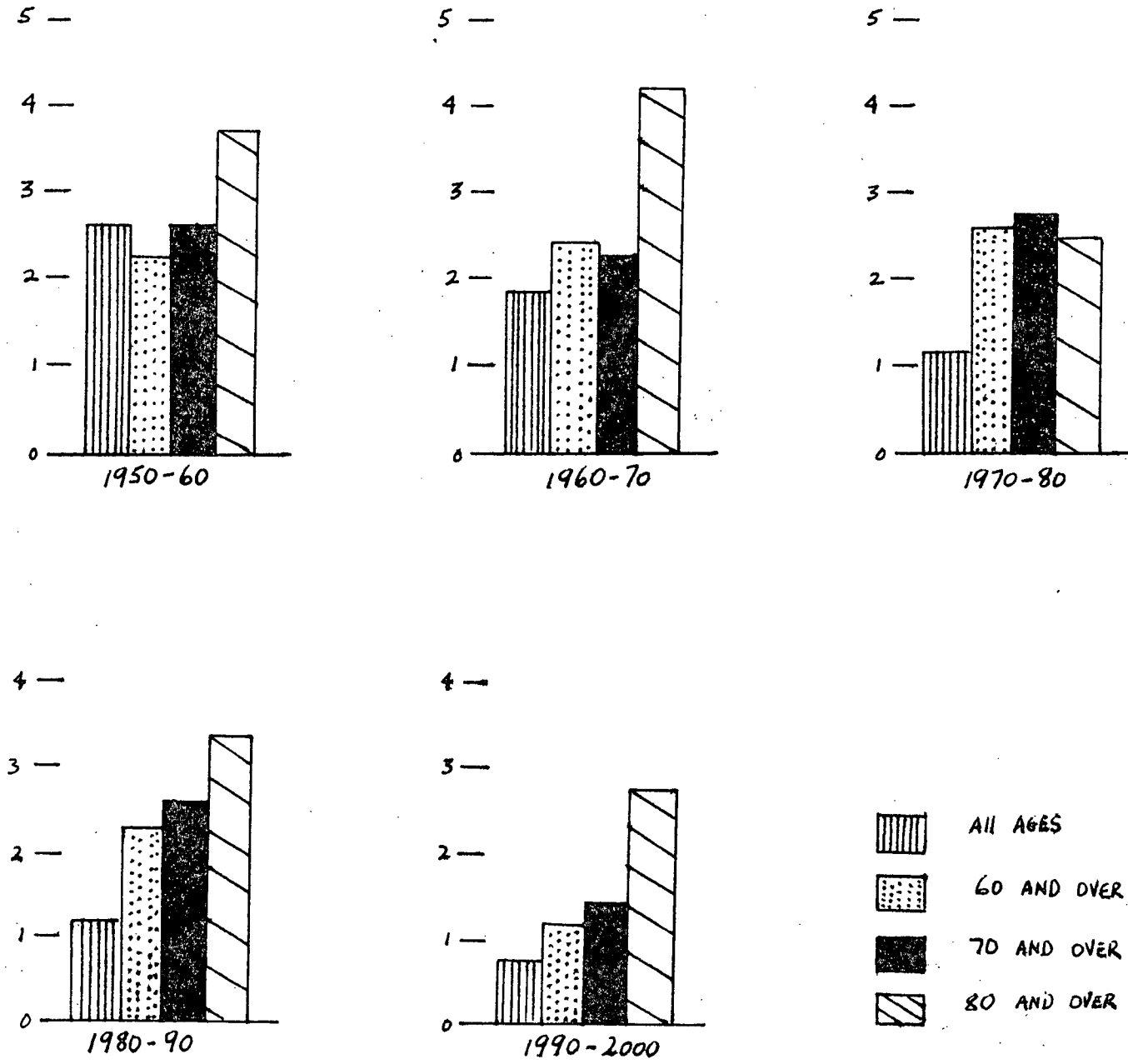
One important area of concern for this study are the cases of those 65 years and older. It is intended to see the extent to which the elderly utilize or respond to programs and services offered for suicide attempters in the community.

The focus on the elderly as a special group is suggested for two main reasons. First, because the suicide rate among aged 65 and over is high in Canada in relation to their percentage in the total population, but accounted for 10% of all reported suicides in Canada. Second, according to demographic calculations, the elderly

population is growing faster than in young age groups. As seen in Chart II, the growth rate of the age-group 70 years and over was the highest in 1970-80 (Stone & Fletcher, 1981). As estimated, by 2031 the aged will represent 20% of the population and their suicide rate is calculated to be 21 percent (Lepine, 1982:18).

Growth Rate of Population, 1950 - 2000

CHART II



Source: Stone, L.O. and Fletcher, S. 1981
Aspects of population Aging in Canada

CHAPTER II

REVIEW OF LITERATURE

2.1 The History of Suicide

Suicidal behavior is as old as humanity itself. Since recorded history, it has been found to occur throughout the world. Many of the early writings were concerned with the ethics of suicide. The first known document dealing with suicide is an Egyptian writing known as 'dispute over suicide.' A man tired of a series of misfortunes debates whether to hold onto life or to end it. The misery of social isolation and loneliness leads to his self-destruction (Choron, 1972).

In the Greek and Roman Literature, suicide is mentioned with admiration and was encouraged by the Cynics, the Cyrenaics, the Stoics and the Epicureans (Dublin and Bunzel, 1963: 183).

Suicide has been denounced in the Jewish, the Christian and Islamic religions which fostered a feeling of indignation against those who committed suicide.

The Brahmanic and Buddhist religions viewed suicide favorably and institutionalized it, e.g., 'sutte', the practice of a Hindu wife to die with her husband. It is quoted by Dublin (1963: 154) that the Rig-Veda, the oldest and most sacred book of the Brahmins does not however commend it. In China and Japan

also the acts of suicide in certain circumstances were ritualized, e.g. death in insolvency or defeat in a battle in China or Hara-Kiri in Japan, (a compulsory form of punishment for those of noble rank) were ritualized (Iga & Tatai: 1975).

A review of the 19th century anthropological data by Steinmetz (1894: 53) contains several instances of suicide among the primitive cultures. It includes the Polar People, the North American Indians, South American Indians, Bedouins, People of the Caucasus, Native Races of British India, Melanesians, Micronesians, Polynesians and Indonesians. He adds that suicide was unknown among the Australian Aborigines and the "wilder South American peoples" might be based on incomplete evidence.

The 20th century studies on primitive people have also confirmed the existence of suicidal propensity among them. The more notable among such studies are those conducted by Devereux, 1962; Elwin, 1943; Firth, 1961; Leighton and Hughes, 1955; Malinowski, 1962; Ramussen, 1931 and Westermarck, 1908. The studies on the whole contain information on the causes and methods of suicide among the primitives. It was generally found that: (1) male suicides were more common than female suicides. (2) The causes of suicide were difficulties with members of the opposite sex, insults, accusations, fear of being conquered, old age or when a person reached some intolerable and inescapable situation. (3) There are ethnic, racial and cultural differences in attitudes toward suicide although the motives of suicide seem to be commonly held.

Dublin (1963) observes that suicidal rates differ with religiosity and taboos against suicide. Despite positive or negative attitudes toward the act of suicide, it appears to have occurred at significant frequencies in most cultures. It is low in Muslim countries, in Israel and in the Catholic countries in general, except Austria, Hungary and France. High rates of suicide characterize Protestant countries where the christian attitudes toward the act are more relaxed. The comments of deCatenzaro (1981: 140-141) are worth nothing in this context. He observes:

> "Organized religions may provide conceptual framework and social structure that give relief to the fitness difficulties of many individuals... perhaps more importantly, it provides social contact for the socially isolated, hence relieving some of the major factors known to be antecedents of suicide."

Based on the above comments, deCatanzaro concludes (1981: 38): "The order of causation in any correlation of suicide rate and prevailing social attitudes toward suicide is unclear."

2.2 The Scientific Perspective

Suicide has been viewed in early history mainly from philosophical, moral and religious points of view. Its scientific perspective is more recent. Dublin (1963: 211-227) writing on the modern view point of suicide has mentioned that during the fourteenth, fifteenth and sixteenth centuries, new currents of thought quite opposed to scholasticism led the way to an entirely new philosophy of life in the West. It was the outcome of a

number of factors including geographical, demographic, political and social. Of all the factors, the assertion of the principles of human freedom and the development of the critical spirit began to be manifest in the writings of the thinkers of the 18th century. This is referred to as the "Age of Enlightenment" in which the criticism of existing institutions reached its height. Thinkers of this century like David Hume (Essay on Suicide) in England, Montaigne, Montesquieu, Voltaire, Rousseau, Kant, Goethe and Shopenhauer in Europe, devoted themselves to answering the question why one should not voluntarily give up life? Dublin (1963: 226) observes that just before the middle of the 19th century, the spirit of investigation radically changed. Abstract ethical disputations gave way to greater interest in factual data. The quantitative and medical aspects of suicide began to receive more attention. The two distinctive scientific studies of the last century on suicide were the works of physicians. In 1838, Esquirol, the French alienist, wrote an epoch-making book under the title 'Mental Maladies: A Treatise on Insanity'. It was the first systematic scientific study on mental diseases with an extensive coverage on suicide, its treatment and prevention. In 1840, Dr. Forbes Winslow, a member of the Royal College of Surgeons in London, England, published the 'Anatomy of Suicide'. It contained medical discussion on suicide and statistical and case material.

Just after the middle of the 19th century, several works on the medical, statistical, physiological and legal aspects of

suicide were published. Some of the notable authors of the period included E. Leslie (1856), Louis Bertrand (1865) and A. Pierre de Boismont in the same period. Their writings contained elaborate statistics, as well as a discussion of causes and of morbid, physiological and legal questions at issue (Dublin, op. cit.: 228).

The most influential treatises on the subject of suicide appeared in the last quarter of the 19th century. The important investigations of the period included the works of Legoyt, 1881; Morselli, 1882; O'Dea, 1882, in the United States; and Strahan, 1893, in Europe. About this time, Durkheim (1897) in France perceived the causes of suicide in the conditions that affect society as a whole and specially those that influence the death rate of the group. His theoretical construct on the subject has wielded a marked influence upon social thought since then.

For the purpose of this study, it is proposed to present:
(1) the theoretical orientation on the subject of suicide;
(2) the findings of research related to: (a) attempted suicide and (b) elderly suicidal behavior.

2.3 The Theoretical Orientation

Theoretical Literature on suicide has developed from two separate fields. In one, the socio-cultural factors are emphasized and in the other, the individual and psychodynamic determinants form the focal point. The psychodynamic formulations are further classified into: (a) Psychoanalytic Theories, (b) Non-psychoanalytic Theories and (c) Theories on motives of suicide.

2.3.1 Socio-Cultural Theories

Among the socio-cultural Theories of Suicide, the most important formulation was developed by Durkheim (1897). He stated that as a general rule, the suicide potential of a given society varied inversely to the degree of cohesion existing within that society. He isolated three etiological types of suicides. Although in a footnote to his book Le Suicide (p. 276), he mentioned a fourth one. They are described below.

a. Anomic Suicide results when the equilibrium of a society is severely disturbed. For instance, in times of business crisis, such a suicide may occur due to the failure of the "nouveau riche" to adjust to new change.

b. Egotistic Suicide results from lack of integration of the individual with other members of his society.

c. Altruistic Suicide occurs when the individual is strongly identified with the tradition and mores of his social group.

d. Fatalistic Suicide is a reaction to hyperregulation. For example, when someone is sold in slavery or married very young, suicide provides an escape from unbearable situations.

Sorokin (1936: 12) elucidating Durkheim's theory points out the following facts in relation to each of the above.

(1) The factor of socio-cultural cohesion and psycho-social isolation explain why in a given society the divorced exhibit a higher rate of suicide than the married; why childless families show a higher rate than families with children and why the greater the number of children, the lower the rate of suicide. A cause of higher rate among the divorced can be attributed to the divorced being ostracized

(2) Individualistic occupational groups show a higher rate than the more integrated. Those without occupation and with no permanent ties have a higher rate of suicide.

(3) Suicide rate tends to be lower in countries with familistic type of organizations than in highly urbanized countries even though the latter may be economically better off than the former.

Durkheim's Theory has provided a model for much subsequent research. The most significant work following Durkheim was of his student Halbwachs. His statistical investigations substantiated Durkheim's empirical generalizations with few exceptions (Giddens, 1971: 97). The statistical works of Dublin and Bunzel (1933) and the results of various ecological studies of suicide in urban areas also basically support Durkheim's general position. More notable among such works are those of Cavan, 1928; Faris, 1955;

Henry & Short, 1951 and 1957; Ogburn, 1942; Sainsbury in London, 1955 and Thomas, 1927. The works of Thomas, Ogburn, Dublin and Bunzel and Henry have specially demonstrated the existence of high negative relationship between suicide and the business cycle in the United States, England and Wales. That is to say that suicide rate increases with economic depression and decreases during business prosperity (Shneidman, 1957: 66). Gibbs and Martin (1964) provided considerable data in their study on the relationship between the degree to which personal initiative and individual freedom in role obligations are institutionalized and the suicide rate (Giddens, 1971: 99). Their status-integration theory predicts an inverse relationship between the suicide rate and status integration.

Henry and Short (1954: 56) examined the hypothesis that "the acts of both suicide and homicide are undifferentiated responses to extreme frustration arising from extreme loss of position in the status hierarchy relative to the status position of others in the same status reference system". The authors added another variable they called "internal restraint" to Durkheim's "external restraint with high suicide rates". Henry and Short took the position that suicidal behavior was determined by both external and internal forces operating jointly. These explanations suggest that the frustration lying within the self arouses aggression against the self, and results in suicide. Frustration is perceived as being the fault of the self. Those persons who occupy high status or are isolated from meaningful relationships are most likely to blame themselves and commit suicide.

Sainsbury's study (1955: 80) among the aged in London showed that social isolation, loneliness and lack of occupation were more of a problem than poverty. He examined the differences in suicide rate among the city wards and enunciated the concept of social isolation, social mobility and social disorganization. Warren Breed (1967: 195) explored the phenomena of loss in relation to suicide, i.e., loss of a person, of a position, and of mutuality of social relationships and found weakening of interrelationships being the cause of suicide.

Durkheim's typology of suicide as Giddens (1963: 100) puts it,

> "provides a viable basis for the analysis of macro-social conditions relevant to the aetiology of suicide in modern societies and it has received a certain amount of empirical verification in subsequent research. But the psychological ideas that Durkheim attempted to link up with it are found fragmentary and inadequate. Therefore, for theoretical insights into the psychology of suicide we must look else-where."

2.3.2 The Psycho-analytic Theories

The psychoanalytic theories of suicide derive their source from Freud's Theory of Depression (Freud: 1917). After deliberating for many years on the question how it becomes possible for the extraordinary powerful life instinct to be overcome, he sought the explanation of self-destructive acts in the 'death instinct'. He referred to it as "Thanatos". Freud postulated that an intimate and constant interaction existed between the two basic instinctual drives, 'Eros' (the life instinct) and 'Thanatos' (the death instinct). The psychic energy for suicide had its origin in the

death wish directed against someone else who was loved and lost, but turned against oneself.

Freud explained that "the ego itself deserted by the superego lets itself die". The ego has a number of "subselves". The super-ego is made up of introjects which present incorporated love objects. Suicide involves the murder of the original object whose incorporation helped to create the superego.

The Psychoanalytic theories stress the importance of libidinal impulses, particularly dynamic aggressive impulses directed against an introjected object. The ideas elaborated by Freud involve the concepts of introjection, incorporation, identification, ego-splitting and regression. In states of emotional crisis, the ego tends to split up or fragments and is referred to as ego-splitting.

Menninger, the chief exponent of Freud's Theory of Suicide, in his book 'Man against Himself' (1938: Part II) brings out three components in the suicidal act: (1) the Wish to Kill; (2) the Wish to be Killed and (3) the Wish to Die. These three elements are reflected in conscious hate, guilt and hopelessness respectively. In other words, it is an aggression turned against oneself. He concludes that the suicidal act is the winning out of the destructive tendencies over the constructive tendencies. He observed that the wish to kill and be killed decreased with age, but the wish to die increased as aggressiveness weakened in old age. It has been further argued that a person who expresses

a wish to live after being saved from suicide would be lacking in the third element, namely the 'wish to die'.

Zilboorg (1936) adds that suicide is a way of thwarting outside forces that make living impossible. In his studies he found every potential case with strong unconscious hostility and an unusual incapacity to love others. Another aspect was the paradoxical effect of living by killing oneself, a method of gaining immortality and fame by destroying oneself.

O'Connor (1948: 222-228) also stresses the immortality aspect. He states that the suicide of the depressed patient is a kind of return to power-narcissism, wherein the person achieves omnipotence. He warns that when a depressive patient shows sudden improvement, suicide may be even more of a possibility because of the change in attitudes. Jackson (1957: 11-20) in reviewing the Psychoanalytic Theories in 'Clues to Suicide' edited by Shneidman has also included to Psychoanalytic thought the contributions of Bender and Schidler, 1937; Bergler, 1936; Garma, 1944; Jamieson, 1936; Palmer,1941. Bergler makes a distinction between types of suicide, classifying them into three types: (1) the Introjection Type, in which the patient has guilt feelings against which pseudo-aggression is mobilized; (2) the Hysteric Type, which is an unconscious dramatization of how one does not want to be treated accompanied by a childish misconception of death lacking finality; (3) the Miscellaneous Type, made up of other forms, like paranoid schizophrenics, who project their super-egos outwardly and hear voices commanding them to kill themselves.

He differed in his views with others in that the aggression did not lead to inner guilt as the basic principle. He believed that "inner passivity masochistically tinged was the decisive element in killing oneself".

According to some psychoanalysts every suicide is a psychotic act, representing a breakthrough of the death instinct.

2.3.3 The Non-Psychoanalytic Theories

There are widely divergent explanations given of the causes of suicide by several writers which do not fit in the psychoanalytic or the socio-cultural theories. For example, Clark (1922: 254-263) states that at the bottom of all suicides one almost invariably finds an onanistic, an incest or an inversion motive. This results in the disturbance in the normal balance of the will to live. Crichton-Miller (1931: 339-341) view suicide due to failure of adaptation and a regression from reality. Lewis (1933: 241-273 & 1934: 146-153) approached the probe to suicide from the psychobiological viewpoint. Davidson (1934: 24-28) states that when a person reaches the limit of his resources and has lost his goal, an "organic depression" results and the higher centers cannot control the incoming impulses to choose an action. He ceases to will and is unable to reject what is unhealthy. Other writers like Mills (1934: 669-677) recognizes weather as one of many contributing factors, but feels it is a major one. He thinks those who are unable to cope with the stresses of life are more affected by weather. Williams (1936: 260-265) felt that the

dominant cause of suicide was the rigid personality which prohibited easy adaptation. Bender and Schidler (1937: 225-234) and Pessin (1941: 13-19) found strong erotic trends in those with self-destructive tendencies. Goitein (1942: 225-247) believed that suicidal impulses occurred as compensations for homicidal impulses against members of the immediate family.

After a review of several viewpoints on suicide, one explanation focusses on attempted suicides by Teicher (1947: 283-298). He found the explanation of attempted suicides in developed aggressive patterns of reaction to insecurity-provoking situations. The aggression is then inwardly turned because of the insecurities. Teicher asserts:

> "The insecurity is so great in the case of attempters that they are unable to complete the aggressive act even against themselves. It remains an infantile exhibitionistic protest and an act of hostility against a harsh restraining figure."

2.3.4 The Theories on Motivation of Suicide

A way of classifying theories of suicide is in terms of the various emphases given to the underlying motives of the suicidal act. The categories proposed by Jackson below, in a review of 'Theories on Suicide' (Shneidman, 1957: 15), represent in fact, an extension of the psychoanalytic theories.

a. Self-directed aggression: It includes partial suicide, such as proneness to accidents and other acts of self-injury

including self-mutilation. Zilboorg and others (1936: 270-291) refer to it as unchannelled aggression.

b. Rebirth and Restitution: The idea to make new beginning by destroying the old (bad) self predominates. The motive of suicide is the joy of finding someone or reuniting with someone who really cared.

c. Despair, loss of self-esteem and other losses: The despair arises from loss of something that precedes a suicide attempt. Such losses include loss of health, financial disaster due to business cycle fluctuation (resulting in suicide of the rich financiers), death of a mate and separation or divorce.

Jackson (1957: 16) in his review of the psychoanalytic and non-psychoanalytic theories sums up the phenomena of suicide as a "concactenation of psychic forces and environmental factors". In other words, suicide can be viewed as a combination of the individual's inner emotional make-up and the external stresses or extreme social pressure. He refers to suicide as a "symptomatic act, not a discrete entity".

Despite the criticisms of Durkheim's and Freud's theories, the sociological and psychological explanations of suicide have, for the most part, been incorporated in the clinical, medical and social frames of reference for identification, intervention and treatment of suicidal behavior.

2.4 Relation of Completed and Attempted Suicide

According to the researchers on suicide, the attempted suicidal behavior and suicide can be considered independently, but the two overlap to some extent. The overlapping is stated to be due to the fact that many cases of suicide have a recorded history of previous attempted suicide/suicides. Maris (1981: 264) points out: "almost every investigator of suicide has concluded that prior suicide attempts are important predictors of eventual death by suicide." He, however, suggests caution against the danger in overemphasizing their similarities in as much as one sees them, 'everyone is self-destructive'. Maris (1981: 264) asserts that those who commit suicide are found to be very different from those who 'merely' attempt suicide. This view substantiates the findings of Durkheim, 1897; Katsching, 1979; Labovitz, 1968; and Rushing, 1968.

A conservative estimate of the ratio of attempted suicide to completed suicide is 8 to 1 (WHO, 1968: 9). Peters & Rand (1977) found the ratio of S.A.F.E.R. clients to be approximately 9:1.

Some of the variations in suicidal behavior are age, sex, marital status and race. Durkheim found significant differences in the suicidal rate by these variables as well as by social class. He did not, however, consider race as a social factor. Nevertheless, subsequent studies by sociologists have included race as a social factor.

In reviewing research results of previous studies, the

purpose here is mainly to focus on the findings of studies on attempted suicide, but due to overlapping of behavior in completed and attempted suicide, as mentioned before, it is found relevant to include the results of some studies on suicide where sufficient evidence is not found on attempted suicide in relation to the variables reviewed here.

2.5 Findings of Related Studies

An attempt is made here to discuss the findings of those studies which have been related to: (1) Attempted Suicide and (2) Suicidal Behavior among the Elderly.

2.5.1 Age as a Variable

a. Incidence of suicide is said to increase with increasing age, but the rate of attempted suicide decreases as the age increases. In other words, completers of suicide are older attempters (McCullouch-Philip, 1972: 7).

b. Peak rates for suicide attempts were found to be in late teens and early twenties, but were lowest after the age of 55 (Kreitman, 1977: 23; Parkin and Stengel, 1965). That is to say, there is a progressive decline in the rate of attempted suicide with advancing years. A study of attempted suicide in Vancouver City substantiated these findings (Termansen, 1972: 128).

c. Motives of suicide also differ with age. For example, the young appear to have "less motive to die". The ratio of

attempted to completed suicide in their case is 50:1 (Miller, 1979: 15).

Majority of countries including the U.S.A. represent continuously increasing suicide rates with age, but in Canada the relationship is curvi-linear. Middle-aged Canadians have the highest suicide rate. It tapers off both before and after this life stage (Stenback, 82: 638; Peters & Rand, 1977).

2.5.2 Sex as a Variable

a. More men kill themselves, but more women than men attempt suicide (Kreitman, 1977; Parkin and Stengel, 1965; and Stengel and Cook, 1958).

b. Male suicide exceeds female suicide at all ages. But the rate of attempted suicide is exactly the opposite of the completed suicide (Farberow and Shneidman, 1961: 28; Stengel, 1964: 76). Durkheim had found roughly three times as many male suicides as female suicides in all age brackets. But the studies quoted in above writings found the ratio of attempted suicide as three females for every one male.

c. The rate of the attempted suicide by the late forties reaches parity between the sexes (McCulluch & Philip, op, cit.: 8).

d. There are differences between the sexes in the use of methods of suicide. That is to say, males choose more lethal methods to kill themselves, e.g., firearms, hanging and jumping from heights, whereas females use less lethal methods, e.g., self-poisoning, mostly through ingestion of drugs.

2.5.3 Marital Status and Parenthood as Variables

a. Following Durkheim's claim (1951: 198) that the 'coefficient of preservation' varied with age and sex, the rate of suicide was found to be low among those with stable marriages, but quite high among the widowed, divorced and single and those with unstable marriages (Dublin, 1963; Linden & Breed, 1976; Stengel, 1964).

b. Single women under the age of 35 years are more at risk than single men of the same age, but over that age the ratio is reversed.

c. Married women tend to have higher rates for attempted suicide than single women of comparable age.

d. Men under 35 years, both single and married, have comparable rates of suicide. In older age groups, the rate for single men is double than that of their married counterparts.

e. The rates for the divorced and separated are very high as compared to the widowed.

The above findings have been found to be constant over the years for the study of attempted suicide in Edinburgh (McCulloch & Philip, 1972: 12).

f. Durkheim (1951) postulated that suicide varied

inversely with the degree of integration of domestic society, that married persons after age 20 had some immunity, that parenthood increased this immunity and childlessness increased the problem of suicide. The rate declined in widowhood when there were children.

Maris (1969: 115) observes that Durkheim's contention that suicide rate is low among the married and those with children is confirmed by his Chicago study. Among those married with children, Maris suggests a large number of significant others, e.g., spouse, children and relatives 'function to minimize anomie and egoism'.

Other studies also support Durkheim's contentions. Notable among such studies include those of Breed, 1966; Dublin and Bunzell, 1933; Dublin,1963; Kozak and Gibbs, 1979; and Meer, 1976.

The findings of these studies also confirmed the hypothesis by Henry and Short (1954: 16 and 75) that suicide varied inversely with the strength of the relational system. That is to say that persons with strong relational systems are subjected to greater external restraints than persons with weak relational systems.

2.5.4 Race as a Variable

Researchers have found racial differences in suicide frequency.

a. Suicide rates for nonwhites is found to be generally lower than the rate for whites (Busse and Pfeiffer, 1969; Swanson

and Breed, 1976; and Maris, 1969).

b. Suicide rates for American Indians and Blacks aged 15-29 was found to be higher than for whites at those ages. But among whites, the suicide rates increase throughout the life cycle (Weiss, 1968: 255-267; Hendin, 1969).

c. Suicide among the older white males has been four to sixteen times higher than the overall suicide rate in U.S.A. since World War II (Dublin, 1963).

d. Anthropologists have found suicide rates higher among the Orientals, of which stock the Amerindians and the Eskimos come (Iga & Tatai, 1975; Murphy, 1954). These studies also indicate low rate of suicide in Africa, particularly West Africa, from which most American slaves were drawn (Asuni, 1962; Bohannan,1960).

Suicide rate among the foreign-born in the United States in the twentieth century has followed the same relative patterns as existing in the respective countries of birth. To prove the point, deCatanzaro (1981) presents comparative tables of rates of suicide (p. 14) and suicide rates among foreign-born in the United States (p. 34). He , thus, concludes that there are clear racial and ethnic differences in suicide rates and other characteristics of the act and that these differences in rates appear to be consistent over time and across international boundaries (p. 38).

2.5.5 Social Class as a Variable

a. Durkheim's claim that suicide was exceptionally frequent in the highest classes of society has been supported by subsequent studies by Cavin, 1965; Gibbs & Martin, 1964; Henry & Short, 1954 and Powell, 1958.

b. Studies by Breed (1963) in New Orleans, Maris (1969) in Chicago, Sainsbury (1955) in London and Wilenskey and Edwards (1959) in Los Angeles revealed that downward social mobility was conductive to suicide.

c. The findings from Edinburgh studies have shed light on most attempted suicide cases from unskilled occupations, i.e., 3/5 as compared to 1/5 from professions of an upper and middle status category (McCulloch & Philip, 1972).

d. Maris (1969: 142) found that median school years completed were slightly higher in high suicide areas.

From the vast literature that exists on the etiology of suicide,"some of the important psychosocial correlates (and presumptive precipitating factors)" in suicidal attempts have been selected for review here.

2.5.6 Early Life Traumatizing Experiences

a. Early traumatizing relationships are reflected in late life pathology (Bowlby, 1960 &1968; Dorpat et al, 1965; Klein,

1948; Spitz, 1946). For example, separation from parents in childhood, specially from the mother, represents the early object loss. This trauma was found greatest among non-fatal suicidal attempters in a recent study by Maris (1981).

b. Dorpat et al. (1965) have stressed that divorce of parents among non-fatal attempters is related to later self-destructive behavior.

c. The trauma of disrupted families is said to be positively related to inability to interact interpersonally. Substantial proportion of both children and young adults committing suicide have few strong relationships to others in society (Breed, 1972; Ganzler, 1967; Stengler, 1973 and Worden, 1976). They are described as "asocial, withdrawn, terribly shy, with minimal social interaction" (Reese et al, 1972 and Seiden, 1966). Such young people avoid close peer relationships (Jan-Tausch, 1963).

d. Poor relationships with parents, broken homes or rejection by boy/girl friend may lead to suicidal attempts (Jacob & Teischer, 1967: 139-149).

2.5.7 Chronic Emotional Problems

Feelings of jealousy, anger, spite and hate have been found to be some of the causes in acts of attempted suicide. Studies by Faigel (1966: 187-190) and Jacobziner (1960: 519 and 1965: 7) found that in children and young people, hate directed

against loved ones was expressed through attempted suicide, while pathological jealousy, persistent suspicion and spite led to suicide attempt among adults (Kessel and Lee, 1962: 130). Most such problems cause depression and hopelessness.

2.5.8 Social Isolation and Loneliness

Sainsbury (1955) in his study of suicide in London found social isolation as a major etiological factor in suicidal behavior, whether fatal or not. Batchelor and Napier (1953: 99) found that more than half of a group of persons aged 40 and 60 gave loneliness as the precipitating factor for attempted suicide. Stengel's study (1964) provides evidence that the rate for social isolation as a precipitating factor for attempted suicide may be almost four times the rate for social isolation among the general population. Claussen and Kohn (1954: 140) found that men in rooming houses tended to drift there because of socio-economic failure or because of psychological illness. Such social isolation, they explain, can precipitate mental illness and hence suicidal behavior.

It has been suggested by researchers that where there is social isolation or feelings of it, the call for help in case of an attempted suicide may not even be heard and may result in death.

2.5.9 Loss and Bereavement

The loss of a partner, spouse, relative or of a

significant other has been said to be a precipitating factor in suicide or its attempt. The loss of a child, similarly, may cause bereavement and lead to suicidal behavior by a parent (McCulloch & Philip, op. cit.: 20).

2.5.10 Psychiatric Illness and Personality Disorders

Studies by Batchelor & Napier, 1953; Kreitman & co-workers, 1977 and Stengel, 1977, confirm suicide attempts related to psychiatric disorder. Almost two-thirds of repeaters of attempts of suicide had a history of psychiatric treatment as compared to one-fifth of first attempters.

Freud had maintained that in depressive illness, e.g. manic-depressive illness, psychotic depressive illness and neurotic depressive reaction, there was object loss, ambivalence toward the lost object, regression and ego-splitting. This gives rise to hopelessness, precipitating in the desire to kill oneself.

2.5.11 Alcohol and Drug Abuse

a. The findings from researches carried out in Europe and in the United States have shown that half of men suicide attempters and a quarter of women who attempted suicide had taken drink before the suicidal act. It is further reported that almost 40% of men and 7% of women had alcoholism as a primary or secondary diagnosis in suicide attempts (McCulloch, 1972: 27).

b. In the London, Canada study (Schober, 1980: 6), 94% of those who usually drank consumed alcohol prior to suicide attempt as compared to 33% of those who did not usually drink.

c. Stenback (1980: 640) points out that the frequency of chronic alcoholism was found to be more among those attempters who were under 65.

d. The suicide rate for drug addicts is reported to be fifty times higher than for non-addicts. Those dependent on soft are likely to be "repeaters" of suicide attempts, as demonstrated by studies in Edinburgh (Kessel & Grossman, 1961).

e. Drug abusers who had made a suicide attempt suffered more 'depression' than those who made no attempt (Harris et al, 1979: 25).

2.5.12 Personal Stress and Mental Tension

There are several events in one's life which can give stress, such as chronic illness, incurable and terminal disease, financial problems, legal involvement, failure in ambition or in socio-sexual relations, unemployment, disharmony in marital and family relationships which are cited as other causes of suicidal attempts (Daly & Wilson, 1978; Symons, 1980).

2.5.13 History of Suicide Attempts

Studies in general indicate that persons who have made

previous attempts are more likely to die through suicide than those who have no history of suicide attempt. Stengel & Cook (1958) point out that the danger of repetition of a suicidal attempt depends on whether the act has brought about a change in the life situation and mental state. Subsequent attempts depend upon the reaction to the act by the caring persons, including the family and others in the social environment as well as on the diagnosis and treatment of the attempter.

Suicidal attempts in manic-depressives and with psychiatric illnesses may be more fatal.

It may be concluded that the risk of suicide from past attempts depends on the seriousness of the prior attempt, the lethality of methods and the availability of meaningful help to the client following the prior attempt (McCulloch, 1972: 48).

2.5.14 Temporal Variations in Suicide

a. Seasonal variations are mentioned by many observers, e.g., Curtin, 1909; Durkheim, 1951; Miner, 1922; Peterson, 1934; Sainsbury, 1955; and Vidoni, 1925 (Pokorny et al., 1963). Such variations are explained due to weather changes. There has been fairly general agreement among such observers that suicide rates are highest in late spring or early summer. Durkheim found a perfect continuity of curve increasing from winter to summer. He considered length of the day, rather than weather fluctuations, as

the cause. That is to say that the frequency of suicide at a particular time of the day was due to 'occupational anomie' and 'egoism' and not due to temporal variations (Durkheim, 1960: 1-31). He regarded seasonal and diurnal variables as non-social and dismissed climate and "extra-social" influences as causes of suicide.

b. Most papers on weather and climate are speculative. No single significant relationship was found (Pokorny et al, 1963).

c. The importance of the awareness of day-to-day variations in suicidal attempts can hardly be ignored. In fact, much can be learned from such studies. For example, the Edinburgh study brought to light the fact that peak periods of suicide attempts occurred at time when professional staff and many lay advisory bodies were not available (McCulloch, op. cit.: 11). The observation of the frequency of suicide incidents on particular days of the week and time of the day or night has been found to be helpful in planning for deployment of manpower resources by the agencies concerned with the treatment and prevention of suicide.

Patterns of Variables in Suicide Attempts

There is general agreement among the researchers that the act of fatal or non-fatal attempt of suicide is the result of many varied complex processes. These processes include a number of antecedants or life history events, acting singly or in

concert. Along with the immediate situation events produce the precipitating effect. The events provide a causal network on the basis of which a Hypothetical Model of Suicide and Attempted Suicide has been constructed. Diagram I represents such a model (p. 45).

Further, a profile of attempted suicide has been drawn representing the modal characteristics of a suicide attempter. Diagram II represents the profile (p. 46).

2.6 Suicidal Behavior among the Elderly

A large number of studies have been conducted to explore the factors which prove suicidogenic among the elderly attempters. The factors commonly held as causes of suicidal behavior are discussed here.

2.6.1 Mental Illness

It is regarded as the most important determining factor for suicide in old age (Batchelor, 1957: 143-152).

a. The high frequency of serious suicide attempts among the older people as compared to younger is found to be related to the occurrence of two diseases in old age, namely, serious depressive psychosis and chronic brain syndrome (CBS). The psychiatric diagnosis of elderly who attempt and those who

HYPOTHETICAL MODEL IN FATAL AND NON-FATAL SUICIDE ATTEMPTS

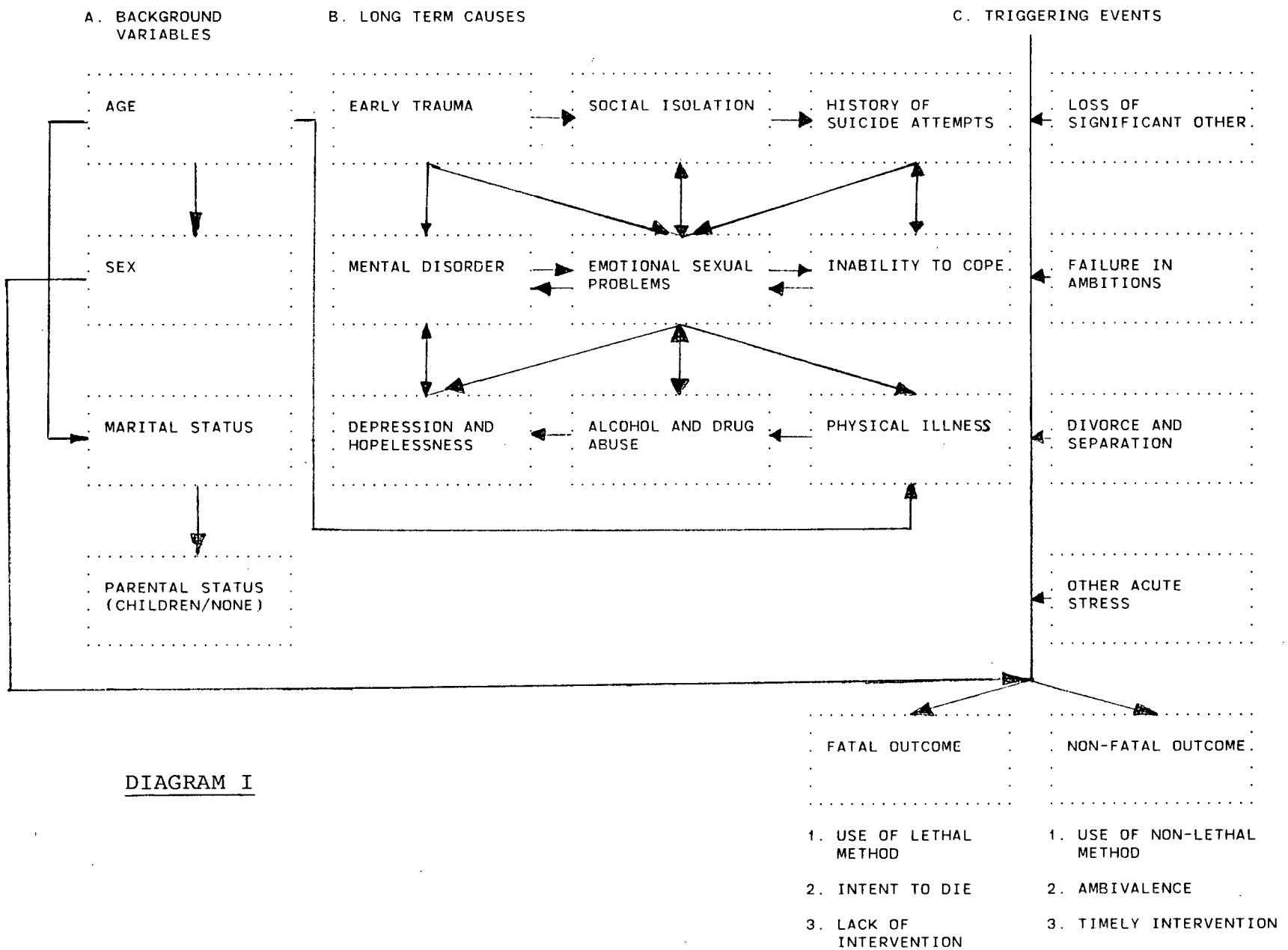
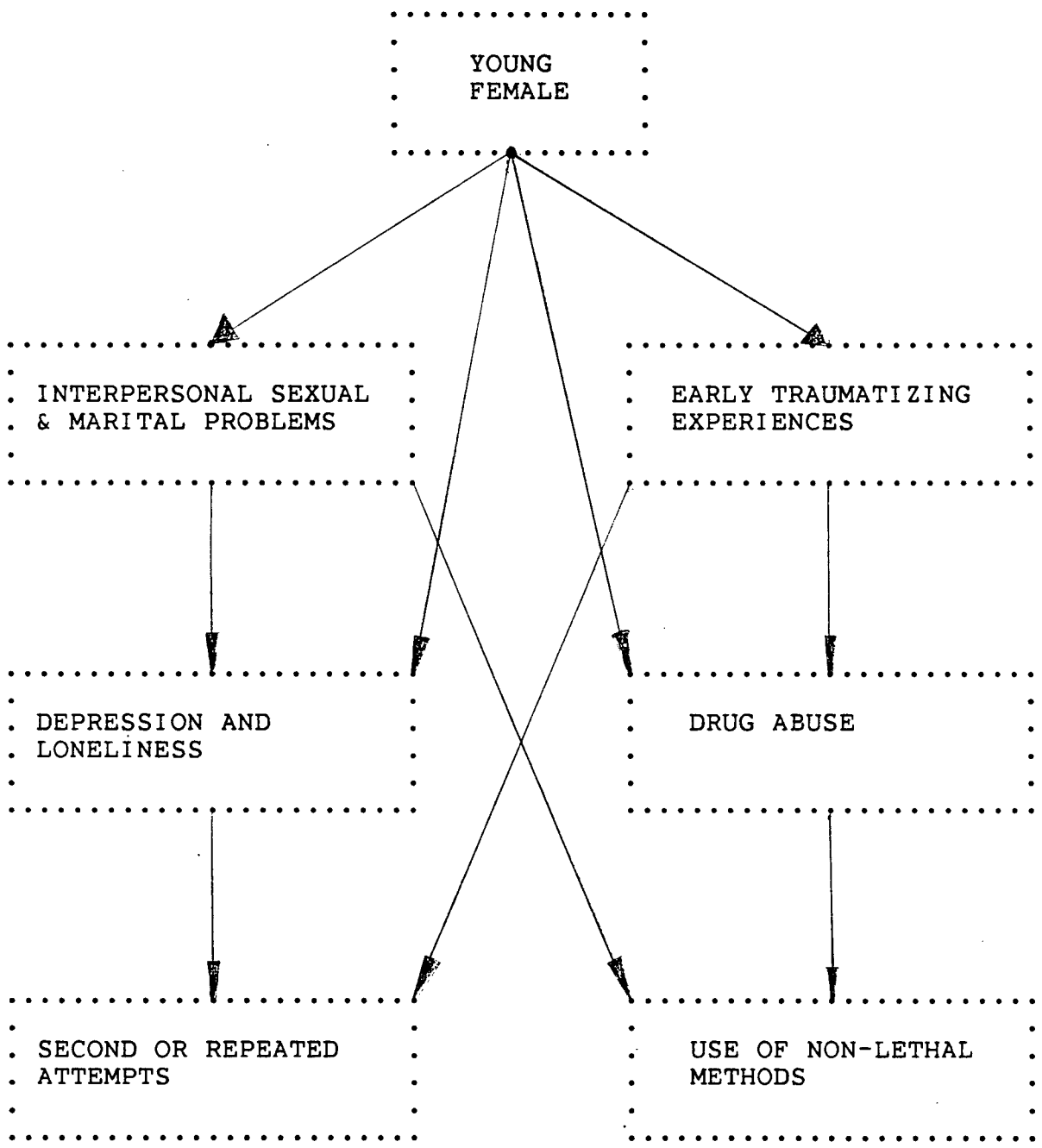


DIAGRAM I



COMPLETED SUICIDE

1. HISTORY OF ATTEMPTS
2. ATTEMPT DIRECTED TOWARD SIGNIFICANT OTHER
3. INSUFFICIENT RESPONSE FROM SIGNIFICANT OTHER

ATTEMPTED SUICIDE

1. HISTORY OF ATTEMPTS
2. ATTEMPT DIRECTED TOWARD SIGNIFICANT
3. ATTENTION FROM SIGNIFICANT OTHER

DIAGRAM II

complete suicide are, however, similar (O'Neal et al, 1956: 275-284; Buss & Pfeiffer, 1969: 212-224).

b. There is an increased risk for suicide and attempted suicide due to lack of psychiatric care (Gardner et al, 1964; Kastenbaum et al, 1972).

c. There is evidence of correlation between depression and low socio-economic status, e.g., poverty occurring in adult life may contribute more to mental illness than life long poverty

2.6.2 Depression

'Depression is the most common psychiatric syndrome in old age' (Batchelor, 1957; Butler, 1973; Kay, Beamish & Roth, 1964).

Depressions include those resulting from: (a) psychiatric illness, (b) grief, such as loss of significant other, rejection, disappointment, dininished self-esteem, (c) physical illness, such as viral infection or Parkinson'd disease (Bromley, 1966; Butler, 1973).

Stenback (1980: 620) in his article on 'Depression and Suicidal Behavioe in Old Age' points out that one factor alone may not cause depression, but a multiple interaction of factors may give rise to it. He adds that depression in later life is

partly due to individual events and partly to biological, social and cultural characteristics of this life phase.

Bailier (1968) in a study of 985 subjects found that depression frequently remained unnoticed behind a 'barrier of social isoloation'. Passivity, pessimism and hypochondriachal complaints are usually considered part of normal aging. He dismisses such notions are misleading on the basis of his own findings.

In the Longitudinal Studies at Duke University (1955 & 1968) depression in old age was not found to be a precursor of cerebral degeneration. Major correlates of organic brain syndrome were found to be lower socio-economic status, decreased physical and mental activity and decompensated heart disease (Maddox et al: 1980).

2.6.3 Physical Illness

a. Failing health is associated positively with both age and suicide rate (Bromley, 1966: 125-140).

b. Physical illness played a lesser role in attempted suicide than in committed suicide (Shneidman & Farberow, 1961; Dorpat et al., 1968).

c. Physical infirmity brings the realization of permanent invalidism and dependency (Batchelor, 1957: 143-152).

d. Hypochondriachal bodily complaints, though delusional, nevertheless, seem to cause extreme internal pressure (Miller, 1971: 13).

e. Chronic illness or the diagnosis of an incurable disease can cause distress, tension and insomnia.

2.6.4 Use of Alcohol and Drugs

a. Many suicidal attempts occur among the old people who at the time are under the influence of alcohol or drugs (McCulloch, op. cit.: 27).

b. The prolonged use of alcohol was clearly related to suicidal behavior (Kahne, 1973: 52-69; Gardner, 1964: 547-553; Farberow et al, 1975: 333-337).

c. Known psychiatric contacts had a history of alcoholism (Gardner, 1964).

d. Alcohol abuse has been found to be more common among older men, although it is not uncommon among older women (Farberow & Moriwaki, 1975).

e. Most alcoholics are also found to be either drug-addicts or drug dependent. The most commonly used drugs are analgesics, e.g., asprin; anxiolytyes, barbituates and sedatives.

Reliance on drugs has often gone 'hand-in-hand' with dependence on alcohol (Miller, op. cit.: 51).

2.6.5 Social Factors

a. Divorced, widowed, never married men and those living alone or isolated from friends, neighbours, relatives, and community organizations may be regarded as high-risk groups in both completed and attempted suicide (Gardner et al, 1964; Resnik & Cantor, 1970).

b. The impact of retirement on the elderly is said to be even more serious than widowhood. Retirement is closely identified with decline in status, income, power, years remaining to live, roles, physical and mental health, numbers of friends and relatives, identity, independence, physical mobility, security, hope, etc... (Bock, 1972; Rachlis, 1970)

The picture of a retired person is, however, not so dismal as portrayed above. The impact of retirement on those who enter this stage without varied interests, kin networks and other outlets is found to be more serious. Sainbury (1961) observes that it may not be a critical factor for those who retire from secure economic positions. He, therefore, concludes that retirement may be related to a decrease of old age suicide in the higher social classes and an increase in the lower classes.

c. Community attitudes that make the older person feel

useless and unwanted. More of those elderly who have lost social status, feel rejected and are socially isolated have resorted to attempt suicide (Batchelor & Napier, 1953).

d. The social factors impinge differently on men and women. Widowhood and retirement may have a more depressing effect on men which explains higher rate of suicide among them. Women who, in general, do not have to face retirement and who may have a wide kin network even after widowhood may feel less isolated and are less prone to attempt suicide (Berardo, 1968).

e. Number of children and social relationship with them help reduce the effects of social isolation and loneliness which might otherwise drive the old to depression and to end their lives. (Sainsbury, 1963: 153-175).

f. Living Situation: Persons from socially disorganized areas, living in overcrowded housing, in the center of the city, were found to be more suicide prone, also those living out of a normal family setting (Busse & Pfeiffer, 1969; Ettinger & Flordh, 1955; Kessel, 1965).

Termansen's study (1972: 128) in Vancouver City records high rates of attempted suicides in the downtown area.

Relocation or change of neighbourhood is also found to be more stressful for the elderly (Sainsbury. 1973).

2.6.6 Inability to Cope with Losses in Life

Suicidal behavior is associated with inability to cope with vital losses in later life. Such losses may be economic (loss of job, income), physical (loss of healthy limb), social (loss of friend), psychological (loss of self-esteem or confidence), emotional (loss of spouse or child) or any combination thereof. The older the person, the greater the losses he has incurred. The cumulative effect of such losses has a much greater effect than that exerted individually by any one of them (Miller, 1979: 24).

2.6.7 Hopelessness

Farberow and Shneidman (1957) analyzed suicide notes by age in terms of predominant component expressed in the note. Generally, they found that the 'wish to kill' and the 'wish to be killed' decreased with age and the 'wish to die' increased.

The feeling of hopelessness in the old people is that life is devoid of meaning, that they are a burden on others and of no use to them. It is often accompanied by depression. In a depressed, hopeless person, dissatisfaction may serve to 'ignite or catalize suicidal action' (Maris, 1981: 338).

2.6.8 Unfavorable Factors in Familial and Personal Histories

A number of negative factors have been singled out as traumatizing experiences in the histories of elderly suicidal

victims and attempters of suicide. (a) Family members institutionalized for mental illness. (b) Broken homes in childhood. (c) Prior indication of depression. (d) A familial manic-depressive. (e) Personality traits which limit social adaptation, e.g., fewer friends, shyness, dependency, egocentricity and other psychological abnormalities, anxiety and hypochondriasis (Batchelor, 1953 & 1957; Birren, 1964; O'Neal et al., 1956).

2.6.9 Reaction to Multiple Factors

Miller (1979: 24) discussing the suicidal patterns among the elderly stresses that there is no one simple reason for anyone to commit or attempt suicide. According to him, suicidal reactions in late life can be subsumed under the heading "multiple factors". Such a reaction, Miller explains, occurs as a result of a lengthy and complex process of 'erosion'. A crisis is triggered when the 'line of unbearability' is crossed. And unbearable plights vary from individual to individual. Miller adds: "No two people have identical constellation of problems" (p. 8).

2.6.10 Characteristics of Elderly Suicide Attempters

Based on causal factors in suicidal behavior of the elderly, suicidologists have stated the following characteristics of the elderly suicide attempters:

a. In relation to the size of the other age-groups, the

elderly commit suicide most, but attempt suicide the least "Grollman, 1971).

b. They use lethal weapons more often, especially the male elderly.

c. They become more successful in completing suicide (Bock, 1972; Maris, 1969; O'Neal et al., 1956).

d. The aged communicate their suicidal intent less frequently and do not use suicidal activities as a gesture to call attention or 'cry out for help'. Their intent to die is strong (Busse & Pfeiffer, 1969; Butler & Lewis, 1973).

e. Being less ambivalent than the younger, the old are less likely to be rescued from suicidal action (Rachlis, 1970; Resnik, 1970; Seiden, 1974).

f. Disparity between male and female suicide ratio becomes more pronounced in late life (Bromely, 1966; Rachlis, 1970; Weis, 1968).

The suicide rate for women tends to reach its peak by or before 55, the rate for older men increases steadily through the eighth decade of life (Birren, 1964; Botwinick, 1978; Sainsbury, 1962).

g. In months preceding their death, a large percentage of elderly suicidal men are under a physician's care (Barraclough, 1971; Capstick, 1960; Miller, 1976).

h. Included in the high-risk groups are old widowed with terminal illnesses, with prior suicidal behavior (self or pattern of suicide within the family), with losses (job, status, relative), and with the "empty nest syndrome" (Zusman & Davidson, 1971: 16). The combined effect of all such variables may produce a high-risk profile.

i. Most elderly attempters have a psychiatric illness, brain damage from alcohol or depressive symptomatology.

j. The elderly who commit suicide are similar in population characteristics to those who attempt.

The profile of an Elderly Suicide Attempter is illustrated in Diagram III.

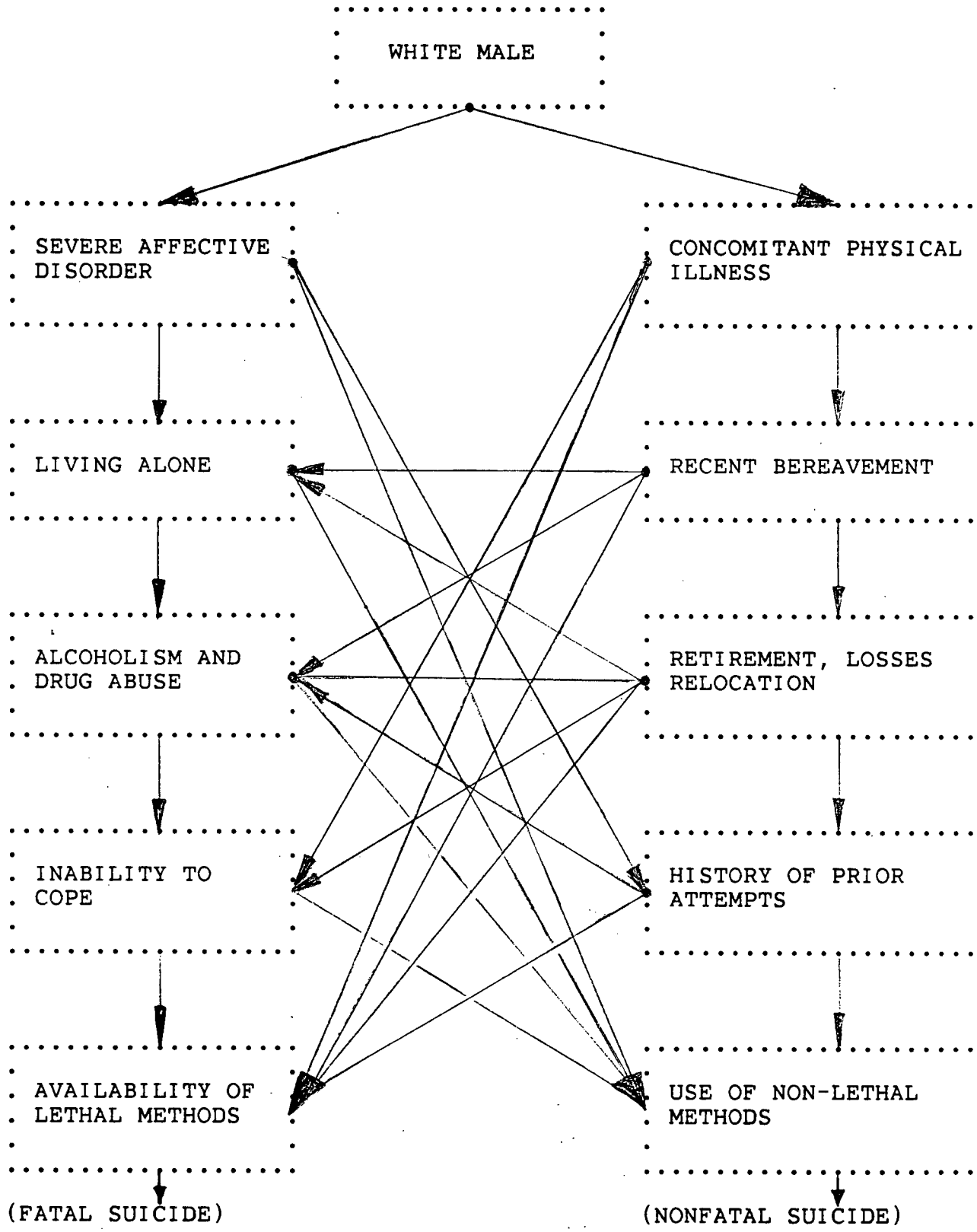

WHITE MALE
SEVERE AFFECTIVE DISORDER
CONCOMITANT PHYSICAL ILLNESS
LIVING ALONE
RECENT BEREAVEMENT
ALCOHOLISM AND DRUG ABUSE
RETIREMENT, LOSSES RELOCATION
INABILITY TO COPE
HISTORY OF PRIOR ATTEMPTS
AVAILABILITY OF LETHAL METHODS
USE OF NON-LETHAL METHODS
(FATAL SUICIDE)
(NONFATAL SUICIDE)

DIAGRAM III

CHAPTER III

STRUCTURE OF THE INQUIRY

The review of background literature as presented in Chapter II provides us with the knowledge base to test the association of variables in attempted suicide. The empirical testing here would be keeping in view the specific objectives of the study which are outlined below.

Objectives of the Study

The specific objectives of the present study are:

1. To construct a basic profile of the cases included in the data set.
2. To make a preliminary analysis to determine which of the items in the SIS reliably distinguish the suicide attempters when classified in various age-groups (i.e., are there recognizably different "profiles" for S.A.F.E.R. clients at different age-levels?).
3. To examine more closely the characteristics of the elderly S.A.F.E.R. client in areas, such as: (a) possible differences between the 'younger' and the 'older' elderly, and (b) possible differences in service utilization among the elderly clients.
4. To try to develop an increased awareness of "age" as a

factor relevant to the planning and on-going evaluation of suicide prevention programs.

With regard to the last two objectives, the more specific questions posed to gain insights into Programmatic Factors include:

Q1. Are there any differences in the tendency to return to the program (i.e., to have multiple re-openings) by age?

Q2. For those clients who return to the program for multiple re-openings, does the level of services received change across openings and does age account for any such variance?

Q3. Are there any differences in level or quality of services received by age?

Q4. Do more or fewer of the elderly 'slip through the service net' than those in other age-groups, i.e., whether the reasons why no service was received are the same across various age-groups among clients whom S.A.F.E.R. is aware of, but who receive no service.

The Hypotheses

The hypotheses are used mainly to explore the characteristics of the study population we are dealing with. Their purpose is descriptive. No general inferences to suicide attempts in the population can be made, because the sample is self-

selected for service. Therefore no causal hypotheses can be tested.

The assumed relationship of age with the variables of the study are outlined as hypotheses. They appear in the order in which the variables are listed in the SIS.

Specific Hypotheses

1. Frequency of contact with the S.A.F.E.R. program is significantly associated with age.
2. Persons who come to the attention of the S.A.F.E.R. Program by different referral routes also differ significantly by age.
3. Age differences in suicide attempts are closely associated with sex differences, i.e., suicide attempts are more common among females than among males.
4. Occupational status varies with age among S.A.F.E.R. clients.
5. Age and marital status of attempters are associated, i.e., marital status, e.g., 'single', 'married', 'widowed', 'divorced and separated' is associated with age differences.
6. Change of abode is associated with age differences, i.e., older people who have to move are more prone to suicide attempts than the younger.
7. Age differences in suicide attempts are associated with educational level.

8. Age differences in suicide attempts are associated with employment status.
9. Living situation is associated with incidence of suicide attempts.
10. Age differences in suicide attempts are associated with ethnicity.
11. Age differences in suicide attempts are associated with financial situation of the attempter.
12. Sexual deviance is associated with age differences in suicide attempts.
13. Differences in the age of the attempter are associated with their legal involvement.
14. There are differences in primary problems by the age of the attempter.
15. Methods of suicide attempts differ with age.
16. Use of alcohol in suicide attemps is associated with age.
17. In suicide attempts, 'plan to die' is associated with age, i.e., most old people attempting suicide have a strong 'expressed intent to die'.
18. Older people who attempt suicide mostly plan their attempt, as compared to most younger people who do not 'plan their attempt'.
19. 'Attempt directed' is closely associated with age, i.e., most young people direct their attempt of suicide toward some 'significant other', whereas, in the case of the old people, attempt is not usually directed toward others.

20. 'Prior communication' of suicidal intent is associated with age, i.e., older people usually communicate their suicidal intent, as opposed to younger who act more on impulse.
21. Age differences in suicide attempts are associated with having or not having children.
22. The presence or absence of drug dependency among S.A.F.E.R. clients varies with age.
23. A recent history of physical illness among suicide attempters is associated with age, i.e., it is more common among the elderly.
24. Age differences in suicide attempts are associated with accidents experienced in the past.
25. Age differences in suicide attempts are associated with the presence or absence of violence in the family.
26. 'Death of significant others' as a correlate of attempted suicide is strongly associated with age differences.
27. Age differences are associated with a history of prior suicide attempts.
28. Age differences are associated with the 'level of service' received in prior attempts.
29. Age differences are associated with the quantity of services received by suicide attempters in 'present attempts'.
30. Reasons for non-utilization of S.A.F.E.R. Services differ with age.

Significance of the Study

The significance of the study is manifold, but the two immediate considerations are: First, that the empirical investigation will expand our understanding of the phenomenology of attempted suicide, i.e., of suicidogenic factors as they relate to age. Such insights are of importance in view of the rising rate of suicide and attempted suicide in Canada. This knowledge will be beneficial for agencies for planning and/or assessing programs of suicide prevention. The agencies' concern with ever increasing rates of suicide is legitimate in as much as it points to the need for a more effective program and services in suicide prevention. Such a need in turn, requires constant up-dating of the understanding of the precipitating factors in suicidal behavior, especially in a society like Canada with fast moving changes in life-styles, economic conditions and the value system as a whole. This will mean a constant review of the causal aspects of the problem in view of changes in the demographic, social, psychological and emotional complexion of the population.

Second, the study aims to explore programmatic factors in relation to age and suicide prevention. That is to say the extent to which services are utilized by age-specific populations of attempters, the number of contacts made with S.A.F.E.R. as a service-providing agency, the level of utilization of services of people in age-specific groups and the reason for the non-utilization of services. These findings may improve our understanding of attempters in different age groups and

will give clues to service providers about high-risk categories and how to deal with them to control 'recidivism'.

Third, a close exploration into cases of elderly suicide attempters may enhance our knowledge about those who 'slip through the service net' and stand the risk of further attempts without a follow-up service. Information on such cases among the elderly may, to some extent, lead toward finding ways how to seek such persons out and to save them from the disengagement dependency (disengagement theory), which makes them high-risk individuals.

Fourth, updated knowledge of causes of attempts and how best to deal with their prevention can be used as input for education programs planned for families of attempters as well as for other community groups interested in saving people from such self-destructive behavior.

Lastly, the analysis of the findings may lead to a range of possible topics for further research with implications for still more effective use of agency's resources in the intervention and prevention of suicide as a community-based program.

CHAPTER IV

METHODOLOGY

Type of Study

Research on suicidal behavior in the past has provided us with prolific literature. No less than 5,000 publications (books and articles) have been reported in print up to 1976 and approximately 180 new publications per year have been estimated to be coming off the press (Alberta Task Force on Suicides, 1976: 5). The question can therefore be raised, 'what more is there to discover that can add to our understanding of the suicidal phenomena'?

Suicidologists and researchers are interested in the advancement of knowledge and in refining the concepts related to the dynamics of suicide. In this respect, every research effort may be regarded as a step toward the integration of new knowledge and new ideas.

Suicide is seen as a recurring human problem. For dealing with it more effectively, continued research is necessary. Further, the problem of suicide is regarded as multi-faceted in the approach/approaches that may cover a wide range of questions. The recent interest in community-based programs in suicide prevention has, particularly brought the need for

constant updating of knowledge that can be applied for follow-up, intervention and other programs aimed toward prevention.

The present study is exploratory in nature as it seeks to investigate the patterns of suicide attempts peculiar to different age groups. The investigation also extends to examine the age differences in suicide attempts within the 'elderly group'. The aim of such explorations is to discover new forms of interactions of variables or to confirm the already existing ones in suicide attempts.

The Sample

The Study population comprises of all cases on whom information was compiled by S.A.F.E.R. workers from mid-1977 to the end of 1981. It is, therefore, a Non-Probability Purposive Sampling.

The Cases were drawn from the following sources:

1. The Emergency Wards of Hospitals in the Greater Vancouver Area. These included mainly six acute-care hospitals as follows:

   Vancouver General Hospital
   St. Paul's Hospital
   Burnaby General Hospital
   Richmond General Hospital
   Lion's Gate Hospital
   St. Vincent's Hospital

   Some other hospitals from whence cases were referred to S.A.F.E.R. in small numbers were coded as 'other'.

2. Agency Referrals which included referrals from any community social services. Most client referrals came from the Community-care teams of the Greater Vancouver Mental Health Association. There are altogether eight such teams in operation.

3. Individual physicians or family physicians.

4. Referred by self or brought by friends/relatives to the attention of the S.A.F.E.R. staff.

The cases were assessed by Hospitals and physicians to be of suicide attempts when they were referred to S.A.F.E.R. for follow-up.

Data Collection:

The data collection procedure is described here as the design of the instrument of inquiry and its use.

As mentioned at the beginning (Chapter I, p. 13), the designing of the instrument was initially started as part of a brief research project launched by S.A.F.E.R. in mid-summer 1977. The set of forms were referred to as the S.A.F.E.R. Information Sheet or SIS. The information sought through the SIS was what was considered useful from the clinical and programmatic point of view for the S.A.F.E.R. Program.

The Forms (Appendix A) remained in continual use by S.A.F.E.R. workers until the end of 1981. During a period of

4 1/2 years, information was recorded on 5,358 cases referred to the S.A.F.E.R. program from sources described under 'The Sample'. Consequently, a S.A.F.E.R. data base was prepared with a consistent set of computer-ready records. These records have formed the Source from which the data for analysis of our study has been drawn.

The S.A.F.E.R. Data Base consists of 3 Files called the 'Code Book', the 'Raw Data' and the 'Saferall' respectively. The first of the three files contains descriptions of the format of the raw data in columns with names of variables. Additional comments are included where necessary with further definitions of the variables. The description of the handling of missing data is also given.

The Second File called 'Raw Data' is an unedited file which contains the raw data from the S.A.F.E.R. Information Summaries (SIS). As an unedited file, it may contain undefined variate values, so to say, the "wild codes" or out-of-range values. When copied on a disk file, it can be edited as deemed necessary. The 'Raw Data' file has been used for data analysis for this study.

The third file, 'Saferall' is an SPSS system file, containing the data from the SIS. It can be operated using version 9.00 under MTS at the University of British Columbia. As explained in the Handbook called "An Introduction to the

S.A.F.E.R. Data Base" (1982:7), some of the variate values have been rearranged, re-labelled or re-combined and some new variables have been generated internally by the computer. All such changes are documented in an appendix to the S.A.F.E.R. Data Base.

Information was recorded on 44 variables, listed in the SIS or the data file. It is included here as Appendix C. The choice of the variables was made keeping in mind the research perspective as well as the practical utility of the information. In other words, the information could be comparable, in the first place, with research on suicide and attempted suicide conducted in other regions and with population statistics compiled by Statistics, Canada. In the second place, information was to include questions which the S.A.F.E.R. staff found useful for day-to-day functioning with the clients. For instance, the data for practical utility to the staff included items such as the time of day or week the demand for service was likely to occur most, the level of service needed and the reasons for slipping out of the service net. Such information has implications for the deployment of man-power by S.A.F.E.R., both from the standpoint of intervention as well as delivery of services.

Validity and Reliability of the Data

The use of the same set of Forms throughout the period of data collection accounted for the prevalence of consistency.

The data was, however, collected by different workers. Nevertheless, all of them were trained in several sessions by the S.A.F.E.R. staff to gather the data from the hospital in-take sheets as well as through personal interviews with the clients, i.e., those who had been assessed as cases of attempted suicide. In order to approach a potential client, the worker had to be satisifed that it was a case of suicide attempt and not an accident or a recurrent overdose by a chronic drug-abuser. For such an assessment the worker had to depend on medical opinion and his own clinical judgements based on specialist experience. Even an assessment can be interpreted differently. Therefore, the determination of high-risk case is said to be in the hands of a person who reads the chart.

The two main difficulties have been recalled with the use of the data base for research purposes in 'An Introduction to S.A.F.E.R. Data Base' (1982). The first concerns with the reliability and validity of some of the items. The items, for example, were: "Did the Client plan to die"?, and "Was there prior communication of suicidal intent"? These were said to be coded on clinical judgements. The inter-rater and intra-rater reliability of these items or their validity can be questioned. The second difficulty was related to the high proportion of missing data on some of the items of the SIS. In other words, when the actual contact with the attempter has been limited to a single meeting only, the proportion of the missing data was higher. On the other hand, greater

rapport with an attempter resulted in acquiring more complete information about him/her. Besides, items like 'primary', 'secondary' and 'tertiary' problems may be changing from time to time and may not reliably measure the risk involved.

On the whole, the data sheet was designed to satisfy the needs of the S.A.F.E.R. Staff as far as possible. It helped answer some important questions for the operation of the S.A.F.E.R. Program.

Selection of Variables

The Data File is composed of 44 variables. These also include routine information required on clients' in-take, e.g., client's identification number, S.A.F.E.R. Worker's name who filled the forms on each client, month, year and day of week attempt was made and date and time of admission. Such items have not been cross-tabulated, although some of them have been diagrammatically represented to show frequency of occurrence of attempts.

The Key Variable

Age has been regarded in previous research literature as a key variable. Its taxonomy is represented through age-groups. The four age-groups formed for purposes of comparison with other factors in suicide are:

0 - 19 years
20 - 39 years
40 - 64 years
Above 65 years

Those above 65 years have been further subdivided into two groups, i.e., 65 - 74 years and 75 years and above. The purpose of further subdivision has been to examine more intensively the associational relationship of some selected factors with age-differences among the elderly group.

Variables to be Intercorrelated with Age

Most background variables included in the data file have been chosen for analysis to explore the relationship of age with those factors. Some have been left out due to two main reasons. First, because they were repetition of a certain factor, e.g., 'secondary problems' and 'tertiary problems' and 'second method of attempt' and 'third method of attempt'. Second, those items in which information was limited only to those who were hospitalized, e.g., 'length of stay in hours' and 'discharged before seen'. These two variables were left blank for non-hospitalized suicide attempters. Moreover, they were not applicable for cases of suicide threats and crisis interventions.

The variables to be analyzed include:

1. The Background Factors which include social characteristics, such as sex, marital status, occupation, education, ethnicity and having children.
2. Factors as antecedents in attempt of suicide comprise employment status, living situation, financial situation,

legal involvement, motives of attempt, methods used in attempt, primary presenting problem, prior communication for attempt, past illness, past accidents, death of significant other, drugs, previous attempts toward suicide, impending move and alcohol abuse.

3. Factors relating to programming of services take into account factors such as number of contacts made with S.A.F.E.R., source or method of referral, level of service received, reasons for no contact with the suicide prevention agency (S.A.F.E.R.) and length of case.

Method of Analysis

It is a Secondary analysis of the S.A.F.E.R. data described before. In order to fulfill the first objective of the study, namely the construction of a basic profile of cases of attempted suicide, the first step in data analysis has been a univariate analysis of frequencies.

The second step takes into account the cross-tabulation of all the 30 variables chosen from the data file. The purpose is the testing of association between age and other variables.

The test of the chi-square has been applied to find the significance of association between the variables. Factors which have been found to be significantly related were further analyzed. T-tests were administered to see whether the means

of the two population were homogeneous.

Items with multiple categories were tested by the method of analysis of variance to test the significance of differences between the means of age-groups vs. other correlated variables in attempted suicide. The interaction effects within variables were noted.

Other measures of contingency selected to test the strength of association between age and other variables include: contingency coefficient, uncertainty coefficient, lambda (symmetric) and lambda (asymmetric).

Definition of Key Concepts

Cases: Include all units of observation, i.e., S.A.F.E.R. clients who have been assessed to have attempted suicide.

Attempted Suicide: The decision as to whether or not a suicide attempt was made was based on the clinical judgement of S.A.F.E.R. staff members. The clinical judgement was arrived at on review of hospital charts, physician's report and information from family members and from any other source available at the time.

A formal definition of attempted suicide is: "a non-fatal act in which an individual deliberately causes self-injury or ingests a substance in excess of prescribed or generally recognized therapeutic dosage." (Kreitman, 1977)

Elderly: All those persons who fall in the age category of 65 and above and who have been referred to S.A.F.E.R., assessed and accepted as cases of suicide attempts.

Explanation of Terms Used in Hypotheses

Sexual Deviance: Refers to sexual orientations rather than heterosexuality.

Legal Involvement: Refers to legal involvement concurrent with the current S.A.F.E.R. contact.

Primary Problem: Refers to the primary presenting problem of the client when he/she was first seen by the S.A.F.E.R. worker.

Plan to Die: Refers to 'intent to kill oneself'.

Attempt Planned: Means specific preparations made beforehand, i.e., it was not an impulsive or spontaneous act.

Attempt Directed: Attempts with an interpersonal and instrumental quality, as manifestations of anger, hostility, or revenge directed toward significant others.

Prior Communication: Includes both 'Direct' and 'Indirect', e.g., giving away prized possessions, preparing a will, or direct verbal threats of suicide.

Level of Service: Refers to level of client contact attained with S.A.F.E.R. In data analysis, it is referred to as "Contact type". There

are four levels of contact in the process of referral and counselling at S.A.F.E.R. They are: Assessment only, Offer of Service only, Brief counselling contact and Complete counselling contact. The first two levels are referred to in the analysis of the data as 'No Service', and the last two as 'Some Service'.

Abbreviation Used in Statistical Analysis

CC = Contingency Coefficient

L1 = Goodman's Lambda (Asymmetric)

L2 = Goodman's Lambda (Symmetric)

UC1 = Uncertainty Coefficient (Asymmetric) with Age-dependent and with Column-dependent

UC2 = Uncertainty Coefficient (Symmetric) with Age-dependent and with Column-dependent.

Note: The Code Book contains explanation of Variables. It can be referred to for any further explanations at the Central Office of the Greater Vancouver Mental Health Service.

CHAPTER V

ANALYSIS OF DATA AND ITS INTERPRETATION

The data have been analyzed keeping in view the objectives set up in the designing of the study.

The first objective is to construct a basic profile of suicide attempters. To this end, a univariate analysis of the distribution of variable frequencies has been presented through percentages. Ratios have been used for comparative purposes and some frequencies have been illustrated through bar charts.

In order to meet the second objective of finding profiles of attempters by age groups, tests of association have been applied. Any differences occurring in a sample as large as for this study have to be interpreted keeping in mind that the differences will be statistically significant even though, it may be very close to zero, and too small to have any practical importance. In interpreting the results, we rely mainly on the measures of association. It is the size of relationship that counts.

For meeting the third objective, the analysis is focussed on the two groups within the elderly, namely the

'young' and the 'old' elderly and the same measures of association are applied, but in this case on a small sample.

An examination of the overall findings goes to meet the fourth objective, i.e., to determine the extent to which age as a factor is relevant in the planning of programmes in suicide prevention.

1. Basic Profile of Attempters:

1.1 Demographic Variables:

1. The total cases of S.A.F.E.R. clients referred from various sources totalled 5,358.

2. The period of referral extended over a period of 4½ years. The frequency of occurrence of suicide attempts was highest in 1978 (Bar Chart III).

3. The highest incidence of attempts occurred in the month of August (Bar Chart IV).

4. The referrals to S.A.F.E.R. came mostly from the Vancouver General Hospital (51.9%) and the second most (21.3%) were received from the St. Paul's Hospital. Both the hospitals are located in the Downtown Vancouver Area. (M.O = 3.8%)[1]

Note: Percentages are calculated from a total of those on whom information could be recorded. Number of missing observations have, therefore, been excluded from such calculation.

[1] M.O = Missing Observations.

CHART III

BAR CHART SHOWING FREQUENCY OF SUICIDE ATTEMPTS BY YEAR

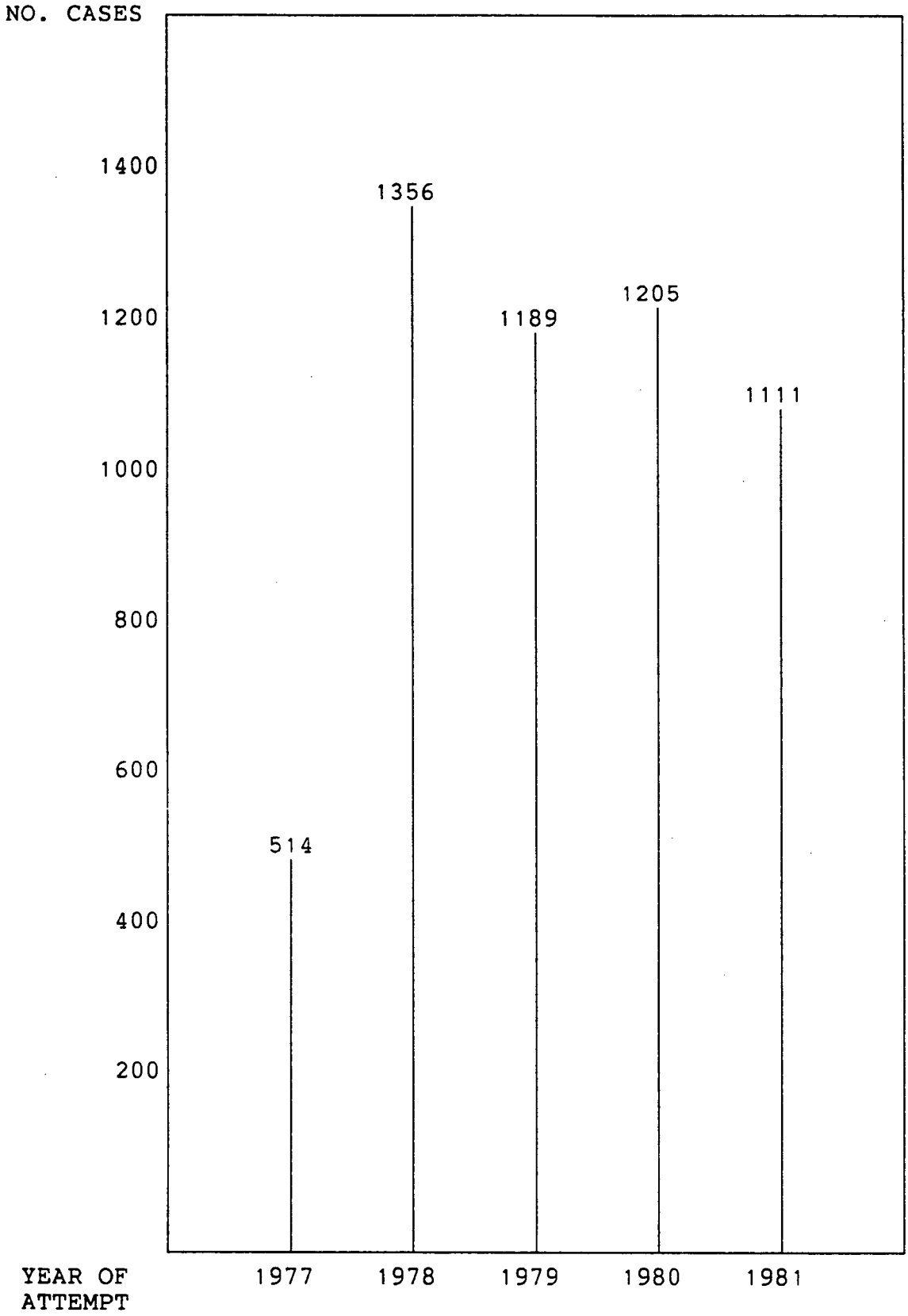
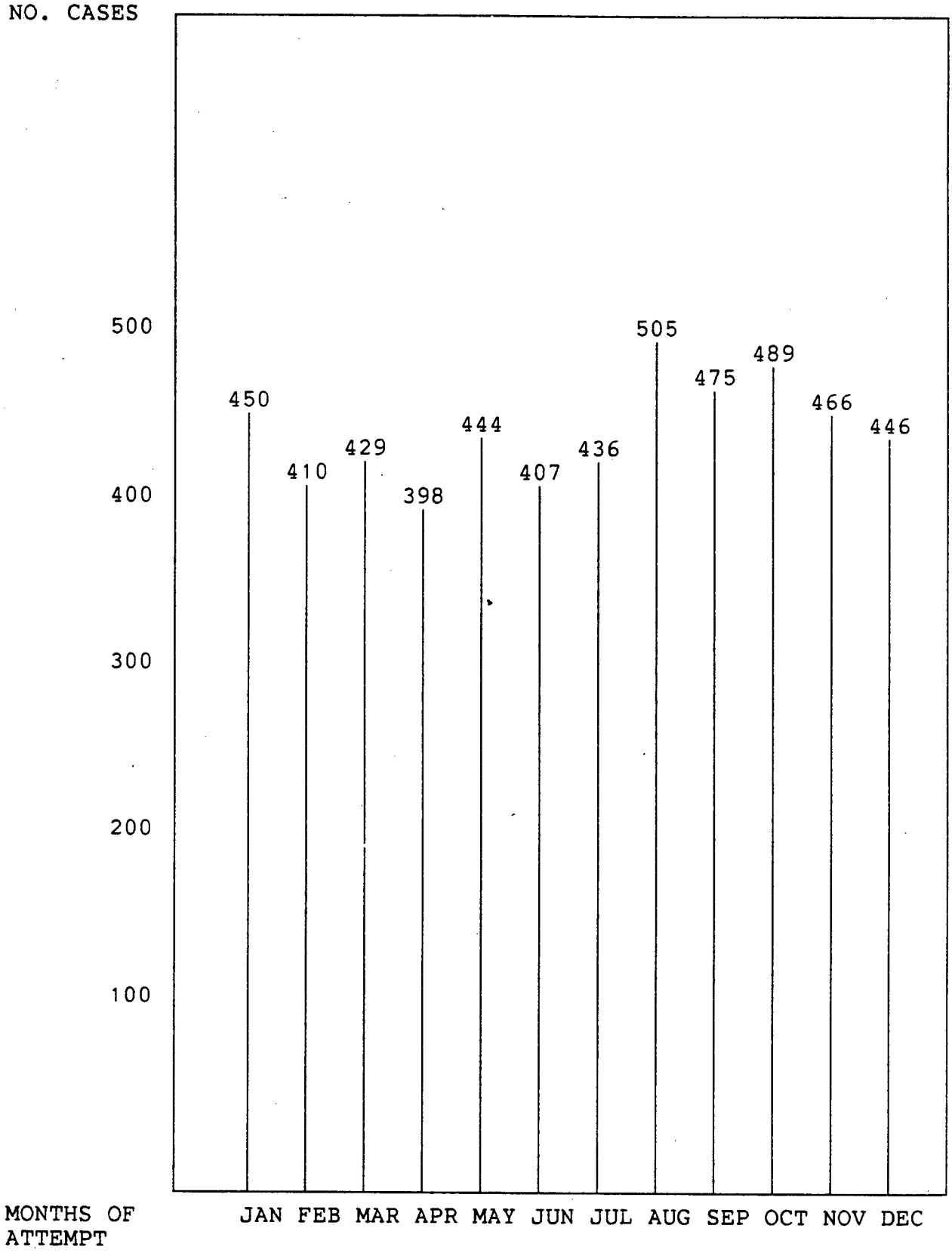


CHART IV

BAR CHART SHOWING FREQUENCY OF SUICIDE ATTEMPTS BY MONTH



5. The ages of attempters ranged from 10-96 years[2] with a mean age of 28.43, median 26.67 and mode 20.0 years.

6. The ratio of females to male attempters stood at 2:1, i.e., 66.8% were females and 33.2% were males. (M.O = 4.1%)

7. The largest number of suicide attempts (49.1%) were among males and females who were never married and were classified as 'single'. Married clients formed 30.7%, divorced and separated 17.5% and widowed 2.7% of the total. (M.O = 25.1%)

8. Of all the cases recorded, 57% were either unskilled or had no occupation. Among such cases included 14.6% (432) students and 13.4% (396) housewives. (M.O. = 44.8%)

9. Level of education attained by most (77.4%) was up to secondary school. (M.O = 63%)

10. By ethnic classification, 84.5% were 'whites'. Native Indians and Inuits comprised 6.7%, orientals constituted 4.5% and the remaining classified as 'other' formed 4.5% of the attempters. (M.O = 37.7%)

11. Sixty percent of all observed cases were without children. (M.O = 52.9%)

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[2] The age range here starts from 10 years because the cases of attempted suicide under 15 years numbered 113. It was too large a number to be ignored.

1.2 Variables Held as Antecedants in Suicide Attempts

1. Employment Status:

The unemployed constituted 68.2% of all observed cases. Unemployment status comprised those without jobs, retired, dependents or living on welfare. (M.O = 34.7%)

2. Living Situation:

Most clients (69.8%) shared accommodations with parents, relatives, friends or were living communally, while 24.8% lived alone and 5.4% were in residential institutions. (M.O = 37.7%)

3. Financial Situation:

Fifty percent of attempters described their financial situation as insecure. (M.O = 51.6%)

4. Sexual Orientation:

There were 94.5% who were heterosexual. The remaining are referred to here as 'sexually deviant'. (M.O = 51.9%)

5. Legal Involvement:

Of those who were involved in court cases, 47% had civil suits and cases in family courts and 28.4% in criminal courts. Another 5.8% of the cases were drug/alcohol abuse related. (M.O = 93.9%)

6. Primary Problem:

Primary problem of most attempters (46.8%) revolved around family, marital and social relationships. Separation

or loss of significant others was the second most frequently experienced, stated by 23.5%. Alcohol and drug related problem was the third most frequently (10.4%) stated problem. Isolation and psychosis were experienced by 5.4% and physical illness was the primary problem of 3.4% of all observed cases. (M.O = 34.5%)

7. Method of Attempt:

Most attempters (75.2%) made use of drugs classified as 'psychotropics', 'barbituates' and 'analgesics' with frequency of ingestion in order of the drugs named here.

There were 21% cases of self-injury which included firearms, hanging, slashing of wrist, drowning, and jumping from heights, while 3.8% were cases in crisis or had threatened suicide. (M.O = 5.4%)

8. Abuse of Alcohol:

Alcohol was directly involved in the suicidal act by one third of the 2,919 cases on whom information could be ascertained. (M.O = 45.5%)

9. Intent to Die:

There were 88.4% of the attempters who stated that they had no intent to kill themselves. (M.O = 62%).

10. Attempt Planned:

Those who had not 'planned their attempt' beforehand formed 93.4% of all cases. In other words, it was an emotional

and impulsive act.

11. Attempt Directed:

Attempts were mostly directed (57.2%) toward lover/ friend. Another 17.4% were directed towards parents or other family members. In the case of 25.4% it could not be ascertained toward whom they were directed. (M.O = 80.2%)

12. Communication of Intent:

Attempts who did not communicate their intention to die prior to attempt were 94.2%. (M.O = 68.5%)

13. Drug Dependency:

The cases found to be drug dependent formed 84.2%. (M.O = 58.5%)

14. Past Illness:

Those who had suffered no past physical illness comprised 91.8%. (M.O = 64.1%)

15. Past Accidents:

Those who had encountered no accidents in the past formed 97.8%. (M.O = 70.4%)

16. Death of Significant Others:

Those who experienced no death or loss of significant other formed 93.8%. (M.O = 77.2%)

17. Violence in the Family:

Those who mentioned no violence in the family were 92.6%.

(M.O = 74.4%)

18. History of Attempts:

Seventy-eight percent had not made an attempt previously or had no record of attempt. (M.O = 45.4%)

1.3 Factors in Programming and Service Utilization

1. Days of Occurrence of Suicide Attempts:

Most attempts occurred on Saturdays and second most on Wednesdays (bar chart V).

2. Time of Occurrence:

Most attempters (42.6%) were admitted in the hospital between mid-night and 5:59 a.m. (bar chart VI).

3. Length of Stay:

The length of stay of most attempters (36.9%) in the hospital was between 1 to 4 hours. Fifty-three percent were discharged from the hospital before they were seen by a S.A.F.E.R. worker. For those whose source of referral was other than a hospital (3.2%), information on the duration of treatment was not available. (M.O = 25%)

4. Level of Service Achieved with S.A.F.E.R. in Previous Attempt/Attempts (PrioContype):

Of the 762 attempters who had made previous contacts with S.A.F.E.R., 60.6% had achieved the service level through either 'brief counselling' or 'complete counselling'.

5. Level of Service Reached with S.A.F.E.R. by those

BAR CHART SHOWING FREQUENCY OF SUICIDE ATTEMPTS BY DAY OF WEEK

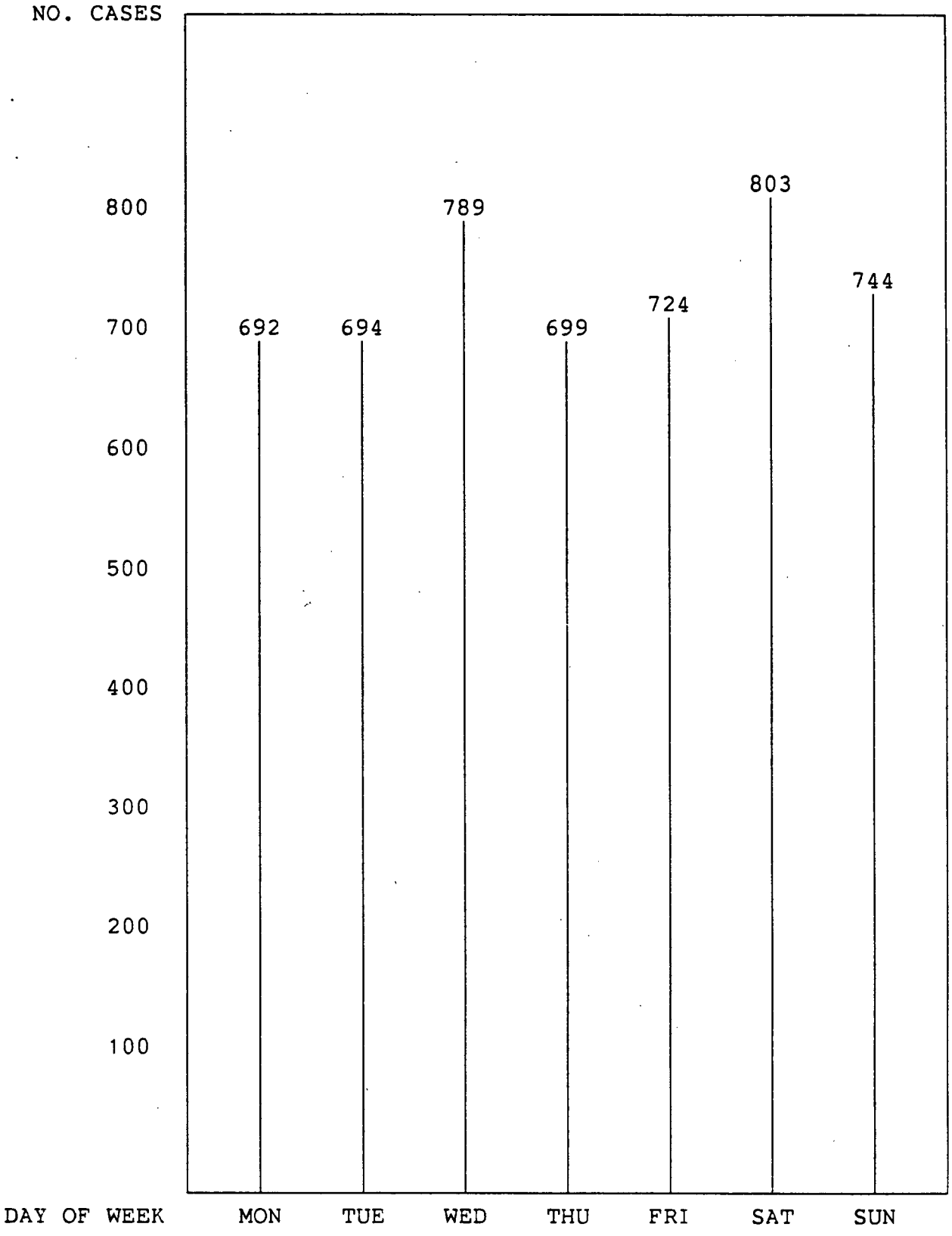
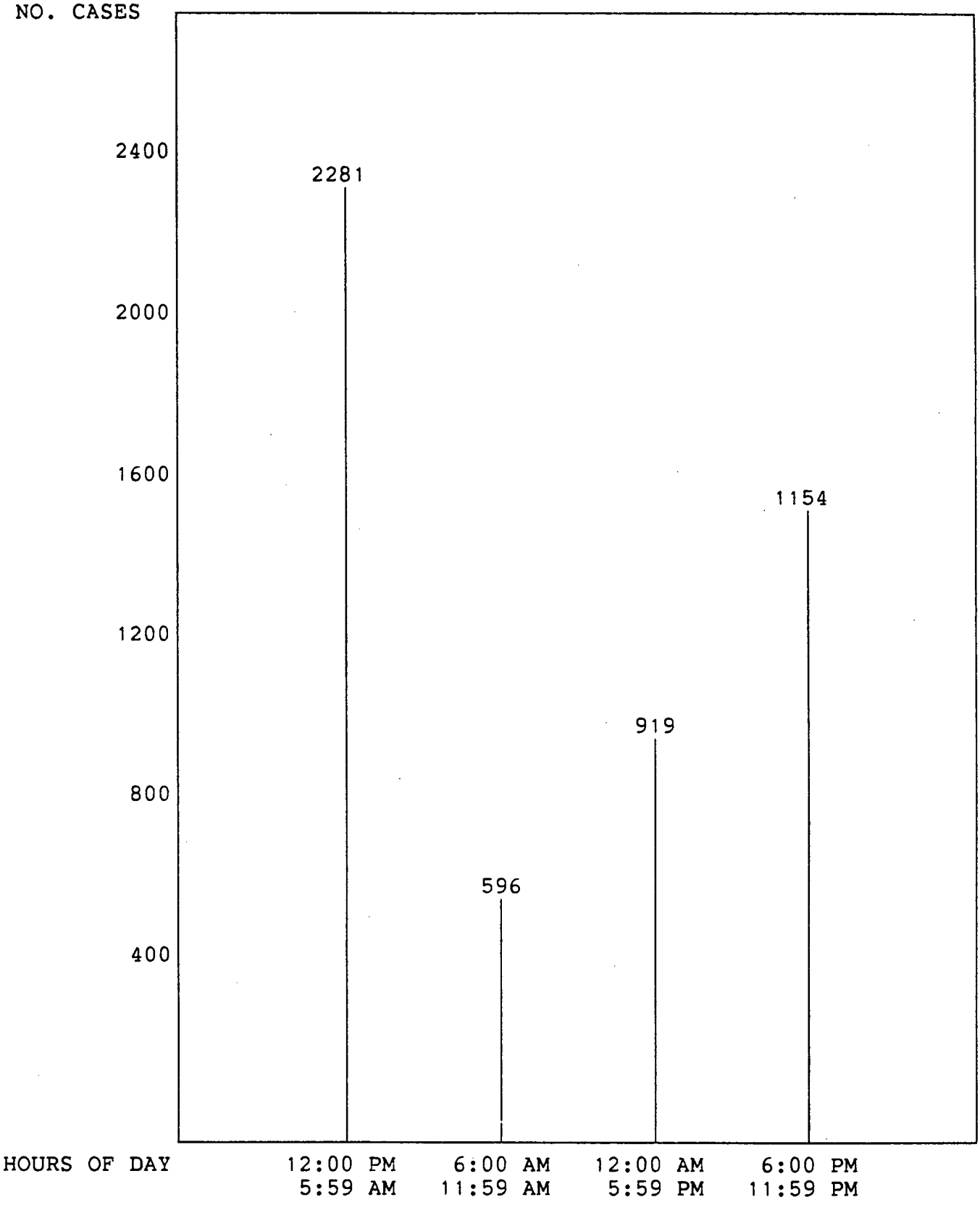


CHART V

CHART VI

BAR CHART SHOWING FREQUENCY OF SUICIDE ATTEMPTS
HOURS OF DAY



who had No record of Previous Contacts (Contype):

Of those, 33.6% had brief counselling and 26.7% went for 'complete counselling' with S.A.F.E.R. Such cases formed 60.2% of a total of 5,347 cases observed. (M.O = 11 cases)

6. Reasons for 'Assessment' Only:

Those who were offered service by S.A.F.E.R. after their cases were ascertained to be those of suicide attempts were approached for finding reasons for non-utilization of service. Those who were unable to contact S.A.F.E.R. formed 49.9%. Reasons given included: inaccessibility to a telephone, S.A.F.E.R.'s inability to trace the client post-discharged from hospital. Other reasons were refusal by kin, friends and professionals to contact the service (20.9%), client's involvement with other agencies (29.3%) and client being non-English speaking. Only 7 out of a total of 2,138 such cases were S.A.F.E.R. ongoing, i.e., receiving counselling.

The Findings:

The profile that emerges from the foregoing analysis corresponds with the one formulated from a review of background literature.

We are, therefore, inclined to confirm that in general, it is young, never married females who became S.A.F.E.R. clients. In general, they had no particular occupation, being mostly housewives or students, mostly dependent on family for

a living or were on welfare. Their primary problems were family, marital or sex related. Past physical illness or past accidents or loss of significant others did not feature prominently as precursors of attempts. Their intent to die was marked by ambivalence and unplanned attempts. Most attempters ingested substances for self-poisoning and directed their attempts mostly toward parents, friends or a lover. The period of intervention was brief, both at the hospital and with S.A.F.E.R.

From the available data, it is, however, not possible to tell whether the group is representative of attempters in the general population.

2. Testing of Hypotheses:

The results of tests of hypotheses appear in Table 8 (pages 92-97). Measures of association as applicable to nominal data have been selected for interpreting the results. The Computer Run Tables appear in Appendix C from which the results have been collated in Table 8.

The hypotheses are recapitulated briefly here in the null form. Their serial numbers correspond with the serial numbers of variables in Table 8.

The Null Hypotheses:

1. There is no association of age with frequency of

contact with S.A.F.E.R. Program.

The Null Hypotheses:

Age differences in suicide attempters are not significantly associated with:

1. Frequency of contact with S.A.F.E.R. Program
2. Different referral routes
3. Sex differences
4. Differences in occupational status
5. Differences in marital status
6. Those who changed their abode or not (move)
7. Differences in educational status
8. Differences in employment status
9. Differences in living situation
10. Differences in ethnic origin
11. Differences in financial situation
12. Differences in sexual orientation
13. Legal involvement
14. Differences in primary problems
15. Methods of attempt
16. Alcohol abuse
17. Differences in seriousness of intent (plan to die)
18. Differences in attempt planned or unplanned
19. Attempt directed toward others or not
20. Differences in prior communication of intent
21. Having or not having children
22. Having or not having drug dependency

23. Physical illness or its absence
24. Experience with past accidents
25. Violence in the family
26. Death of significant others
27. History of prior attempt
28. Level of service received in prior attempts
29. Quantity of service received by those who had made no prior attempts
30. Reasons for non-utilization of S.A.F.E.R. service

Statistical Results:

A. The Chi-square Test: 27 out of 30 variables assumed to be correlated with age were found with significantly high values with a probability of 0.0000, i.e., less than one chance in 10,000 that values this large or larger could be due to sampling error alone. The three null hypotheses which were accepted were those numbered as 13 (Legal Involvement), 20 (prior communication) and 28 (level of service received in prior attempts or PrioContype).

In our analysis the sample size being large yielded large values of chi-squares. The large values imply a systematic relationship that exists between age and correlated variables. Further, to test the strength of relationship between age and correlated variables in suicide attempts, values from other tests of association were examined. Consistently

weak relationships were evident from the results (Table 8, pages 92-97).

It may, therefore, be inferred that variables assumed to be associated with age, though not independent of each other, are nevertheless, not strongly related.

B. Results of t-tests: The 14 null-hypotheses for which t-tests were administered had dichotomous variables. The null hypotheses assumed that the two populations would have equal age means (Tables 9, 98-101). Only one null hypothesis was accepted as the means of the populations were found to be equal (referred as PrioContype). The other 13 were rejected at .05 level of significance as their means on age were not found to be equal.

C. Tests of ANOVA were applied on variables with multiple categories (Table 10, 102-103). The main effects of variables with age were found to be significant at .05 level of significance. The variables of occupation and ethnicity were found to have significant variance in age means. Again the differences in means were small. 'Employment' as a variable did not seem to have high variance in means and may, therefore, be treated as being of a borderline significance.

As regards the two-way interactional effects, the variable of 'marital status' and 'primary problem' showed no

TABLE 8

TESTS OF HYPOTHESES

Age by Correlated Variables

Variables Correlated With Age	Chi-Square X^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
1. Number of S.A.F.E.R. Contacts (NumCon)	32.31	9	0.002	0.078	0.00 with age Dep. 0.00 with NumCon Dep.	0.0	0.003 with age Dept. 0.008 with NumCon Dep.	0.004
2. Method of Referral	70.66	18	0.00	0.116	0.0 with age Dep. 0.0 with method Dep.	0.0	0.007 with age Dep. 0.005 with method Dep.	0.006
3. Sex	52.37	3	0.00	0.09	0.0 with age Dep. 0.0 with sex Dep.	0.0	0.032 with age Dept. 0.037 with Occup. Dep.	0.006
4. Occupational Status	171.05	9	0.00	0.23	0.0 with age Dep. 0.0 with Occup Dep.	0.0	0.032 with age Dep. 0.037 with Occup. Dep.	0.034
5. Marital Status	1371.43	9	0.0	0.50	0.0 with age Dep. 0.135 with Marital Dep.	0.08	0.080 with age Dep. 0.137 with Marital Dep.	0.144

NOTE: The Variables are numbered here in the same order as Hypotheses are stated in Chapter 3.
Abbreviation: Dep. = Dependant.

TABLE 8 (Continued)

Variables Correlated With Age	Chi-Square X^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
6. Move	30.31	3	0.00	0.07	0.0 with age Dep. 0.06 with move Dep.	0.0	0.002 with age Dep. 0.006 with move Dep.	0.004
7. Educational Level	116.80	9	0.00	0.23	0.00 with age Dep. 0.00 with education Dep.	0.0	0.035 with age Dep. 0.042 with education Dep.	0.038
8. Employment Status	110.77	3	0.00	0.17	0.00 with age Dep. 0.0 with employment Dep.	0.0	0.017 with age Dep. 0.029 with employment Dep.	0.022
9. Living Situation	161.71	6	0.00	0.21	0.0 with age Dep. 0.0 with living Dep.	0.0	0.026 with age Dep. 0.036 with living Dep.	0.03
10. Ethnicity	27.94	3	0.00	0.09	0.0 with age Dep. 0.0 with ethnicity Dep.	0.0	0.004 with age Dep. 0.10 with ethnicity Dep.	

TABLE 8 (Continued)

Variables Correlated With Age	Chi-Square x^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
11. Financial	81.43	6	0.00	0.122	0.0 with age Dept. 0.0 with financial Dep.	0.0	0.007 with age Dep. 0.008 with financial Dep.	0.006 0.007
12. Sexual Orientation	30.05	3	0.00	0.10	0.00 with age Dep. 0.0 with sexual orientation	0.0	0.007 with age Dep. 0.035 with sexual orientation	0.012
13. Legal Involvement	14.58	9	0.10	0.206	0.0 with age Dep. 0.01 with legal Dep.	0.08	0.025 with age Dep. 0.02 with legal Dep.	0.022
14. Primary Problem	258.68	18	0.000	0.26	0.00 with age Dep. 0.0 with primary Dep.	0.0	0.02 with age Dep.	0.023
15. Method of Attempt	45.58	6	0.000	0.09	0.0 with age Dep. 0.0 with method Dep.	0.0	0.004 with age Dep. 0.007 with method Dep.	0.005

TABLE 8 (Continued)

Variables Correlated With Age	Chi-Square X^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
16. Alcohol	125.35	3	0.000	0.15	0.0 with age Dep. 0.0 with alcohol Dep.	0.0	0.012 with age Dep. 0.019 with alcohol Dep.	0.014
17. Plan to Die	75.43	3	0.000	0.117	0.0 with age Dep. 0.0 with die Dep.	0.0	0.006 with age Dep. 0.019 with die Dep.	0.010
18. Attempt Planned	29.65	3	0.000	0.07	0.0 with age Dep. 0.0 with planned Dep.	0.0	0.002 with age Dep. 0.010 with planned Dep.	0.004
19. Attempt Directed	175.68	6	0.000	0.37	0.104 with age Dep. 0.072 with directed Dep.	0.08	0.072 with age Dep. 0.074 with directed Dep.	0.073
20. Prior Communication	4.09 n.s*	3	0.25	0.027	0.0 with age Dep. 0.0 with Commun Dep.	0.0	0.00 with age Dep. 0.001 with Commun Dep.	0.000

*n.s = not significant

TABLE 8 (Continued)

Variables Correlated With Age	Chi-Square X^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
21. Children	395.56	3	0.000	0.26	0.0 with age Dep. 0.0 with children Dep.	0.0	0.040 with age Dep. 0.086 with children Dep.	0.054
22. Drug Dependent	88.77	3	0.000	0.127	0.0 with age Dep. 0.0 with drug Dep.	0.0	0.008 with age Dep. 0.020 with Drug Dep.	0.012
23. Past Illness	154.53	3	0.000	0.16	0.0 with age Dep. 0.0 with illness Dep.	0.01	0.01 with age Dep. 0.042 with illnes Dep.	0.018
24. Past Accident	17.76	3	0.000	0.05	0.0 with age Dep. 0.0 with accident Dep.	0.0	0.001 with age Dep. 0.014 with accident Dep.	0.002
25. Family Violence	12.89	3	0.004	0.04	0.0 with age Dep. 0.0 with violence Dep.	0.0	0.001 with age Dep. 0.005 with violence Dep.	0.002

TABLE 8 (Continued)

Variables Correlated With Age	Chi-Square x^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
26. Death of Significant Other	67.66	3	0.000	0.111	0.0 with age Dep. 0.0 with death Dep.	0.0 0.0	0.004 with age Dep. 0.019 with death Dep.	0.007
27. Prior Attempts	57.99	3	0.000	0.103	0.0 with age Dep. 0.0 with attempt Dep.	0.0	0.005 with age Dep. 0.010 with attempt Dep.	0.007
28. Prior Contact Type	1.64 n.s*	3	0.649	0.04	0.0 with age Dep. 0.0 with prior type Dep.	0.0	0.001 with age Dep. 0.001 with prior Type Dep.	0.001
29. Contact Type	36.38	3	0.000	0.082	0.0 with age Dep. 0.0 with Contype Dep.		0.003 with age Dep. 0.005 with Con-type Dep.	0.004
30. Reason for Assessment Only	118.25	9	0.000	0.22	0.0 with age Dep. 0.0 with reason Dep.	0.0	0.024 with age Dep. 0.019 with reason Dep.	0.021

*n.s = not significant

TABLE 9: t-tests on 14 Selected Correlates of Age

T - T E S T

GROUP 1 - SEX EQ 1.
GROUP 2 - SEX EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	3574	27.6984	14.754	0.247	1.24	0.000	-5.33	5355	0.000	-5.53	3925.14	0.000
GROUP 2	1783	29.9030	13.232	0.313								

T - T E S T

GROUP 1 - MOVE EQ 1.
GROUP 2 - MOVE EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	4412	28.6002	14.798	0.223	1.60	0.000	1.88	5356	0.060	2.19	1664.25	0.029
GROUP 2	946	27.6364	11.687	0.380								

T - T E S T

GROUP 1 - FINANC EQ 1.
GROUP 2 - FINANC EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	645	31.5550	15.134	0.596	1.73	0.000	4.29	1945	0.000	3.92	1024.61	0.000
GROUP 2	1302	28.9040	11.514	0.319								

T - T E S T

GROUP 1 - ALCOHOL EQ 1.
GROUP 2 - ALCOHOL EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	3553	27.4909	15.234	0.256	1.60	0.0	-6.77	5356	0.000	-7.30	4436.02	0.000
GROUP 2	1805	30.2787	12.054	0.284								

TABLE 9 (Continued)

T - T E S T

GROUP 1 - PLANNED EQ 1.
GROUP 2 - PLANNED EQ 2.

	OF CASES	MEAN	DEVIATION	ERROR	VALUE	PROB.	POOLED VARIANCE ESTIMATE VALUE	FREEDOM	PROB.	SEPARATE VARIANCE ESTIMATE VALUE	FREEDOM	PROB.
AGE <AGE>												
GROUP 1	4736	27.7627	14.092	0.205	1.11	0.069	-9.50	5356	0.000	-9.12	774.76	0.000
GROUP 2	622	33.5113	14.868	0.596								

T - T E S T

GROUP 1 - ATTEMPT EQ 1.
GROUP 2 - ATTEMPT EQ 2.

	OF CASES	MEAN	DEVIATION	ERROR	VALUE	PROB.	POOLED VARIANCE ESTIMATE VALUE	FREEDOM	PROB.	SEPARATE VARIANCE ESTIMATE VALUE	FREEDOM	PROB.
AGE <AGE>												
GROUP 1	5007	28.1218	14.207	0.201	1.10	0.188	-5.98	5356	0.000	-5.72	395.71	0.000
GROUP 2	351	32.8262	14.934	0.797								

T - T E S T

GROUP 1 - CHILDREN EQ 1.
GROUP 2 - CHILDREN EQ 2.

	OF CASES	MEAN	DEVIATION	ERROR	VALUE	PROB.	POOLED VARIANCE ESTIMATE VALUE	FREEDOM	PROB.	SEPARATE VARIANCE ESTIMATE VALUE	FREEDOM	PROB.
AGE <AGE>												
GROUP 1	4353	26.5798	13.823	0.210	1.04	0.446	-20.46	5356	0.000	-20.71	1523.31	0.000
GROUP 2	1005	36.4438	13.561	0.428								

T - T E S T

GROUP 1 - DRUG EQ 1.
GROUP 2 - DRUG EQ 2.

	OF CASES	MEAN	DEVIATION	ERROR	VALUE	PROB.	POOLED VARIANCE ESTIMATE VALUE	FREEDOM	PROB.	SEPARATE VARIANCE ESTIMATE VALUE	FREEDOM	PROB.
AGE <AGE>												
GROUP 1	4490	27.7987	14.522	0.217	1.32	0.000	-7.29	5331	0.000	-8.01	1295.32	0.000
GROUP 2	843	31.6963	12.650	0.436								

TABLE 9 (Continued)

T - T E S T

GROUP 1 - ILLNESS EQ 1.
GROUP 2 - ILLNESS EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	4917	27.6213	13.809	0.197	1.42	0.000	-14.02	5355	0.000	-12.11	495.76	0.000
GROUP 2	440	37.4227	16.474	0.785								

T - T E S T

GROUP 1 - ACCIDENT EQ 1.
GROUP 2 - ACCIDENT EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	5242	28.3079	14.269	0.197	1.07	0.602	-4.21	5356	0.000	-4.08	119.83	0.000
GROUP 2	116	33.9483	14.728	1.367								

T - T E S T

GROUP 1 - VIOLENCE EQ 1.
GROUP 2 - VIOLENCE EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	4961	28.4773	14.543	0.206	1.80	0.000	0.82	5355	0.411	1.05	516.00	0.292
GROUP 2	396	27.8636	10.832	0.544								

T - T E S T

GROUP 1 - DEATHS EQ 1.
GROUP 2 - DEATHS EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	5022	28.0325	14.012	0.198	1.48	0.000	-7.89	5354	0.000	-6.64	363.46	0.000
GROUP 2	334	34.3743	17.072	0.934								

TABLE 9 (Continued)

T - T E S T

GROUP 1 - PATTEMPT EQ 1.
GROUP 2 - PATTEMPT EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	4177	28.0259	14.841	0.230	1.53	0.000	-3.81	5355	0.000	-4.28	2293.68	0.000
GROUP 2	1180	29.8169	12.017	0.350								

T - T E S T

GROUP 1 - CONTYPE EQ 1.
GROUP 2 - CONTYPE EQ 2.

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
AGE <AGE>												
GROUP 1	2127	29.9027	13.894	0.301	1.08	0.045	6.11	5345	0.000	6.16	4675.12	0.000
GROUP 2	3220	27.4739	14.458	0.255								

TABLE 10: Tests of ANOVA on 8 Selected Correlates of Age

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
            AGE
         BY MARITAL   <MARITAL STATUS>
            EMPLOY    <EMPLOYMENT STATUS>
            LIVING    <LIVING SITUATION>
            PRIMARY   <PRIMARY PROBLEM>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	149924.500	12	12493.707	116.556	0.0
MARITAL	122635.938	3	40878.645	381.363	0.000
EMPLOY	390.595	1	390.595	3.644	0.056
LIVING	9830.871	2	4915.434	45.857	0.000
PRIMARY	14906.277	6	2484.379	23.177	0.0
2-WAY INTERACTIONS	16322.625	47	347.290	3.240	0.000
MARITAL EMPLOY	3163.659	3	1054.553	9.838	0.000
MARITAL LIVING	2507.954	6	417.992	3.900	0.001
MARITAL PRIMARY	2987.355	18	165.964	1.548	0.065
EMPLOY LIVING	756.833	2	378.417	3.530	0.029
EMPLOY PRIMARY	614.130	6	102.355	0.955	0.454
LIVING PRIMARY	3732.324	12	311.027	2.902	0.001
EXPLAINED	166247.125	59	2817.748	26.287	0.0
RESIDUAL	278160.313	2595	107.191		
TOTAL	444407.438	2654	167.448		

```
   5358 CASES WERE PROCESSED.
   2703 CASES ( 50.4 PCT) WERE MISSING.

DUE TO EMPTY CELLS OR A SINGULAR MATRIX,
HIGHER ORDER INTERACTIONS HAVE BEEN SUPPRESSED.
```

TABLE 10 (Continued)

```
* * * * * * * * * * A N A L Y S I S   O F   V A R I A N C E * * * * * * * * * *
            AGE
         BY OCCUP    <OCCUPATION>
            ETHNIC   <ETHNICITY>
            METHOD   <METHOD OF ATTEMPT>
            ATTEMPT  <ATTEMPT DIRECTED>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	9245.098	9	1027.233	7.095	0.000
OCCUP	646.599	3	215.533	1.489	0.216
ETHNIC	222.556	2	111.278	0.769	0.464
METHOD	1844.814	2	922.407	6.371	0.002
ATTEMPT	5837.109	2	2918.555	20.158	0.000
EXPLAINED	9245.125	9	1027.236	7.095	0.000
RESIDUAL	127846.063	883	144.786		
TOTAL	137091.188	892	153.690		

5358 CASES WERE PROCESSED.
4465 CASES (83.3 PCT) WERE MISSING.

DUE TO EMPTY CELLS OR A SINGULAR MATRIX,
HIGHER ORDER INTERACTIONS HAVE BEEN SUPPRESSED.

significant interaction. Similar was the case between the variables of 'employment' and 'primary problems'.

D. Multivariate analysis was attempted to explore question No. 2 posed in Chapter III, i.e., if age was associated with the level of service for those who returned to the program for multiple re-openings.

The variables of prior service level (PrioContype) with concurrent service level (ConType) were cross-tabulated with age (Table 11a & b, 105-106). The results did not yield any significant relationships. It may, therefore, be concluded that no change occurred in the level of services received in the past as compared to the present level of service when age levels were taken into account.

Answers to Question Numbers 1, 3 and 4 can be explained through the results of tests of hypotheses Nos. 1, 29 and 30. It may be concluded that the number of contacts made with S.A.F.E.R. by attempters are age related, that the level of service received and reason for assessment only or for non-utilization of service are also age related. Nevertheless, relationships between the variables are not strong enough to be of much practical significance.

Far more important for this reason than statistical signficance is the degree of association between variables. This has been thoroughly tested by using several different measures, all of which were in agreement.

TABLE 11-A: Multivariate Analysis of Age by PrioContype by Contype (No Service)

* * * * * * * * * * * * * * * * * * CROSSTABULATION OF * * * * * * * * * * * * * * * * * *

PRIOR PRIOR CONTACT TYPE BY AGE RECODED AGE

CONTROLLING FOR..

CONTYPE CONTACT TYPE VALUE.. 1 NO SERVICE

* PAGE 1 OF 1

PRIOR	AGE: COUNT / ROW PCT / COL PCT / TOT PCT	<LO-19> 0	<20-39> 1	<40-64> 2	<65-HI> 3	ROW TOTAL
NO	1 SERVICE	12	109	34	2	157
		7.6	69.4	21.7	1.3	45.6
		30.8	47.4	48.6	40.0	
		3.5	31.7	9.9	0.6	
SOME	2 SERVICE	27	121	36	3	187
		14.4	64.7	19.3	1.6	54.4
		69.2	52.6	51.4	60.0	
		7.8	35.2	10.5	0.9	
	COLUMN TOTAL	39	230	70	5	344
		11.3	66.9	20.3	1.5	100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.282
RAW CHI SQUARE = 4.06711 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.2543
CRAMER'S V = 0.10873
CONTINGENCY COEFFICIENT = 0.10810
LAMBDA (ASYMMETRIC) = 0.0 WITH PRIOR DEPENDENT. = 0.0 WITH AGE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00883 WITH PRIOR DEPENDENT. = 0.00675 WITH AGE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00765
KENDALL'S TAU B = -0.07034 SIGNIFICANCE (2-TAILED) = 0.1877
KENDALL'S TAU C = -0.06997 SIGNIFICANCE (2-TAILED) = 0.1877
CONDITIONAL GAMMA = -0.14163 SIGNIFICANCE (2-TAILED) = 0.1877
SOMERS'S D (ASYMMETRIC) = -0.07018 WITH PRIOR DEPENDENT. = -0.07051 WITH AGE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.07034
ETA = 0.10874 WITH PRIOR DEPENDENT. = 0.07083 WITH AGE DEPENDENT.
PEARSON'S R =-0.07081 SIGNIFICANCE = 0.0951

TABLE 11-B: Multivariate Analysis of Age by PrioContype by Contype (Some Service)

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

PRIOR PRIOR CONTACT TYPE BY AGE RECODED AGE

CONTROLLING FOR..

CONTYPE CONTACT TYPE VALUE.. 2 SOME SERVICE

* PAGE 1 OF 1

PRIOR	AGE: COUNT / ROW PCT / COL PCT / TOT PCT	<LO-19> 0	<20-39> 1	<40-64> 2	<65-HI> 3	ROW TOTAL
NO	1	20	91	29	2	142
	SERVICE	14.1	64.1	20.4	1.4	34.3
		36.4	33.0	37.7	33.3	
		4.8	22.0	7.0	0.5	
SOME	2	35	185	48	4	272
	SERVICE	12.9	68.0	17.6	1.5	65.7
		63.6	67.0	62.3	66.7	
		8.5	44.7	11.6	1.0	
	COLUMN	55	276	77	6	414
	TOTAL	13.3	66.7	18.6	1.4	100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.058
RAW CHI SQUARE = 0.70904 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.8711
CRAMER'S V = 0.04138
CONTINGENCY COEFFICIENT = 0.04135
LAMBDA (ASYMMETRIC) = 0.0 WITH PRIOR DEPENDENT. = 0.0 WITH AGE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00132 WITH PRIOR DEPENDENT. = 0.00093 WITH AGE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00109
KENDALL'S TAU B = -0.01257 SIGNIFICANCE (2-TAILED) = 0.8178
KENDALL'S TAU C = -0.01197 SIGNIFICANCE (2-TAILED) = 0.8178
CONDITIONAL GAMMA = -0.02606 SIGNIFICANCE (2-TAILED) = 0.8178
SOMERS'S D (ASYMMETRIC) = -0.01190 WITH PRIOR DEPENDENT. = -0.01328 WITH AGE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.01255
ETA = 0.04142 WITH PRIOR DEPENDENT. = 0.01115 WITH AGE DEPENDENT.
PEARSON'S R =-0.01119 SIGNIFICANCE = 0.4102

SUMMARY GAMMAS FOR CROSSTABULATION OF PRIOR BY AGE ZERO-ORDER GAMMA = -0.08797
FIRST-ORDER PARTIAL GAMMA = -0.07530

NUMBER OF MISSING OBSERVATIONS = 4600

Profiles by Different Age Levels:*

The statistical results give only the estimates of values, but help little to throw light on profiles by age categories. Tables in Appendix C have been scrutinized to elicit such profiles.

1. More than half of the attempters (57.5%) were comprised of those in the age group 20-39 years. A little less than one quarter (23.4%) constituted those under 20 years. The elderly formed 2% of the total attempters and those 40-64 years 17.1%.

2. The ratio of males to females under 20 years of age was 1:3 and in all other age groups 1:2.

3. The first two groups under 40 were predominantly of 'single' marital status among both males and females. Highest percentage of 'divorced and separated' was found among 40-64 years group. They also formed the highest percentage (40%) among the 'widowed' status.

4. The elderly had the highest percentage (40%) among those who lived 'alone'.

5. The youngest and the oldest had mostly directed their attempts toward the parent and the family and those in

* The age levels are referred to sometimes as youngest or first age group (under 20), second age group (20-39), third age group (40-64) and oldest age group (65 & over).

the two middle groups toward friend/lover.

6. More elderly were afflicted with physical illness.

7. Among the ethnic groups, 'white' attempters predominated. With the age categories of 'other' ethnic groups, the younger had higher proportion of attempters.

8. The ratio of 'prior attempt' to 'no prior attempt' was found to be 1:3 among the second and the third age groups and 1:6 among the youngest and the oldest age groups.

9. The ratio of 'some service' to 'no service' (Appendix C, p. 193) was higher for the youngest age group. It indicates a growing demand on the services for prevention and intervation of suicide for younger groups due to higher incidence of attempts among them. Their easier identification due to 'cry for help' makes their rescue from completed suicide more possible as compared to older age groups who on account of isolation and seriousness of intent (resulting in use of more lethal methods) may not get the attention of service agencies in time to save their lives.

10. Among the reasons for non-utilization of S.A.F.E.R. services, 'Inability to contact' was the common response for all groups. But among the younger groups, 'refusal by family, friend or professional' was a more frequent response, whereas, among the 'elderly group', 'Involvement with other agencies' appeared to be a common answer.

Similarities of Profiles:

The attempters in our study population exhibited the following features in common, irrespective of age categories:

1. 'impending move' or change of abode
2. secondary school level education
3. disruption in family, marital and social relationships as 'primary problem'
4. self-poisoning as the predominant method of attempt
5. ambivalence of 'intent to kill' themselves
6. attempts as unplanned or spontaneous acts
7. no 'prior communication' of the intent to kill

3. Comparative Analysis of the Elderly Group:

Within the elderly group those between 65-74 years numbered 69 and those 75 years and above consisted of 39 persons.

Tests of association were applied to find significant differences between the two age groups in respect of six variables related with attempts toward suicide. The six variables were sex, marital status, method of attempt, intent to kill, prior attempt and Contype (No service or Service). No association was found to exist between age and correlated variables (Table 12, p. 110). The chi-square values were below critical values at the .05 level of significance. Other tests of association also yielded zero values, thus showing no

TABLE 12

Tests of Association of Age* and Correlated Variables

Variables Correlated With Age	Chi-Square X^2	df.	Probability	Contingency Coefficient	LAMBDA (Asymmetrical)	LAMBDA (Symmetrical)	Uncertainty Coefficient (Asymmetrical)	Uncertainty Coefficient (Symmetrical)
1. Sex	0.0	1	1.000	0.0	0.0 with age Dep. 0.0 with sex Dep.	0.0	0.000 with age Dep. 0.000 with sex Dep.	0.000
2. Method of Attempt	1.35	2	0.50	0.112	0.026 with age Dep. 0.0 with method Dep.	0.018	0.009 with age Dep. 0.012 with marital Dep.	0.105
3. Marital Status	10.23	3	0.016	0.338	0.103 with age Dep. 0.083 with marital Dep.	0.090	0.125 with age Dep. 0.067 with marital Dep.	0.087
4. Planned to 'die'	0.0	1	1.00		0.0 with age Dep. 0.0 with planned Dep.	0.0	0.000 with age Dep. 0.000 with planned Dep.	0.000
5. Prior Attempt	0.0	1	1.000	0.018	0.0 with age Dep. 0.0 with prior Dep.	0.0	0.000 with age Dep. 0.000 with prior Dep.	0.000
6. Contact Type	0.133	1	0.7	0.05	0.0 with age Dep. 0.0 with Contype Dep.	0.0	0.002 with age Dep. 0.002 with Contype Dep.	0.002

*65+

evidence of strength of relationships between age and the tested variables.

The Findings:

It is evident from the above analysis that 'young' and 'old' elderly do not show any different pattern of suicidal attempts or differ in respect of the variables tested.

CHAPTER VI

SUMMARY OF FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary of Findings:

The highlights of the findings of our study are summarized below:

1. The profile of the suicide attempter among the S.A.F.E.R. clients that has emerged from the analysis of the data corresponds with the model which was depicted from a review of background literature.

2. Recognizable differences by age levels were observed in the suicidal behavior of attempters in respect of most factors when X^2 test was applied. Other tests of association, however, showed consistently weak relationships; most were in the neighbourhood of zero. Interpretations of the findings were based primarily on the strength of association rather than on statistical significance.

3. Differences between the 'young' and the 'old' elderly did not prove to be significant. In other words, the elderly who attempt showed no significantly different pattern within their age categories. Even the sex differences between males and females in later years of life reported in other studies

were not confirmed from our analysis.

Conclusions:

In concluding, it may be said that the findings of our study, in general, corroborates the results of most previous studies on attempted suicide. The main conclusions which substantiate results of previous studies are as follows:

1. The preponderence of young women in attempted suicide makes it evident that such suicidal behavior is age and sex related.

2. Age differences were found associated with marital status in the same way as they would be in the general population. That is to say that 'single' or never married mostly fall in the youngest age category and those 'married', 'divorced', 'separated' and 'widowed' in the middle and older age groups.

The younger people appear more prone to suicidal attempts than those 40 years of age and older.

3. The relational system of most attempters appeared weak in terms of more having 'no children'. This is, however, related closely with age and marital status, most clients being young with 'single' marital status.

4. Marital status and living situation provide the shield against loneliness, separation or loss for our study population in as much as the observed frequencies indicate that those who are 'single' share living with parents. Those

married lived with families or spouses. We may conclude that 'living alone' as loneliness may not be the precipitating factor in suicide attempts of those younger in age (below 40 years).

5. As in the general population, unemployment seems to be both age and sex related. Women, students and old people depending on family, welfare or pensions face insecure financial situations. Rudolf (1975) found the factor of mental illness associated with unemployment. He commented that a 'housewive's role is a source of mental illness'. Johnson (1979) found a relationship between employment of married women and lower suicide rates.

6. The most prevalent 'primary problem' in attempts being disrupted family, marital and social relationships has led us to conclude that it is a societal or group problem as much as an individual problem. Richman (1967: 379) writing on 'Family determinants of attempted suicide' had aptly remarked, "A suicidal attempt is not only an individual but a collective cry for help." The implications of these findings are worth noting for intervention strategies.

7. Physical illness proving to be age related makes us suspect that chronic illness and sufferings from diseases in later life may turn older people into high-risk individuals.

8. Age appears to be associated with 'plan to die', but gives little clue about the seriousness of intent. Since the majority of respondents had indicated no plan to die, we might

conclude that attempted suicide follows weak intent to kill oneself. That is to say, attempts are 'gestures' or 'ambivalent' and are not 'serious acts'. Such conclusions may, however, be accepted with caution. Sometimes, poor planning, particularly in the case of the old and the mentally disturbed, may lead to non-fatal outcome, although the intention might have been serious. In the past research on 'intent', there are clinical references of intent, lethality and diagnostic syndromes. On the basis of studies on the subject of 'intent', Goldney (1980: 134) had observed that there had been a broad continuum of 'wishing to live' and 'wishing to die' in suicide.

9. Attempt directed toward others is to be viewed along with problems in the family and with social relationships. The interventive process has to be directed toward bringing a change in the situation. Since the attempt is usually directed toward a family member or a significant other, their help and cooperation is needed for therapeutic purposes to create a supportive environment.

10. Absence of communication prior to the act of suicide, unplanned attempts and ambivalence of intent seem to be shared by attempters in general across age levels and provide us with a 'prototype' of attempters, regardless of age.

11. Use of less lethal methods (poisoning drugs) characterized most attempts. It may partly explain the degree of seriousness of intent. The explanation, however, seems to lie

in the accessibility of self-poisoning substances these days and the ease of their ingestion in the privacy of one's abode.

12. Frequency of alcohol and drug abuse was found to be greater among those in the early and late middle age groups, i.e., 20-64 years. This is consistent with the findings reported by Stenback (1980: 64) that chronic alcoholism more often afflicted those who were under 65 years of age.

13. Frequency of suicide reported at late evenings, during the night and in the early hours of the morning and during week-ends as well as during the weekdays calls for the need for emergency services and the services round-the-clock. There is no pattern of seasonal variations, as a substantial number of suicides are reported not only in summer, but in fall, winter and spring months as well. Hence, a year round team of workers is required.

14. In regard to the utilization of services, the elderly seek counselling services with S.A.F.E.R., the least and youngest the most. This partly reflects the inability of old people to avoid such services and partly the agency's inability to reach the elderly. The incomplete addresses in the records of emergency services of hospitals seems to thwart the efforts of the suicide prevention agency for an outreach program or to seek high-risk suicidal elderly.

Limitations of the Study:

The large number of missing observations (40-80%) from

almost 50% of the variables used in the analysis has affected the reliability of our results. Some information recorded under 'yes, but not otherwise specified' or 'yes, but I don't know at whom' (as in the case of 'legal involvement' and 'attempt directed')* made its interpretation or classification difficult.

Also, there were no separate codes for 'don't know', and 'no answer' or 'not applicable'. In the absence of such codes, information on 'no answer' and 'not affected' has probably mingled. More precise information could have affected changes in the distribution of frequencies and consequently in the conclusion of results.

Another limitation of the study is its retrospective nature. The reliability of conclusions in such cases is often questioned. Despite this limitation, however, the findings of our study were consistent with results of previous research.

Further, a research attempt to manipulate a large data base may obscure the qualitative aspect of the problem, in as much as the researcher relies heavily on the quantitative analysis. Generalizations are based on inferences drawn from statistical findings. It is said that in suicidal behavior, no two people's constellation is identical. Each case diagnosed on the basis of its background factors can provide real insight into the causes of the act. This study must omit such considerations.

* Code Book, S.A.F.E.R. Database.

Assuming that suicidogenic behavior is the result of a complex interaction of variables, it has to be viewed from a multi-dimensional perspective. One cannot, therefore, be content to conclude results through the process of bi-variate analysis alone. A reference of the study by Sawyer and Jameton (1979) may elucidate this point. In the study, repeated contacts with a suicide prevention centre gave the 'prototype' of a chronic caller which was not simply age related, but sex, marital status, alcohol involvement, drug dependency and mental illness, all combined completed the picture of the 'prototype'. In other words, simultaneous testing of many variables is more likely to provide clues, on the basis of which conclusions can more reliably be stated. Therefore, our answer to question No. 1 raised in Chapter III (if age differences were associated with number of contacts) could only partially be answered. Due to limited time and resources of the researcher, and above all, commitment to the objectives set up at the beginning of the study, it was not feasible to expand our perspective to attempt multi-dimensional analyses. Multivariate analysis requires that the time order of events be clearly established, a condition which we found very difficult to satisfy with the data at hand. Also, useful multivariate analysis depends on at least a subset of strong bivariate relationships. We were unable to find any such relationships.

Lastly, the possibility was considered of combining columns and rows to meet the expected frequency requirements

for use of the chi-square. Since this would have destroyed the age-categories being tested in the study, it was not pursued. In some purely "data-dredging" approach to the database, it could be tried, but was not appropriate for this study.

Recommendations:

1. Self-poisoning as a method of suicide attempt has been found to predominate in our study. Drug-poisoning as a method of self-destruction has also been reported to be on the increase in the United States and Canada (Boldt, 77). S.A.F.E.R. could recommend to the medical profession to decrease the amount of dosage in drug prescriptions. It may also recommend to the pharmacists to restrict the placing of non-prescriptive lethal drugs on open counter, e.g., salicylates. It is apparent that limiting the availability of the means will bring about a decrease in the incidence of suicide attempts. The recommendations of the Alberta Task Force (1976: 78) in this regard are especially noteworthy.

In consonance with other related agencies, S.A.F.E.R. can also recommend to the Government to formulate a more restrictive policy on the sale and monitoring of such drugs to the public.

2. Suicide prevention centres and agencies have learnt from years of experience that the referral approach as well as the crisis intervention model have been found wanting. It

is believed that services to emergency room attempters reach only a small proportion of those at risk and that a reduction in suicide and suicide attempts can more effectively occur by concentrating on high-risk groups. The search for high-risk individuals, however, requires an aggressive and extensive out-reach effort with liaison with many agencies and community and citizen's groups. The problem can be tackled through the support of and coordination with welfare agencies, community, neighbourhood and citizen's groups and through the use of volunteers.

S.A.F.E.R. claims to have adopted a rehabilitation model instead of relying exclusively on a crisis intervention model. It is understood that the S.A.F.E.R. workers do not wait for referrals to come to them, they actively seek their clients out from local hospitals. Further, the S.A.F.E.R. staff deal particularly with cases of chronic attempters where there often is no crisis and counselling focusses on long term life style and social relationships. To provide effective service, S.A.F.E.R. has to maintain good liaison with other social service agencies in the Vancouver area. The future projections may call for heavier load with more and more cases of suicide attempts surfacing as the taboo on suicide information slowly wears off.

3. The volunteer services can be used for: (1) active out-reaching, long-term follow-up and for rehabilitative care, (2) mobilizing resources of the family, friends and the com-

munity to reduce the suicidal person's sense of isolation and rejection. S.A.F.E.R. seems to be dealing with some of the functions mentioned above, but with its limited resources of workers, the need for the use of volunteers in the near future may become more real and urgent. It is our suggestion that a pilot project may be undertaken on the use of volunteers in one area of the city first where high-risk groups are more likely to be found. The project may be extended in stages to other areas.

4. The selection and training of workers has received a great deal of emphasis for bringing effectiveness to the suicide prevention programs. The report of the Alberta Task Force on Suicide (op, cit., 102-107) incoporates many good suggestions on the designation, selection and training of volunteers. Training programs for volunteers, would, however, need to be reviewed from time to time to improve its quality and functionality in reducing the incidence of suicide.

5. Over-the-phone referral services have been critically reviewed elsewhere (Alberta Task Force on Suicide, 76: 48). But the Vancouver Crisis Centre as a local service seems to consider such a service useful in initiating dialogue with people in crisis. It is their opinion that some referrals and resources may not have followed if the crisis centres would not have been in existence. Moreover, the installation of a 'Senior-Line' for the senile, the isolated, the distressed,

alcoholics and the hide-away persons may bring more cases of the older suicides to surface. The Emergency Visiting Teams consisting of male and female workers (flying squads) reach the persons in crisis. Thus telephone response supplemented by visits from flying squads indicate initial efforts to save acutely suicidal persons from the crisis situation. The danger lies when the entire approach might be misguided. S.A.F.E.R.'s Education programs for volunteers from the Crisis Intervention and Suicide Prevention Centres in the Greater Vancouver area may be designed to help in the effective use of such a facility. It is important to dispel doubts about the utility of such service by improving the skills of volunteers in handling cases in crisis through phoning in services or through actual contacts with such persons. Such a focus on 'Education for Crisis Intervention' may also help the volunteers and workers of crisis centres to learn to distinguish between an acutely suicidal person from the chronically suicidal person. It would also be helpful for them in making appropriate referrals.

As the cases of the chronically suicidal persons have to be handled differently from those who are acutely suicidal, it might be worth considering separate phone-in lines for effective referral.

6. S.A.F.E.R. may also work toward the standardization and certification of training programs for professionals. In order to train professionals or support services personnel to recognize suicide symptoms and to identify danger signals,

the training has to be supplemented with supervision to ensure competent functioning of such workers.

7. As our research data revealed, a substantial number of attempters comprised of those who were students in their teen years, S.A.F.E.R.'s extensive program of education in schools and colleges can be helpful. In order to make them on-going, S.A.F.E.R. may recommend the integration of the topics, on the subject of suicide, personal crisis and death in the program of formal education.

8. Considering the prevalence of the problem of unhappy relationships in the family and marriage, causing suicide attempts, a coordinated approach with the family, relatives and significant others may help prevent 'recidivism'. It is understood that S.A.F.E.R. Counsellors routinely engage family and significant others in the counselling process. To ensure that the family relationships continue as improved, long-term follow-up services may be required with the cooperation of family welfare agencies, mental health clinics and other relevant services. It may be noted that the first 2-3 years are crucial after an attempt is made. If the situation does not improve, the attempt is either repeated or suicide is completed.

9. Realizing that a suicide prevention agency has to face a plethora of problems in suicide attempts, e.g., alcohol and drug abuse, physical and mental illness, family tensions,

emotional and financial difficulties, problems of loneliness, bereavement and isolation, it may have to make referral to concerned agencies dealing with those special problems. A good referral gets the right place at once and saves the client from being tossed around from one agency to the other. Another suggestion that may be considered is a policy of centralization of services for prevention of suicide. It may save many clients from despair and inconvenience they might feel by knocking at the doors of different agencies.

10. Research being one of the basic aims of the S.A.F.E.R. Program requires particular attention. To serve its aims directly, there is need to organize research around programmatic responses to case identification and individual intervention. Better diagnosis and treatment programs, however, depend on a sound data base.

S.A.F.E.R. can advocate the case for good research by helping referral agencies in systematic record keeping of cases of attempted suicide so that complete and accurate information may be obtainable for required research purposes.

Boldt (1981: 95-96) points out that deficiencies in the data are the most important factor as to why research efforts remain relatively unproductive. Some of the deficiencies pointed out by him are: underreporting, absence of a cumulative "history" of the individual's experiences and circumstances to understand causes of motivation, need for record

linkages and lack of a multidisciplinary data-base. To overcome the problem, he recommends a Research-oriented Registry on suicidal behavior to avoid duplication and to follow individuals over time and through a variety of agencies. Boldt's 'Plan for Improved Research on Suicidal Behavior' contains many practical proposals for achieving comprehensive and complete reporting.

In our study 53% of the cases were discharged from the hospitals before they were seen by a S.A.F.E.R. worker. Information recorded after the incidence is over can be changed by the client or friends and relatives, thus, the factual aspects of the problem can be lost. The hospitals have, therefore, to be urged to keep a systematic referral and a record of attempters. This may make follow-up and continuity of care of attempters possible and may prevent 'recidivism'.

11. Services are few after 5 p.m. and on weekends. It is in the late evenings, at night and in the early hours of the morning that most suicide attempts are reported. S.A.F.E.R. may recommend a 24 hour, 7 days a week service to take care of those in crisis and in need of emergency services. It is found that the effect of some poisoning substances has led to other complications due to delay in attending to victims of suicide. Cases of self-injury will also be in need of prompt care.

12. Focus on the elderly is needed for several reasons.

First, because they are among the known high-risk groups for suicide along with those who are isolated, retired, mentally or physically handicapped or socially and financially underprivileged. Second, the elderly do not usually cry for help to be saved when they commit the act. They can only be discovered through active outreach programs. Third, most of them being lonely have no way of being helped in time. Fourth, the attitude of professionals and the unconcern of the relatives makes the suicidal elderly vulnerable to completed suicides. It is evident from our data that 45% of those who attempted did not avail themselves of S.A.F.E.R. services. A person afflicted with disease, depression and lack of strength can hardly care to reach a prevention service. It is an active out-reach program that can save him from an ultimate self-destruction. A befriending relationship is recognized to bring a change in outlook. In the words of Rev. Chad Varah (1967: 91), "a Samaritan friend unqualified and unassuming may be the one whose involvement at the crucial time swings the issue from death to life, from despair to hope". Hence the use of lay-volunteers is again stressed, particularly in the case of those who cannot reach an agency easily.

Social isolation is considered as one of the precipitating causes in elderly suicide. Most elderly have their own homes (64.3%: Census, 1976). It is believed that 85% of elderly are managing without any additional assistance, nevertheless, economic self-sufficiency or physical functioning cannot

compensate for their 'social isolation'. There are a good many old men occupying rooming houses in downtown hotels, in skid-row areas and in residential care facilities (senior citizen's residences). Senior citizens' groups can help reach the elderly in rooming houses and in isolated living situations. Therefore, S.A.F.E.R.'s contact with such groups and other community workers can help in the out-reach of the high-risk suicidal elderly suffering from loneliness and isolation.

The Long-Term Care Program established in 1978 has brought the services in the elderly's own homes which include health and home-making services. This has partly broken the isolation of some of the elderly who may have no relatives to take care of them. The visits from home-nurses and home-makers can help identify potential cases of suicide.

Many studies have been conducted on the 'attitudes of practicing professionals toward the elderly clients. Their findings indicate negative images and negative stereotypes held of the elderly by health care and social service providers (Blank, 1971; Campbell, 1971; Kahana and Coe, 1969; and Kosberg, 1978). The negative attitude of professionals may have been a discouraging factor for the old people from seeking help and counselling. Although the problem needs further research, nevertheless, to combat the situation, training and education programs for volunteers and professionals are recommended to promote realistic and supportive attitudes toward the elderly. A study conducted by Kwan (1982) covers a compre-

hensive review on attitudes toward elderly and contains many proposals for changing attitudes through education and training of social workers. The researcher endorses his proposals.

Implications for Social Work:

The role of social work as a helping profession in suicide prevention, intervention and postvention is of key importance. Like the physician, the nurse, psychiatrist, the police and clergy, social workers are regarded as the gatekeepers of the community. Among the social welfare workers, those identified more directly with suicide prevention programs would be mental health workers, senior citizen's and child welfare workers, family counsellors, alcohol and drug abuse counsellors and volunteer workers. Social workers can specifically strengthen some of the tasks of the following nature:

1. "Reaching out" and providing a face to face contact with the person or his relatives by arranging home visits.

2. Involving relatives in family and group therapy in order to provide an emotionally supportive environment for the suicidal victim.

3. Mobilizing other agencies in the community in the prevention and postvention process with the individual and his family.

4. Significantly widening the social contacts of the person with individuals and groups with effective use of the

community's communication networks of self help and mutual support.

5. Organizing and stimulating the community to undertake recreational and educational activities is significant in as much as it can make life more meaningful and purposeful for those who are seized by hopelessness and helplessness among the more vulnerable men, women, young and old.

6. Playing a key role as advocates for improving suicide prevention, intervention and postvention services locally and regionally, also for upgrading and standardizing the quality of service, record-keeping of all suicide and self-injury cases throughout the province.

7. The close liaison of social workers with the mental health services on a regional as well as local level involves them in organizing services of a preventive type for high-risk groups in disrupted families, among youth and elderly, the unemployed, the handicapped and among the ex-inmates.

8. Creating awareness of the problem and of its prevention by helping in the organization of public education programs, in schools and various groups and organizations in the community.

Suggestions for Further Research:

Efforts in the direction of predicting and identifying suicidal behavior have been of long standing. But in view of

the growing need for expansion of suicide intervention and prevention programs, it is necessary to focus the research efforts toward evaluation of existing programs in suicide prevention.

At present, there is little or no data to document the effectiveness of such programs in Canada. Therefore, a major programmatic effort has to be put on evaluating the effectiveness of:

(1) the out-reach and follow-up programs

(2) referral sources and case-finding methods for high-risk-groups

(3) crisis intervention and prevention centres in helping suicide cases through phone-in-service

(4) the role of helping professions in suicide prevention and how their services contribute in the coordination process

(5) government programs for social security for the elderly and the extent of its effect in reducing incidence of suicide and suicide attempts among them.

REFERENCES AND BIBLIOGRAPHY

Alberta, Ministry of Social Services & Community Health
1976 Task Force on Suicides Report. Edmonton.

Alvarez, A.
1971 The Savage God, A Study of Suicide. London: Weidensfelf and Nicholson.

Asuni, T.
1962 "Suicide in Western Nigeria." British Medical Journal 2: 1091-1097.

Balier, C.
1968 "Les états nervotiques chez les personne agees." Gazette Medicale de France 75: 3415-3420.

Batchelor, I.R.C., and M.B. Napier
1953 "Broken homes among attempted suicides." British Journal of Delinquency 4: 99.

Bender, L., and P. Schidler
1937 "Suicidal preoccupation and attempts in children." American Journal of Orthopsychiatry 7: 225-234.

Berardo, Felix M.
1968 "Widowhood status in the United States: perspective on a neglected aspect of the family-life cycle." The Family Co-ordinator 17: 191-203.

Bergler, E.
1946 "Problems of suicide." Psychiatric Quarterly 20: 261-275.

Bertrand, Louis
1857 Traité du suicide considéré dans ses rapports avec la philosophie. La Theologie la Medicine et la Jurisprudence. Paris: J.B. Baillière.

Birren, James E., and R. Bruce (eds.)
1980 Handbook of Mental Health and Aging. Englewood Cliffs, N.J.: Prentice-Hall.

Blank, M.L.
1971 "Recent research findings on practice with the aged." Social Casework 52: 382-389.

Bock, E. Wilbur
1972 "Aging and suicide: the significance of marital kinship and alternative relations." The Family Coordinator 21: 71-79.

Bohannan, P. (ed.)
1960 African Homicide and Suicide. Princeton, N.J.: Princeton University Press.

Boismont, Bierre de A.J.F.
1865 Du Suicide et de la Folie Suicide. Paris: Librairie Germer Bailliere.

Boldt, Menno
1981a "A plan for improved research on suicidal behavior." International Journal on Suicide and Crisis-Studies 2(2): 95-105.

Boldt, M.
1981b "Suicide in later years." Essence: The Journal of Aging 4(3): 145-158.

Boldt, Menno
1982 "A model for suicide prevention, intervention and postvention: The Alberta Task Force Proposals." Canada's Mental Health (March).

Bowlby, J.
1960 "Separation anxiety." International Library of Psychoanalysis 41: 89-113.

Bowlby, J.
1968 "Process of mourning." In W. Gaylin (ed.), The Meanings of Despair. New York: Science House.

Braucht, Nicholas G.
1970 "International Analysis of suicidal behaviour." Journal of Consulting and Clinical Psychology 47(4): 653.

Breed, W.
1966 "Migration and race." Journal of Social Issues 22: 30-43.

Breed, Warren
1967 "Suicide and loss in social interaction." Shneidman, E.S. (ed.), Essays in Self-Destruction. New York: Science House, Inc.

Breed W.
1972 "Five components of a basic suicide syndrome." Life Threatening Behavior 2: 3-18.

Brody, E.M.
1977 "Aging." In Encyclopedia of Social Work, 17th Edition, Volume 1. Washington, D.C.: National Association of Social Workers.

Bromley, D.B.
1966 The Psychology of Human Aging. Baltimore: Penguin.

Busse, Ewald, and Eric Pfeiffer
1969 Behaviour and Adaptation in Late Life. Boston: Little, Brown and Co., 212-213 & 221-224.

Butler, R., and Myrna Lewis
1973 Aging and Mental Health. St. Louis: Mosby.

Canada, Statistics Canada
1953 Vital Statistics, 1951 (December).
1963 Vital Statistics, 1961 (August).
1971 Vital Statistics, Volume III, Catalogue No. 84-206 Annual.
1973 Vital Statistics, Volume III, Catalogue No. 84-206 Annual.
1977 Vital Statistics, Volume III, Catalogue No. 84-206. Annual.

Canada, Statistics Canada
1972 Canadian Suicide Ratio by Local Areas and By Urban Centres, 1970-72, Catalogue No. 84-530, Occasional.

Canada, Statistics Canada
1977 Estimates of Population by Sex and Age for Canada and the Provinces, Cataloque No. 91-202, Annual, November 1978.

Canada, Statistics Canada
1979 Canada's Elderly, Catalogue No. 98-800E. Ottawa: Minister of Supply and Services.

Capstick, A.
1960 "Recognition of emotional disturbance and the prevention of suicide." British Medical Journal 9: 1179-1182.

Cavan, Ruth S.
1928 Suicide. Chicago: University of Chicago Press.

Choron, J.
1972 Suicide. New York: Charles Scribner's Sons.

Clark, P.
1922 "A study of the unconscious motivation in suicides." New York: Medical Journal 116: 254-263.

Claussen, J., and M. Kohn
1954 "The ecological approach in social psychiatry." American Journal of Sociology 60: 140.

Chrichton-Miller, H.
1931 "The psychology of suicide." British Medical Journal 2: 239-241.

Cutter, Fred, and A.D. Pokorney
1966 "A follow-up study of 618 suicide patients." American Journal of Psychiatry 122: 1109-1116.

Daly, M., and M. Wilson
1978 Sex, Evolution and Behaviour. North Scituate, Mass.: Duxbury Press.

Davidson, G.M.
1934 "The problem of suicide." Medical Record 139: 24-28.

Davis, Frederick, B.
1967 "The relationship between suicide and attempted suicide: a review of the literature." Psychiatric Quarterly 41(4): 760-761.

de Catanzaro, Denys
1981 Suicide and Self-Damaging Behaviour. New York: Academic Press.

Dept. of Health & Social Development
1977 Suicide and Suicide Attempts. Statistics Section, Division of Resources, Dept. of Health & Social Development, Winnipeg, Manitoba.

Devereux, G.
1961 Mohave ethno-psychiatry and suicide; the psychiatric knowledge and the psychic disturbances (Bulletin No. 175). Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office.

Doig, Linda
1981 Adolescent Suicide: The Tragic Solution. Research paper submitted in partial requirement for the Degree of Master of Social Work, Faculty of Graduate Studies, School of Social Work, The University of British Columbia.

Dorpat, T., and J. Boswell
1963 "An evaluation of suicidal intent in suicide attempts." Comprehensive Psychiatry 4: 117-125.

Dorpat, T.L. et al.,
1965 "Broken homes and attempted suicide." Archives of General Psychiatry 12: 213-216.

Dorpat, T.L., W.F. Anderson and H.S. Ripley
1968 "The relationship of physical illness to suicide." In H.L.P. Resnik (ed.), Suicidal Behaviors. Boston: Little Brown & Co.

Dublin, Louis, I., and Bessie Bunzel
1933 To Be or Not To Be, A Study of Suicide. New York: Harrison Smith and Robert Haas.

Dublin, L.I.
1963 Suicide: A Sociological and Statistical Study. New York: Ronald Press.

Durkheim, E.
1897 Le Suicide - Etude de sociologie, Paris: Felix Alcan.
1951 (Trans.) Spaulding, J.A. and G. Simpson. Glenco, Ill.: Free Press.

Durkheim, Emile
1960 The Division of Labor in Society. New York: The Free Press.

Elwin, V. Maria
1943 Murder and Suicide. London: Oxford University Press.

Esquirol, Jean E.D.
1845 Mental Melodies: A Treatise on Insanity (Trans. by E.K. Hunt). Philadelphia: Lea & Blanchard.

Ettinger, R.W., and P. Flordh
1955 "Attempted suicide." Acta psychiat. Scandinavia, Supplement 103.

Faigel, H.C.
1966 "Suicide among young persons: a review for its incidence and causes, and methods of its prevention." Clinical Pediatrics 5: 187-190.

Farber, Maurice L.
1968 Theory of Suicide. New York: Funk and Wagnells.

Farberow, N.L., and S.Y. Moriwaki
1975 "Self-destructive behavior in the older person." The Gerontologist 15(4): 333-337.

Farberow, N.L., and E.S. Schneidman (eds.)
1961 The Cry For Help. New York: McGraw-Hill Book Co.

Ferguson, George A.
1981 Statistical Analysis in Psychology and Education (fifth edition). New York: McGraw-Hill Book Co.

Firth, R.
1961 "Suicide and risk-taking in Tikopia society." Psychiatry 24: 1-17.

Freud, S.
1917 "Mourning and melancholia." Collected Papers, Volume IV. London: Hogarth Press Ltd.

Futrell, M., and W. Jones
1977 "Attitudes of physicians, nurses and social workers toward the elderly and health maintenance services for the aged: implications for health manpower policy." Journal of Gerontological Nursing 3: 42-46.

Ganzler, S.
1967 "Some interpersonal and social dimensions of suicidal behavior." Dissertation Abstracts 28B: 1192-1193.

Gardner, E., A. Bahn, and M. Mack
1964 "Suicide and psychiatric care in the aging." Archives of General Psychiatry 10: 547-553.

Garma, A.
1944 "Sadism and masochism in human conduct: part II." Journal of Clinical Psychopathology and Psychotherapy 6: 355-390.

Gibbs, J.P., and W.T. Martin
1964 Status Integration and Suicide. Eugene, Ore.: The University of Oregon Press.

Giddens, Anthony
1971 The Sociology of Suicide - A Selection of Readings. London: Frank Cass and Co., Ltd.

Goethe, Johann Wolfgang, Von.
1870 Faust. (Trans. by Bayard Taylor.) Boston: Houghton Mifflin Co.

Goiteia, P.L.
1942 "Mind of Murder." Journal of Criminal Psycho-Pathology 3: 625-647.

Goldney, R.D.
1980 "Attempted suicide: an ethological perspective." Suicide and Life Threatening Behavior 10(3): 131-139.

Greater Vancouver Mental Health Service
1982 An Introduction to the S.A.F.E.R. Data Base. Evaluation and Research Department, G.V.M.H.S., Vancouver, B.C.

Halbwachs, Maurice
1930 Les Causes du Suicide. Paris: Librarie Felix Alcan. Goldblatt, Harold (Tr.), London: Routledge & Kegan Paul (1978).

Harris, R., M.W. Linn, and K.I. Hunter
1979 "Suicide attempts among drug abusers." Suicide and Life-Threatening Behavior 9(1): 25-32.

Heilig, S.M., and D.J. Klugman
1963 "The social worker in a suicide prevention center." Social Work Practice. New York: Columbia University Press, 102-112.

Hendin, H.
1969 Black Suicide. New York: Basic Books, Inc.

Henry, A.F. and J.F. Short
1954 Suicide and Homicide. New York: The Free Press.

Hume, David
1929 An Essay on Suicide. Yellowsprings, Ohio: Kahoe & Co.

Iga, M. and K. Tatai
"Characteristics of Suicides and Attitudes Toward Suicide in Japan." In Farbernow, N.L. (ed.), Suicide in Different Cultures. Baltimore: University Park Press.

Jackson, Don D.
1957 "Theories of Suicide." E.S. Shneidman and N.L. Barbernow (eds.), Clues to Suicide. New York: The Blackiston Division, McGraw-Hill Book Co., Inc.

Jacobs, J. and J.D. Teicher
1967 "Broken homes and social isolation in attempted suicides of adolescents." International Journal of Social Psychiatry, Volume 13.

Jacobziner, H.
1960a "Attempted suicide in adolescence." Journal of American Medical Association 191: 7.

Jacobzinar, H.
1960b "Attempted suicide in children." Journal of Pediatrics 56: 519.

Jamieson, G.R.
1936 "Suicide and mental disease." Archives of Neurology and Psychiatry 36: 1-12.

Jan-Tausch, J.
1963 Suicide of Children 1960-63. Trenton, N.J.: New Jersey Department of Education.

Johnson, F.G., et al.
1974 Self Injury in London, Canada, 1969-1971.

Kahne, Merton et al.
1973 "Discussion. Suicide in the Aging." Journal of Geriatric Psychiatry 6: 52.

Kant, Immanuel
1871 The Metaphysics of Ethics. Edinburgh: T & T Clarke.

Kastenbaum, R.
1963 "The reluctant therapist." Geriatrics 18: 296-301.

Kastenbaum, R., and R. Aisenberg
1972 "Suicide and age." In the Psychology of Death. New York: Springer, 252-254.

Kay, D.W.K., P. Beamish, and M. Roth
1964 "Old age and mental disorders in Newcastle upon Tyne." British Journal of Psychiatry 110: 146.

Kessel, N., and G. Grossman
1961 "Suicide in alcoholics." British Medical Journal 2: 1671.

Kessel, N., and E. McC. Lee
1962 "Attempted suicide in Edinburgh." Scottish Medical Journal 7: 130.

Kessel, N.
1966 "The respectability of self-poisoning and the fashion of survival." Psychosomatic Research 10: 29.

Klein, M
1948 "A contribution to the psychogenesis of manic-depressive states." In M. Klein (ed.), Contributions to Psychoanalysis, 1921-45. London: Hogarth Press, 282-310.

Klugman, D.J., R.E. Litman, and C.I. Wold
1965 "Suicide: answering the cry for help." Social Work, 10(4): 43-50.

Kosberg, J.I., and A.P. Harris
1976 Attitudes Toward Elderly Clients. Unpublished paper presented at the Annual Scientific Meeting of the Gerontological Society, New York.

Kosberg, J.I., and M.J. Austin
1978 "Attitudes toward elderly clients." Health and Social Work 3: 67-90.

Kozak, C.M., and J.O. Gibbs
1979 "Dependent children and suicide of married parents." Suicide and Life-Threatening Behaviour 9: 67-75.

Kreitman, N.
1976 "Age and parasuicide." Psychological Medical Journal 6: 113.

Kreitman, N. (ed.)
1977 Parasuicide. New York: John Wiley and Sons.

Kwan, Alex
1982 Attitude of Social Work Students Toward Older Persons. M.A. Thesis, School of Social Work, University of British Columbia, Vancouver.

Labovitz, S.
1968 "Variations in suicide rates." In J.P. Gibbs. (ed.), Suicide. New York: Harper and Row.

Legoyt, A.
1881 Le suicide Ancien et Modern; Etude Historique, Philosophique, morale et statistique. Paris: A. Drouin.

Leigton, A.H., and C.C. Hughes
1955 "Notes on Eskimo patterns of suicide." Southwestern Journal of Anthropology II.

Lepine, Lorraine
1982 Suicide Among the Aged in Canada. Ottawa: Policy Planning and Information Branch, Policy Resources Directorate, Department of National Health and Welfare.

Lewis, N.D.C.
1933 "Studies on suicide I: preliminary survey of some significant aspects of suicide." Psychoanalytic Review 20: 241-273.

Lewis, N.D.C.
1934 "Studies on suicide II: some comments on the biological aspects of suicide." Psychoanalytic Review 21: 146-153.

Linden, L.L., and W. Breed
1976 "The demographic epidimeology of suicide." In E.S. Shneidman (ed.), Suicidology, Contemporary Developments. New York: Grune and Stratton.

Lisle, Pierre-Egiste
1856 Du suicide, Statistique, Medecine, Histoire et Legislation. Paris: J.B. Bailliere.

Maddox, G.L. et al.
1982 The Duke Multidisciplinary Longitudinal Studies of Normal Aging, Center Reports on Advances in Research. Durham, N.C.: The Center for the Study of Aging and Human Development, Duke University Medical Center.

Malinowski, Bronislaw
1926 Crime and Custom in Savage Society. New York: Harcourt, Brace and Co.

Manitoba, Ministry of Health and Social Development
1977 Suicide and Suicide Attempts. Statistics Section, Division of Resources, Department of Health and Social Development, Winnipeg.

Marcus, Lotte
1978 The Situation of the Elderly and Their Families: Myths and Reality. National Symposium on Aging, Ottawa.

Maris, R.W.
1969a Social Forces in Urban Suicide. Homewood, Ill.: The Dorsey Press.

Maris, R.W.
1969b "The sociology of suicide prevention. Policy implications of differences between suicidal patients and completed suicides." Social Problems, 132-149.

Maris, R.W.
1981 Pathways to Suicide. Baltimore: The Johns Hopkins University Press.

McCulloch, J.W., and A.E. Philip
1972 Suicidal Behaviour. Essex. England: The Anchor Press.

McIntosh, J.L., R.W. Hubbard, and J.F. Santos
1981 "Suicide among the elderly: a review of issues with case studies." Journal of Gerontological Social Work 4(1): 63-74.

Meer, F.
1976 Race and Suicide in South Africa. London: Routledge and Kegan Paul.

Menninger, K.A.
1938 Man Against Himself. New York: Harcourt Brace and Company.

Miller, M.
1978a "Toward a profile of the older white male suicide." The Gerontologist 18: 80-82.

Miller, Marv
1978b "Geriatric Suicide." The Arizona Study. The Gerontologist 18: 488-495.

Mills, C.A.
1934 "Suicide and homicides in their relation to weather changes." American Journal of Psychiatry 91: 669-677.

Montesquieu, Charles Louis de Secondat
Persian Letters. (trans) John Davidson, London: George Routledge & Sons Ltd.

Morselli, Enrico A.
1882 Suicide: An Essay on Comparative Moral Statistics. New York: D. Appleton Co.

Motto, J.A.
1980 "Suicide risk factors in alcohol abuse." Suicide Life-Threatening Behavior 10(4): 230-243.

National Conference of Telephone Crisis-Intervention/Suicide
1973 Prevention Centres in Canada. Ist. Ottawa.

O'Connor, W.A.
1948 "Some notes on suicide." British Journal of Medical Psychology 21: 222-228.

O'Dea, James J.

1882 Suicide: Studies on its Philosophy, Causes and Prevention. New York: G.P. Putnam's Sons.

Ogburn, William F., and Dorothy S. Thomas
1922 "The influence of the business cycle on certain social conditions." Journal fo the American Statistical Association XVIII: 324, 340.

O'Neal, P., E. Robins., and E.H. Schmidt
1956 "A psychiatric study of attempted suicide in persons over sixty years of age." Archives of General Psychiatry 75: 275.

Palmer, D.M.
1941 "Factors in suicidal attempts." Journal of Nervous and Mental Disease 93: 421-442.

Parkin, D., and E. Stengel
1965 "Incidence of suicidal attempts in an urban community." British Medical Journal 2: 133.

Peck, M., and A. Schrut
1967 Suicide Among College Students. Proceedings of the Fourth International Conference on Suicide Prevention. Los Angeles, California: Dalmar Publishing Co.

Pessin, J.
1941 "Self-destruction tendencies in adolescence." Bulletin of the Menainger Clinic 5: 13-19.

Peters, R., and M. Rand
1977 Suicide and Attempted Suicide in the Vancouver Area. Mimeographed report, report to S.A.F.E.R., Vancouver.

Peterson, W.F.
1934 The Patient and the Weather, Vol. III. Ann Arbor: Mich.: Edward Bros.

Pokorny, A.D., F. Davis., and Wayne Harberson
1963 "Suicide and suicide attempts and weather." American Journal of Psychiatry 20: 377-381.

Pokorny, A.D.
1968 "Characteristics of 44 patients who subsequently committed suicide." American Archives of General Psychiatry 2.

Powell, E.H.
1958 "Occupation, status and suicide: toward a redefinition of anomie." American Sociological Review 23(2).

Rachlis, David

1970 "Suicide and loss adjustment in the aging." Bulletin of Suicidology 0: 23.

Ramussen, K.
1931 The Netsilik Eskimos. Copenhagen: Report of the Fifth Thule Expedition, Volume 8.

Reese, F.D.
1972 "School age suicide and the educational environment." In B.Q. Hafen and E.J. Faux (eds.), Self Destructive Behavior: A National Crisis. Minneapolis: Burgess Publishing Company.

Reimer, Fritz
1968 "Classification of attempted suicide." In N.L. Farberow (ed.), Proceedings of the Fourth International Conference for Suicide Prevention. Los Angeles, California: Dalmar Publishing Co.

Resnick, H.L.P., and J.M. Cantor
1970 "Suicide and aging." Journal of American Geriatrics Society 18: 152-158.

Richman, Joseph
1968 "Family determinants of attempted suicide." In N.L. Farberow (ed.), Proceedings of the Fourth International Conference for Suicide Prevention. Los Angeles, California: Dalmar Publishing Co.

Roberts, Albert R.
1975 Self-Destructive Behavior. Springfield, Ill.: Charles and Thomas Publishers.

Roth, and Martin
1963 "Suicide in old age." Canada's Mental Health 11: 27.

Rousseau, Jean J.
1852 La Nouvelle Hélorse. Paris: Furnie et cie.

Rushing, W.A.
1968 "Individual behaviour and suicide." In J.P. Gibbs (ed.). New York: Harper and Row.

Sainsbury, P.
1955 Suicide in London: An Ecological Study. London: Chapman and Hall, Maudsley Monographs No. 1.

Sainsbury, P.
1961 "Suicide in old age." Proceedings of the Royal Society of Medicine 54: 266.

Sainsbury, P.
1963 "Social and epidemiological aspects of suicide." In R.H. Williams (ed.), Processes of Aging II. New York: Atherton Press.

Sawyer, J.B., and E.M. Jameton
1979 "Chronic callers to a suicide prevention center." Suicide and Life-Threatening Behavior 9: 97-104.

Schmid, Calvin F.
1928 Suicides in Seattle. Seattle: University of Washington Press.

Schober, R., M. Afford, and M. Marshall
1980 Suicide Data (Ontario). Toronto: Distress Centre, Inc.

Seiden, R.H.
1966 "Campus tragedy. A story of student suicide." Journal of Abnormal and Social Psychology 71: 389-399.

Shaupenhauer, Arthur
1907 The World as Will and Idea. London: Kegan Paul, Trench, Tribune and Co., Ltd.

Shneidman, E.S.
1957 Clues to Suicide. New York: The Blackiston Division, McGraw-Hill Book Co., Inc.

Shneidman, E.S.
1961 "Statistical comparisons between attempted and committed suicides." In N.L. Farberow and E.S. Shneidman (eds.), The Cry for Help. New York: McGraw-Hill Book Co., Inc., 19-46.

Sendbuehler, J.M., and S. Goldstein
1977 "Attempted suicide among the aged." Journal of American Geriatrics Society 25: 245.

Shulman, Kenneth
1978 "Suicide and parasuicide in old age: a review." Age and Aging 7: 201-209.

Smart, R.G., and M.S. Goodstadt
1977 "Alcohol and drug use among Ontario adults." Report of a Household Survey. Addiction Research Foundation.

Sorokin, Pitrim A.
1962 Society, Culture and Personality. New York: Cooper Squares Publishes Inc.

Spitz, René A.
1946 "Anaclitic depression." In P. Greenacre (ed.), Psychoanalytic Study of the Child. New York: International University Press.

Steinmetz, S.R.
1894 "Suicide among primitive peoples." American Anthropologist VII: 53-60.

Stenback, Asser
1980 "Depression and suicidal behavior in old age." In James E. Birren and R. Bruce Sloane (eds.), Handbook of Mental Health and Aging. Englewood Cliffs, N.J.: Prentice-Hall.

Stengel, E., and N.G. Cook
1958 Attempted Suicide: Its Significance and Effects. New York: Oxford University Press.

Stengel, E.
1964 Suicide and Attempted Suicide. Harmondsworth: Penguin Books.

Stengel, E.
1965 "The causation and prevention of suicide in old age." In Psychiatric Disorders in the Aged. World Psychiatric Association Symposium. Manchester: Geogy.

Stone, Leroy O., and S. Fletcher
1981 Aspects of Population Aging in Canada, A Chart Book. Ottawa: Minister of Supply and Services, Chart III.

Strahan, Samuel A.K.
1893 Suicide and Insanity. London: S. Sonnenschein & Co.

Swanson, W.C., and W. Breed
1976 "Black suicide in New Orleans." In E.S. Shneidman (ed.), Suicidology: Contemporary Developments. New York: Grune and Stratton.

Symons, D.
1980 "Precis of the evolution of human sexuality." The Behavioral and Brain Sciences 3: 171-214.

Teischer, J.D.
1947 "A study in attempted suicide." Journal of Nervous and Mental Disease 105: 283-298.

Termansen, Paul E., and R.E. Harris
1972 "Suicide and attempted suicide in Vancouver," Part I & II. B.C. Medical Journal 14(5): 125-128.
1973 "Suicide and attempted suicide in Vancouver," Part III. B.C. Medical Journal 15(2): 27-30.

Termansen, Paul E., and Cathryn Bywater
1975 "S.A.F.E.R., a follow-up service for attempted suicide in Vancouver." Canadian Psychiatric Association Journal 20: 1-32.

Thomas, D.S.
1927 Social Aspects of the Business Cycle. New York: Alfred Knopf, Inc.

Trout, D.L.
1980 "The role of social isolation in suicide." Suicide and Life-Threatening Behavior 10(1): 10-20.

Tuckman, J., and W.F. Youngman
1964 "Attempted suicide and family disorganization." Journal of Genetic Psychology 105(2): 187-193.

United Nations
1979 Demographic Year Book (1978). New York: United Nations.

Weiss, J.M.A.
1968 "Suicide in the aged," In H.L.P. Resnik (ed.), Suicidal Behaviours. Boston: Little, Brown and Co.

Weissman, Myrna M.
1974 "The epidemiology of suicide attempts 1960-71." Archives of General Psychiatry 30: 737-747.

Westermarck, E.
1908 "Suicide: a chapter in comparative ethics." Sociological Review 1: 12-33.

Wilensky, H.L., and H. Edwards
1959 "The skidder: ideological adjustments of downwardly mobile workers." American Sociological Review 24: 215-231.

Williams, E.Y.
1936 "Some observations on the psychiatric aspects of suicide." Journal of Abnormal and Social Psychology 31: 260-265.

Winslow, Forbes
1840 The Anatomy of Suicide. London: Henry Renshaw.

Worden, J.W.
1976 "Lethality factors and the suicide attempt." In E.S. Shneidman (ed.), Suicidology: Contemporary Developments. New York: Grune and Stratton.

World Health Organization
1968 Prevention of Suicide. Public Health Papers, Paper No. 35, Geneva, WHO.

World Health Organization
1974 Prevention of Suicide. Public Health Papers, Paper No. 58, Geneva, WHO.

Zilboorg, G.
1936 "Differential diagnostic types of suicide." Archives of Neurology and Psychiatry 35: 270-291.

Zusman, J., and D.L. Davidson
1971 Organizing the Community to Prevent Suicide. Springfield, Ill.: Charles C. Thomas.

A P P E N D I X A

S.A.F.E.R. Information Summary Sheet

1. Client Number ____ (01-04)
2. Number of Attempt ____ (05)
3. Worker ____ (06,07)
4. Month ____ (08,09)
5. Year ____ (10)
6. Day of Week ____ (11)
   (M=1 T=2 W=3 Th=4 F=5 S=6 Su=7)
7. Method of Referral (Code) ____ (12,13)

   Date of Admission _____

   Date of Discharge _____

8. Length of Stay (in hours) ____ (14,15)
9. D.B.S. (no=0 yes=1) ____ (16)
10. Time of Admission ____ (17-20)
11. Sex (female=0 male=1) ____ (21)
12. Occupation (Code) ____ (22,23)

    Birthdate _____

13. Age ____ (24,25)
14. Marital Status ____ (26)
    (S=2 M=3 Re-M=4 W=5 D=6 Sep=7 C-L=8)
15. Recent or impending move (no=0 yes=1) ____ (27)
16. Educational Status (Code) ____ (28,29)
17. Employment Status (Code) ____ (30,31)
18. Living Situation (Code) ____ (32)
19. Racial Origin (Code) ____ (33)
20. Financial Situation ____ (34)
    (Secure=2 Insecure=3 Not an issue=0)
21. Sexual Orientation ____ (35)
    (Het=2 Homo=3 Bi=4 Trans=5)
22. Legal Involvement (Code) ____ (36)
23. Primary Problem(Code) ____ (37,38)
24. Secondary Problem (Code) ____ (39,40)
25. Tertiary Problem(code) ____ (41)
26. Method of Attempt(code) ____ (43)
27. 2nd method of attempt(code) ____ (45)
28. 3rd method of attempt(code) ____ (47)
29. Was alcohol involved? (n=0 y=1) ____ (49)
30. Did client plan to die? (n=0 y=1) ____ (50)
31. Was attempt planned? (n=0 y=1) ____ (51)
32. Was attempt directed? (Code) ____ (52)
33. Was there prior communication? (n=0 y=1) ____ (53)
34. Does client have any children? (n=0 y=1) ____ (54)
    If yes, how many _____
    How many live with client _____
35. Does client have any drug dependency? (n=0 y=1) ____ (55)
    If yes, what? _____
36. Does client have an important illness?(n=0 y=1) ____ (56)
    If yes, what? _____
37. Did client have an important accident?(n=0 y=1) ____ (57)
    If yes, what and when? _____
38. Was there violence in client's family?(n=0 y=1) ____ (58)
    If yes, client's role? _____
39. Were there any significant deaths in client's background? (n=0 y=1) ____ (59)
    If yes, who _____ _____ _____
    how long ago _____ _____ _____
    nature of death _____ _____ _____
40. Were there any previous suicide attempts?(n=0 y=1) ____ (60)
41. If yes, method _____ _____ _____
    How long ago _____ _____ _____
    Primary problem _____ _____ _____
    S.A.F.E.R. Contact _____ _____ _____ ____ (61)
    Worker _____ _____ _____
42. Contact Type (None=2 Brief=3 Complete=4) ____ (62)
43. Reason for no contact (Code) If 62 is '2'. ____ (63)
44. Length of case ____ (65)

APPENDIX A - 2

SIS - VARIABLES CODES*

Number of Contacts

0 First Contact
1 Second Contact
2 Third Contact
3 N-th Contact

Method of Referral

02 Self-referral
03 Doctor referral
04 Agency referral
05 Vancouver General
06 St. Paul's
07 Burnaby General
08 Royal Columbian
09 Lion's Gate
10 St. Vincent's
11 Other hospital

Sex

0 Female
1 Male

Occupation

02 Professional
03 Semi-professional
04 Artisan
05 White Collar Worker
06 Clerical
07 Skilled Manual
08 Semi-skilled
09 Unskilled
10 Student
11 Housewife
12 None

Marital Status

2 Single
3 Married
4 Re-married
5 Widowed
6 Divorced
7 Separated
8 Common Law

Impending Move (Change of Abode)

0 No
1 Yes

Educational Status

02 Some elementary
03 Elementary
04 Some secondary
05 Secondary
06 University
07 Completed University
08 Post Graduate
09 Technical
10 Apprenticeship

Employment Status

02 Unemployed
03 Employed
04 Welfare
05 Housewife
06 Student
07 Retired
10 Dependent
11 On strike
12 Self-employed

Living Situation

2 Alone
3 With parents
4 With other family (e.g. children
5 With lover/mate
6 Institutional residence
7 Communally
8 Share with friends
9 Extended family

Ethnicity

2 White
3 Black
4 Oriental
5 Native Indian
6 Indo-Pakestani
7 Polynesian
8 Inuit/Eskimo
9 Other

*Source: "CODE BOOK", An Introduction to S.A.F.E.R. Data Base, G.V.M.H.S., June 1982.

Financial Situation

2 Secure
3 Insecure
0 Not a clinical Issue

Sexual Orientation

2 Heterosexual
3 Homosexual
4 Bisexual
5 Transvestite

Legal Involvement

1 Yes, Not Otherwise Specified
2 Civil suit
3 Prostitution
4 Family Court
5 Other criminal
6 Drug related
7 Theft
8 Impaired driving
9 Rape

Primary Problem

02 Marital
03 Nuclear family
04 Extended family
05 Social isolation
06 Drug dependency
07 Sexual conflict
08 Financial problem
09 Separation or loss
10 Fear of separation
11 Physical Illness
12 Legal
13 Social relationship
14 Psychotic
15 Alcohol problem
16 Boyfriend/ Girlfriend
17 No job
18 School related

Method of Attempt

02 Slashing
03 Stabbing
04 Firearms
05 Jumping
06 Asphyxiation
07 Drowning
08 Hanging
09 Poisons (solid or liquid)
10 Unspecified non-prescription drugs
11 Analgesics
12 Antihistamines
13 Sleep-inducers
14 Cold remedies
15 Laxatives
16 Street drugs
17 Threatening suicide
18 In crisis
30 Traffic accidents
40 Burning (Immolation)
50 Industrial machinery
60 Unspecified prescription drugs
62 Antianxiety, antidepressant, antipsychotic
63 Analgesics
64 Anticonvulsants
65 Antiasthmatics
66 Barbiturate sedatives
67 Non-barbiturate sedatives
68 Antibiotics
69 Cardiovascular agents
70 Amphetamines

Was Alcohol Involved?

0 No
1 Yes

Did Client Plan to Die?

0 No
1 Yes

Was Attempt Planned?

0 No
1 Yes

Was Attempt Directed?

1 Yes, but I don't know who
2 Parent
3 Other family
4 Lover/mate
5 Friend
6 Stranger
7 Other

Was there Prior Communication?

0 No
1 Yes

Does Client have Children?

0 No
1 Yes

Is Client Drug Dependent?

0 No
1 Yes

Important Illness in Past Year?

0 No
1 Yes

Important Accident in Past Year?

0 No
1 Yes

History of Family Violence?

0 No
1 Yes

History of Deaths of Significant Others?

0 No
1 Yes

History of Prior Attempts?

0 No
1 Yes

Prior Contact Type

1 Assessment only
2 Offer of Service only
3 Brief Counselling Contact
4 Complete Counselling Contact

Contact Type

1 Assessment only
2 Offer of Service only
3 Brief Counselling Contact
4 Complete Counselling Contact

Reason for Assessment or Offer of Service only

02 Unable to contact
03 Client has no phone
04 Client refusal
05 Parent refusal
06 Other family refusal
07 Lover/mate refusal
08 Refused by friend
09 Doctor refusal
10 Other professional refusal
11 Refused by other than 4-10
12 Other agency involved
13 Community Care Team involved
14 Chimo involved
15 Group home involved
16 In-Patient Psychiatric Unit involved
17 Client committed
18 Client hospitalized
19 Client in jail
20 Client in rest home
21 Long psychiatric history
22 Non-English speaking
23 Left Vancouver
24 Client died
25 Denies suicide attempt
26 S.A.F.E.R. ongoing

A P P E N D I X B

APPENDIX B

RECODES FOR VARIABLES

1. Age in Years: (Low - 19= 0) (20 - 39= 1) (40 - 64= 2)
   (65 - High= 3)
2. Number of Contacts (Numcon): (0= 1) (1= 2) (2= 3)
   (N - th Contact= 4)
3. Method of Referral: (2= 1) (3,4= 2) (5= 3) (6= 4) (7= 5)
   (8= 6) (9,10,11= 7)
4. Sex: (0= 1) female (1= 2) male
5. Occupation: (2,3= 1) (4,7= 2) (5,6= 3) (8,9,10,11,12= 4)
6. Marital Status: (2= 1) (3,4,8= 2) (5= 3) (6,7= 4)
7. Impending Move (Change of Abode): (0= 1) (1= 2)
8. Education: (2,3= 1) (4,5= 2) (6,7,8= 3) (9,10= 4)
9. Employment Status: (3,12= 1) (2,4,5,6,7,10,11= 2)
10. Living Situation: (2= 1) (3,4,5,7,8,9= 2) (6= 3)
11. Ethnicity: (2= 1) (3,4,5,6,7,8,9= 2)
12. Financial Situation: (0= 1) (2= 2) (3= 3)
13. Sexual Orientation: (2= 1) (3,4,5= 2)
14. Legal Involvement: (1= 1) (2,4= 2) (3,5,7,8,9= 3) (6= 4)
15. Primary Problem: (2,3,4,13,16= 1) (5= 2) (6,15= 3) (9,10= 4)
    (11= 5) (14= 6) (7,8,12,17,18= 7)
16. Method of Attempt: (2,8,= 1) (9,16,60,62,70= 2) (17,18= 3)
17. Alcohol Involvement: (0= 1) (1= 2)
18. Plan to Die: (0= 1) (1= 2)
19. Attempt Planned: (0= 1) (1= 2)
20. Attempt Directed: (1,6,7= 1) (2,3= 2) (4,5= 3)

21. Prior Communication: (0= 1) (1= 2)
22. Children/no Children: (0= 1) (1= 2)
23. Drug Dependency: (0= 1) (1= 2)
24. Past Illness: (0= 1) (1= 2)
25. Past Accident: (0= 1) (1= 2)
26. Family Violence: (0= 1) (1= 2)
27. Death of Significant Other: (0= 1) (1= 2)
28. History of Prior Attempts: (0= 1) (1= 2)
29. Prior Contact Type (Priotype): (1,2= 1) (3,4= 2)
30. Contact Type (Contype): (1,2=1) (3,4= 2)
31. Reason for Assessment: (2,3,23,24= 1) (12,16,20,26= 2)
    (17,18,19,21,22,25= 3)

A P P E N D I X C

AGE <AGE>

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
<LO-19>	0.	1254	23.4	23.4	23.4
<20-39>	1.	3082	57.5	57.5	80.9
<40-64>	2.	914	17.1	17.1	98.0
<65-HI>	3.	108	2.0	2.0	100.0
	TOTAL	5358	100.0	100.0	

```
AGE        <AGE>


      CODE
           I
        0. ************** (   1254)
           I  <LO-19>
           I
           1. ********************************* (   3082)
           I  <20-39>
           I
           2. ********** (    914)
           I  <40-64>
           I
        3. ** (    108)
           I  <65-HI>
           I
           I.........I.........I.........I.........I.........I
           0       1000       2000       3000       4000       5000
           FREQUENCY
```

MEAN	0.977	STD ERR	0.010	MEDIAN	0.962
MODE	1.000	STD DEV	0.696	VARIANCE	0.485
KURTOSIS	0.141	SKEWNESS	0.390	RANGE	3.000
MINIMUM	0.0	MAXIMUM	3.000		
VALID CASES	5358	MISSING CASES	0		

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
AGE <AGE> BY NUMCON <NUMBER OF CONTACTS>
* PAGE 1 OF 1

AGE	NUMCON COUNT ROW PCT COL PCT TOT PCT	FIRST CONTACT 1	SECOND CONTACT 2	THIRD CONTACT 3	N-TH CONTACT 4	ROW TOTAL
	0	1165	74	13	2	1254
<LO-19>		92.9	5.9	1.0	0.2	23.4
		24.3	16.9	13.0	6.3	
		21.8	1.4	0.2	0.0	
	1	2698	287	68	26	3079
<20-39>		87.6	9.3	2.2	0.8	57.5
		56.4	65.5	68.0	81.3	
		50.4	5.4	1.3	0.5	
	2	821	71	18	4	914
<40-64>		89.8	7.8	2.0	0.4	17.1
		17.2	16.2	18.0	12.5	
		15.3	1.3	0.3	0.1	
	3	101	6	1	0	108
<65-HI>		93.5	5.6	0.9	0.0	2.0
		2.1	1.4	1.0	0.0	
		1.9	0.1	0.0	0.0	
	COLUMN TOTAL	4785	438	100	32	5355
		89.4	8.2	1.9	0.6	100.0

2 OUT OF 16 (12.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 0.645
RAW CHI SQUARE = 32.31229 WITH 9 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0002
CRAMER'S V = 0.04485
CONTINGENCY COEFFICIENT = 0.07745
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH NUMCON DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00323 WITH AGE DEPENDENT. = 0.00819 WITH NUMCON DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00464
KENDALL'S TAU B = 0.03216 SIGNIFICANCE (2-TAILED) = 0.0125
KENDALL'S TAU C = 0.01446 SIGNIFICANCE (2-TAILED) = 0.0125
GAMMA = 0.10047 SIGNIFICANCE (2-TAILED) = 0.0125
SOMERS'S D (ASYMMETRIC) = 0.05578 WITH AGE DEPENDENT. = 0.01854 WITH NUMCON DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.02783
ETA = 0.02870 WITH AGE DEPENDENT. = 0.07625 WITH NUMCON DEPENDENT.
PEARSON'S R = 0.02819 SIGNIFICANCE = 0.0196

NUMBER OF MISSING OBSERVATIONS = 3

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	METHOD SELF (1)	DOCTOR AGENCY (2)	VAN GEN (3)	ST PAULS (4)	BURNABY (5)	RICHMOND (6)	OTHER (7)	ROW TOTAL
	0	23	15	534	166	138	168	10	1054
<LO-19>		2.2	1.4	50.7	15.7	13.1	15.9	0.9	20.5
		22.8	20.8	19.9	15.1	26.7	25.4	45.5	
		0.4	0.3	10.4	3.2	2.7	3.3	0.2	
	1	60	41	1586	708	275	401	10	3081
<20-39>		1.9	1.3	51.5	23.0	8.9	13.0	0.3	59.8
		59.4	56.9	59.2	64.2	53.3	60.6	45.5	
		1.2	0.8	30.8	13.7	5.3	7.8	0.2	
	2	16	15	489	209	97	84	2	912
<40-64>		1.8	1.6	53.6	22.9	10.6	9.2	0.2	17.7
		15.8	20.8	18.3	19.0	18.8	12.7	9.1	
		0.3	0.3	9.5	4.1	1.9	1.6	0.0	
	3	2	1	70	19	6	9	0	107
<65-HI>		1.9	0.9	65.4	17.8	5.6	8.4	0.0	2.1
		2.0	1.4	2.6	1.7	1.2	1.4	0.0	
		0.0	0.0	1.4	0.4	0.1	0.2	0.0	
	COLUMN	101	72	2679	1102	516	662	22	5154
	TOTAL	2.0	1.4	52.0	21.4	10.0	12.8	0.4	100.0

5 OUT OF 28 (17.9%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 0.457
RAW CHI SQUARE = 70.65944 WITH 18 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.06760
CONTINGENCY COEFFICIENT = 0.11629
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH METHOD DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00678 WITH AGE DEPENDENT. = 0.00522 WITH METHOD DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00590
KENDALL'S TAU B = -0.04258 SIGNIFICANCE (2-TAILED) = 0.0005
KENDALL'S TAU C = -0.03471 SIGNIFICANCE (2-TAILED) = 0.0005
GAMMA = -0.06965 SIGNIFICANCE (2-TAILED) = 0.0005
SOMERS'S D (ASYMMETRIC) = -0.03963 WITH AGE DEPENDENT. = -0.04575 WITH METHOD DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.04247
ETA = 0.09047 WITH AGE DEPENDENT. = 0.06412 WITH METHOD DEPENDENT.
PEARSON'S R =-0.06326 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 204

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	SEX: FEMALE 0	MALE 1	ROW TOTAL
<LO-19>	0	940	313	1253
		75.0	25.0	23.4
		26.3	17.6	
		17.6	5.8	
<20-39>	1	1959	1120	3079
		63.6	36.4	57.5
		54.8	63.0	
		36.6	20.9	
<40-64>	2	603	310	913
		66.0	34.0	17.1
		16.9	17.4	
		11.3	5.8	
<65-HI>	3	72	36	108
		66.7	33.3	2.0
		2.0	2.0	
		1.3	0.7	
COLUMN TOTAL		3574	1779	5353
		66.8	33.2	100.0

RAW CHI SQUARE = 52.37930 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.09892
CONTINGENCY COEFFICIENT = 0.09844
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH SEX DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00487 WITH AGE DEPENDENT. = 0.00795 WITH SEX DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00604
KENDALL'S TAU B = 0.06505 SIGNIFICANCE (2-TAILED) = 0.0000
KENDALL'S TAU C = 0.06628 SIGNIFICANCE (2-TAILED) = 0.0000
GAMMA = 0.12901 SIGNIFICANCE (2-TAILED) = 0.0000
SOMERS'S D (ASYMMETRIC) = 0.07468 WITH AGE DEPENDENT. = 0.05666 WITH SEX DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.06443
ETA = 0.06280 WITH AGE DEPENDENT. = 0.09892 WITH SEX DEPENDENT.
PEARSON'S R = 0.06277 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 5

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

AGE <AGE> BY OCCUP <OCCUPATION>

* PAGE 1 OF 1

AGE		COUNT / ROW PCT / COL PCT / TOT PCT	OCCUP PROFNALL 1	ARTISAN 2	WCOLLAR 3	OTHER 4	ROW TOTAL
<LO-19>	0	COUNT	12	17	36	603	668
		ROW PCT	1.8	2.5	5.4	90.3	22.6
		COL PCT	5.4	6.9	9.3	28.7	
		TOT PCT	0.4	0.6	1.2	20.4	
<20-39>	1	COUNT	155	173	277	1120	1725
		ROW PCT	9.0	10.0	16.1	64.9	58.4
		COL PCT	70.1	70.0	71.8	53.3	
		TOT PCT	5.2	5.9	9.4	37.9	
<40-64>	2	COUNT	51	56	68	327	502
		ROW PCT	10.2	11.2	13.5	65.1	17.0
		COL PCT	23.1	22.7	17.6	15.6	
		TOT PCT	1.7	1.9	2.3	11.1	
<65-HI>	3	COUNT	3	1	5	51	60
		ROW PCT	5.0	1.7	8.3	85.0	2.0
		COL PCT	1.4	0.4	1.3	2.4	
		TOT PCT	0.1	0.0	0.2	1.7	
COLUMN TOTAL			221	247	386	2101	2955
			7.5	8.4	13.1	71.1	100.0

1 OUT OF 16 (6.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 4.487
RAW CHI SQUARE = 171.05701 WITH 9 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.13891
CONTINGENCY COEFFICIENT = 0.23392
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH OCCUP DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.03278 WITH AGE DEPENDENT. = 0.03714 WITH OCCUP DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.03483
KENDALL'S TAU B = -0.16047 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = -0.11098 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = -0.32277 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = -0.17907 WITH AGE DEPENDENT. = -0.14380 WITH OCCUP DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.15951
ETA = 0.15585 WITH AGE DEPENDENT. = 0.21887 WITH OCCUP DEPENDENT.
PEARSON'S R =-0.14908 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 2403

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* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                                   BY  MARITAL   <MARITAL STATUS>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                  MARITAL
            COUNT  I
          ROW PCT ISINGLE   MARRIED  WIDOWED  DIVSEP     ROW
          COL PCT I                                      TOTAL
          TOT PCT I      1  I     2  I     3  I     4  I
AGE       --------I--------I--------I--------I--------I
                0  I   787  I    94  I     5  I    18  I   904
  <LO-19>          I  87.1  I  10.4  I   0.6  I   2.0  I  22.5
                   I  39.9  I   7.6  I   4.5  I   2.6  I
                   I  19.6  I   2.3  I   0.1  I   0.4  I
                  -I--------I--------I--------I--------I
                1  I  1103  I   780  I    26  I   467  I  2376
  <20-39>          I  46.4  I  32.8  I   1.1  I  19.7  I  59.2
                   I  55.9  I  63.3  I  23.6  I  66.5  I
                   I  27.5  I  19.4  I   0.6  I  11.6  I
                  -I--------I--------I--------I--------I
                2  I    73  I   328  I    48  I   208  I   657
  <40-64>          I  11.1  I  49.9  I   7.3  I  31.7  I  16.4
                   I   3.7  I  26.6  I  43.6  I  29.6  I
                   I   1.8  I   8.2  I   1.2  I   5.2  I
                  -I--------I--------I--------I--------I
                3  I     9  I    30  I    31  I     9  I    79
  <65-HI>          I  11.4  I  38.0  I  39.2  I  11.4  I   2.0
                   I   0.5  I   2.4  I  28.2  I   1.3  I
                   I   0.2  I   0.7  I   0.8  I   0.2  I
                  -I--------I--------I--------I--------I
          COLUMN      1972     1232      110      702     4016
           TOTAL      49.1     30.7      2.7     17.5    100.0

   1 OUT OF    16 (  6.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   2.164
RAW CHI SQUARE =  1371.43872 WITH     9 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0
CRAMER'S V =  0.33739
CONTINGENCY COEFFICIENT =  0.50454
LAMBDA (ASYMMETRIC) =  0.01341 WITH AGE      DEPENDENT.          =  0.13552 WITH MARITAL  DEPENDENT.
LAMBDA (SYMMETRIC) =  0.08116
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.15080 WITH AGE      DEPENDENT.          =  0.13789 WITH MARITAL  DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.14406
KENDALL'S TAU B =    0.42572  SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C =    0.34173  SIGNIFICANCE (2-TAILED) = 0.0
GAMMA =    0.67223  SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) =  0.40459 WITH AGE      DEPENDENT.          =  0.44796 WITH MARITAL  DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.42517
ETA =  0.50368 WITH AGE      DEPENDENT.          =  0.41294 WITH MARITAL  DEPENDENT.
PEARSON'S R = 0.40071  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =  1342
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* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
AGE <AGE> BY MOVE <RECENT-PENDING MOVE>
* PAGE 1 OF 1

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	MOVE 0	NO MOVE 1	ROW TOTAL
<LO-19>	0	1033	221	1254
		82.4	17.6	23.4
		23.4	23.4	
		19.3	4.1	
<20-39>	1	2480	602	3082
		80.5	19.5	57.5
		56.2	63.6	
		46.3	11.2	
<40-64>	2	807	107	914
		88.3	11.7	17.1
		18.3	11.3	
		15.1	2.0	
<65-HI>	3	92	16	108
		85.2	14.8	2.0
		2.1	1.7	
		1.7	0.3	
	COLUMN TOTAL	4412	946	5358
		82.3	17.7	100.0

RAW CHI SQUARE = 30.31810 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.07522
CONTINGENCY COEFFICIENT = 0.07501
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH MOVE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00293 WITH AGE DEPENDENT. = 0.00652 WITH MOVE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00404
KENDALL'S TAU B = -0.03901 SIGNIFICANCE (2-TAILED) = 0.0028
KENDALL'S TAU C = -0.03218 SIGNIFICANCE (2-TAILED) = 0.0028
GAMMA = -0.09766 SIGNIFICANCE (2-TAILED) = 0.0028
SOMERS'S D (ASYMMETRIC) = -0.05533 WITH AGE DEPENDENT. = -0.02751 WITH MOVE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.03675
ETA = 0.04226 WITH AGE DEPENDENT. = 0.07522 WITH MOVE DEPENDENT.
PEARSON'S R =-0.04226 SIGNIFICANCE = 0.0010

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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                                BY  EDUC      <EDUCATION>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     EDUC
           COUNT   I
          ROW PCT  ISOME ELE SOME SEC UNIV     TECH       ROW
          COL PCT  I                                      TOTAL
          TOT PCT  I      1 I      2 I      3 I      4 I
AGE       --------I--------I--------I--------I--------I
               0  I    62  I   498  I    17  I     8  I   585
  <LO-19>         I  10.6  I  85.1  I   2.9  I   1.4  I  29.5
                  I  40.8  I  33.8  I   7.1  I   7.0  I
                  I   3.1  I  25.1  I   0.9  I   0.4  I
                 -I--------I--------I--------I--------I
               1  I    63  I   798  I   179  I    84  I  1124
  <20-39>         I   5.6  I  71.0  I  15.9  I   7.5  I  56.7
                  I  41.4  I  54.1  I  74.3  I  73.7  I
                  I   3.2  I  40.3  I   9.0  I   4.2  I
                 -I--------I--------I--------I--------I
               2  I    26  I   163  I    40  I    21  I   250
  <40-64>         I  10.4  I  65.2  I  16.0  I   8.4  I  12.6
                  I  17.1  I  11.1  I  16.6  I  18.4  I
                  I   1.3  I   8.2  I   2.0  I   1.1  I
                 -I--------I--------I--------I--------I
               3  I     1  I    16  I     5  I     1  I    23
  <65-HI>         I   4.3  I  69.6  I  21.7  I   4.3  I   1.2
                  I   0.7  I   1.1  I   2.1  I   0.9  I
                  I   0.1  I   0.8  I   0.3  I   0.1  I
                 -I--------I--------I--------I--------I
          COLUMN       152     1475      241      114      1982
           TOTAL       7.7     74.4     12.2      5.8     100.0

   3 OUT OF    16 ( 18.8%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  1.323
RAW CHI SQUARE =   116.80562 WITH     9 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
CRAMER'S V =  0.14016
CONTINGENCY COEFFICIENT =  0.23591
LAMBDA (ASYMMETRIC) =  0.0     WITH AGE      DEPENDENT.          =  0.0     WITH EDUC     DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.03572 WITH AGE      DEPENDENT.          =  0.04243 WITH EDUC     DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.03878
KENDALL'S TAU B =     0.17312  SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C =     0.11375  SIGNIFICANCE (2-TAILED) = 0.0
GAMMA =    0.35222  SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) =  0.20207 WITH AGE      DEPENDENT.          =  0.14831 WITH EDUC     DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.17107
ETA =  0.19660 WITH AGE      DEPENDENT.          =  0.21414 WITH EDUC     DEPENDENT.
PEARSON'S R = 0.17041  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =  3376
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* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                               BY  EMPLOY    <EMPLOYMENT STATUS>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                 EMPLOY
         COUNT  I
        ROW PCT IEMPLOYED UNEMPLOY   ROW
        COL PCT I                    TOTAL
        TOT PCT I      1  I      2  I
AGE     --------I--------I--------I
              0 I   150  I   599  I   749
  <LO-19>       I  20.0  I  80.0  I  21.4
                I  13.5  I  25.1  I
                I   4.3  I  17.1  I
               -I--------I--------I
              1 I   786  I  1305  I  2091
  <20-39>       I  37.6  I  62.4  I  59.8
                I  70.6  I  54.7  I
                I  22.5  I  37.3  I
               -I--------I--------I
              2 I   175  I   407  I   582
  <40-64>       I  30.1  I  69.9  I  16.6
                I  15.7  I  17.1  I
                I   5.0  I  11.6  I
               -I--------I--------I
              3 I     2  I    74  I    76
  <65-HI>       I   2.6  I  97.4  I   2.2
                I   0.2  I   3.1  I
                I   0.1  I   2.1  I
               -I--------I--------I
        COLUMN     1113     2385     3498
         TOTAL     31.8     68.2    100.0

RAW CHI SQUARE =   110.77328 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
CRAMER'S V =  0.17795
CONTINGENCY COEFFICIENT =  0.17520
LAMBDA (ASYMMETRIC) =  0.0      WITH AGE       DEPENDENT.          =  0.0     WITH EMPLOY   DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.01781 WITH AGE      DEPENDENT.          =  0.02902 WITH EMPLOY   DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.02207
KENDALL'S TAU B =   -0.04927  SIGNIFICANCE (2-TAILED) = 0.0023
KENDALL'S TAU C =   -0.04894  SIGNIFICANCE (2-TAILED) = 0.0023
GAMMA =   -0.10202  SIGNIFICANCE (2-TAILED) = 0.0023
SOMERS'S D (ASYMMETRIC) = -0.05640 WITH AGE      DEPENDENT.          = -0.04303 WITH EMPLOY   DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.04882
ETA =  0.03032 WITH AGE      DEPENDENT.          =  0.17797 WITH EMPLOY   DEPENDENT.
PEARSON'S R =-0.03032  SIGNIFICANCE =  0.0365

NUMBER OF MISSING OBSERVATIONS =  1860
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AGE <AGE> BY LIVING <LIVING SITUATION>

* PAGE 1 OF 1

AGE	LIVING: COUNT / ROW PCT / COL PCT / TOT PCT	ALONE 1	SHARING 2	INST RES 3	ROW TOTAL
<LO-19>	0	69	621	70	760
		9.1	81.7	9.2	22.8
		8.3	26.7	39.1	
		2.1	18.6	2.1	
<20-39>	1	560	1291	87	1938
		28.9	66.6	4.5	58.1
		67.6	55.4	48.6	
		16.8	38.7	2.6	
<40-64>	2	169	379	14	562
		30.1	67.4	2.5	16.8
		20.4	16.3	7.8	
		5.1	11.4	0.4	
<65-HI>	3	31	38	8	77
		40.3	49.4	10.4	2.3
		3.7	1.6	4.5	
		0.9	1.1	0.2	
	COLUMN	829	2329	179	3337
	TOTAL	24.8	69.8	5.4	100.0

1 OUT OF 12 (8.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 4.130
RAW CHI SQUARE = 161.71571 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.15566
CONTINGENCY COEFFICIENT = 0.21499
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH LIVING DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.02620 WITH AGE DEPENDENT. = 0.03612 WITH LIVING DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.03037
KENDALL'S TAU B = -0.17272 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = -0.13233 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = -0.33936 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = -0.19679 WITH AGE DEPENDENT. = -0.15160 WITH LIVING DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.17126
ETA = 0.17838 WITH AGE DEPENDENT. = 0.20888 WITH LIVING DEPENDENT.
PEARSON'S R =-0.17571 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 2021

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

AGE <AGE> BY ETHNIC <ETHNICITY>

* PAGE 1 OF 1

AGE	ETHNIC COUNT ROW PCT COL PCT TOT PCT	WHITE 1	OTHER 2	ROW TOTAL
<LO-19>	0	576 81.1 20.9 17.7	134 18.9 26.6 4.1	710 21.8
<20-39>	1	1612 83.7 58.6 49.5	314 16.3 62.4 9.6	1926 59.2
<40-64>	2	497 90.9 18.1 15.3	50 9.1 9.9 1.5	547 16.8
<65-HI>	3	66 93.0 2.4 2.0	5 7.0 1.0 0.2	71 2.2
	COLUMN TOTAL	2751 84.5	503 15.5	3254 100.0

RAW CHI SQUARE = 27.94151 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.09267
CONTINGENCY COEFFICIENT = 0.09227
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH ETHNIC DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00461 WITH AGE DEPENDENT. = 0.01099 WITH ETHNIC DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00650
KENDALL'S TAU B = -0.08190 SIGNIFICANCE (2-TAILED) = 0.0000
KENDALL'S TAU C = -0.06341 SIGNIFICANCE (2-TAILED) = 0.0000
GAMMA = -0.21651 SIGNIFICANCE (2-TAILED) = 0.0000
SOMERS'S D (ASYMMETRIC) = -0.12130 WITH AGE DEPENDENT. = -0.05530 WITH ETHNIC DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.07596
ETA = 0.08741 WITH AGE DEPENDENT. = 0.09270 WITH ETHNIC DEPENDENT.
PEARSON'S R =-0.08741 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 2104

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F * * * * * * * * * * * * * * * * * * *

AGE <AGE> BY FINAN <FINANCIAL SITUATION>

* PAGE 1 OF 1

AGE	FINAN: COUNT / ROW PCT / COL PCT / TOT PCT	OTHER 1	SECURE 2	INSECURE 3	ROW TOTAL
0 <LO-19>	COUNT	890	128	236	1254
	ROW PCT	71.0	10.2	18.8	23.4
	COL PCT	26.1	19.8	18.1	
	TOT PCT	16.6	2.4	4.4	
1 <20-39>	COUNT	1872	352	858	3082
	ROW PCT	60.7	11.4	27.8	57.5
	COL PCT	54.9	54.6	65.9	
	TOT PCT	34.9	6.6	16.0	
2 <40-64>	COUNT	583	138	193	914
	ROW PCT	63.8	15.1	21.1	17.1
	COL PCT	17.1	21.4	14.8	
	TOT PCT	10.9	2.6	3.6	
3 <65-HI>	COUNT	66	27	15	108
	ROW PCT	61.1	25.0	13.9	2.0
	COL PCT	1.9	4.2	1.2	
	TOT PCT	1.2	0.5	0.3	
COLUMN TOTAL		3411	645	1302	5358
		63.7	12.0	24.3	100.0

RAW CHI SQUARE = 81.43951 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.08718
CONTINGENCY COEFFICIENT = 0.12236
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH FINAN DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00709 WITH AGE DEPENDENT. = 0.00831 WITH FINAN DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00765
KENDALL'S TAU B = 0.04414 SIGNIFICANCE (2-TAILED) = 0.0004
KENDALL'S TAU C = 0.03655 SIGNIFICANCE (2-TAILED) = 0.0004
GAMMA = 0.08065 SIGNIFICANCE (2-TAILED) = 0.0004
SOMERS'S D (ASYMMETRIC) = 0.04675 WITH AGE DEPENDENT. = 0.04166 WITH FINAN DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.04406
ETA = 0.06963 WITH AGE DEPENDENT. = 0.09501 WITH FINAN DEPENDENT.
PEARSON'S R = 0.03565 SIGNIFICANCE = 0.0045

* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *

AGE <AGE> BY SEXUAL <SEXUAL ORIENTATION>

* PAGE 1 OF 1

AGE	SEXUAL COUNT / ROW PCT / COL PCT / TOT PCT	HETROSEX 1	HOMOSEX OTHERS 2	ROW TOTAL
<LO-19>	0	466	20	486
		95.9	4.1	18.8
		19.1	14.2	
		18.1	0.8	
<20-39>	1	1490	116	1606
		92.8	7.2	62.2
		61.1	82.3	
		57.8	4.5	
<40-64>	2	435	5	440
		98.9	1.1	17.1
		17.8	3.5	
		16.9	0.2	
<65-HI>	3	48	0	48
		100.0	0.0	1.9
		2.0	0.0	
		1.9	0.0	
	COLUMN TOTAL	2439	141	2580
		94.5	5.5	100.0

1 OUT OF 8 (12.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.623
RAW CHI SQUARE = 30.05219 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.10793
CONTINGENCY COEFFICIENT = 0.10730
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH SEXUAL DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00772 WITH AGE DEPENDENT. = 0.03590 WITH SEXUAL DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01271
KENDALL'S TAU B = -0.04028 SIGNIFICANCE (2-TAILED) = 0.0343
KENDALL'S TAU C = -0.01916 SIGNIFICANCE (2-TAILED) = 0.0343
GAMMA = -0.19987 SIGNIFICANCE (2-TAILED) = 0.0343
SOMERS'S D (ASYMMETRIC) = -0.09274 WITH AGE DEPENDENT. = -0.01750 WITH SEXUAL DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.02944
ETA = 0.04596 WITH AGE DEPENDENT. = 0.10791 WITH SEXUAL DEPENDENT.
PEARSON'S R =-0.04595 SIGNIFICANCE = 0.0098

NUMBER OF MISSING OBSERVATIONS = 2778

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	LEGAL: YES	NOS	CIVIL	CRIMINAL	DRUG	ROW TOTAL
		1	2	3	4		
0 <LO-19>		20	24	23	4		71
	ROW PCT	28.2	33.8	32.4	5.6		21.6
	COL PCT	32.3	15.6	24.7	21.1		
	TOT PCT	6.1	7.3	7.0	1.2		
1 <20-39>		36	103	59	12		210
	ROW PCT	17.1	49.0	28.1	5.7		64.0
	COL PCT	58.1	66.9	63.4	63.2		
	TOT PCT	11.0	31.4	18.0	3.7		
2 <40-64>		5	27	9	3		44
	ROW PCT	11.4	61.4	20.5	6.8		13.4
	COL PCT	8.1	17.5	9.7	15.8		
	TOT PCT	1.5	8.2	2.7	0.9		
3 <65-HI>		1	0	2	0		3
	ROW PCT	33.3	0.0	66.7	0.0		0.9
	COL PCT	1.6	0.0	2.2	0.0		
	TOT PCT	0.3	0.0	0.6	0.0		
COLUMN TOTAL		62	154	93	19		328
		18.9	47.0	28.4	5.8		100.0

6 OUT OF 16 (37.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 0.174
RAW CHI SQUARE = 14.58299 WITH 9 DEGREES OF FREEDOM. SIGNIFICANCE = 0.1030
CRAMER'S V = 0.12174
CONTINGENCY COEFFICIENT = 0.20632
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.01149 WITH LEGAL DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00685
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.02571 WITH AGE DEPENDENT. = 0.02004 WITH LEGAL DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.02252
KENDALL'S TAU B = 0.02444 SIGNIFICANCE (2-TAILED) = 0.6307
KENDALL'S TAU C = 0.01919 SIGNIFICANCE (2-TAILED) = 0.6307
GAMMA = 0.04092 SIGNIFICANCE (2-TAILED) = 0.6307
SOMERS'S D (ASYMMETRIC) = 0.02180 WITH AGE DEPENDENT. = 0.02740 WITH LEGAL DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.02428
ETA = 0.14295 WITH AGE DEPENDENT. = 0.03809 WITH LEGAL DEPENDENT.
PEARSON'S R = 0.03285 SIGNIFICANCE = 0.2767

NUMBER OF MISSING OBSERVATIONS = 5030

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	PRIMARY: MARITAL / FAMILY (1)	ISOLATE (2)	ALCOHOL / DRUG (3)	SEPARATE / LOSS (4)	PHYSICAL (5)	PSYCHO (6)	OTHER (7)	ROW TOTAL
0 <LO-19>		457	21	46	152	6	29	32	743
		61.5	2.8	6.2	20.5	0.8	3.9	4.3	20.9
		27.4	10.8	12.4	18.2	5.0	14.9	17.7	
		12.8	0.6	1.3	4.3	0.2	0.8	0.9	
1 <20-39>		946	114	219	553	58	120	121	2131
		44.4	5.3	10.3	26.0	2.7	5.6	5.7	59.9
		56.8	58.8	59.2	66.2	47.9	61.9	66.9	
		26.6	3.2	6.2	15.5	1.6	3.4	3.4	
2 <40-64>		243	47	101	114	40	41	25	611
		39.8	7.7	16.5	18.7	6.5	6.7	4.1	17.2
		14.6	24.2	27.3	13.7	33.1	21.1	13.8	
		6.8	1.3	2.8	3.2	1.1	1.2	0.7	
3 <65-HI>		19	12	4	16	17	4	3	75
		25.3	16.0	5.3	21.3	22.7	5.3	4.0	2.1
		1.1	6.2	1.1	1.9	14.0	2.1	1.7	
		0.5	0.3	0.1	0.4	0.5	0.1	0.1	
COLUMN TOTAL		1665	194	370	835	121	194	181	3560
		46.8	5.4	10.4	23.5	3.4	5.4	5.1	100.0

4 OUT OF 28 (14.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.549
RAW CHI SQUARE = 258.68823 WITH 18 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.15563
CONTINGENCY COEFFICIENT = 0.26027
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH PRIMARY DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.02899 WITH AGE DEPENDENT. = 0.01949 WITH PRIMARY DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.02331
KENDALL'S TAU B = 0.10812 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = 0.09129 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = 0.17040 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = 0.09701 WITH AGE DEPENDENT. = 0.12049 WITH PRIMARY DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.10749
ETA = 0.22328 WITH AGE DEPENDENT. = 0.12487 WITH PRIMARY DEPENDENT.
PEARSON'S R = 0.10882 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 1798

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

AGE <AGE> BY METHOD <METHOD OF ATTEMPT>

AGE	METHOD: COUNT / ROW PCT / COL PCT / TOT PCT	SELF INJURY 1	SELF POISON 2	OTHER 3	ROW TOTAL
<LO-19>	0	240	765	29	1034
		23.2	74.0	2.8	20.4
		21.6	20.1	19.9	
		4.7	15.1	0.6	
<20-39>	1	725	2212	97	3034
		23.9	72.9	3.2	59.9
		65.2	58.0	66.4	
		14.3	43.6	1.9	
<40-64>	2	134	744	17	895
		15.0	83.1	1.9	17.7
		12.1	19.5	11.6	
		2.6	14.7	0.3	
<65-HI>	3	13	90	3	106
		12.3	84.9	2.8	2.1
		1.2	2.4	2.1	
		0.3	1.8	0.1	
	COLUMN TOTAL	1112	3811	146	5069
		21.9	75.2	2.9	100.0

1 OUT OF 12 (8.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.

MINIMUM EXPECTED CELL FREQUENCY = 3.053

RAW CHI SQUARE = 45.58813 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000

CRAMER'S V = 0.06706

CONTINGENCY COEFFICIENT = 0.09441

LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH METHOD DEPENDENT.

LAMBDA (SYMMETRIC) = 0.0

UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00474 WITH AGE DEPENDENT. = 0.00743 WITH METHOD DEPENDENT.

UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00578

KENDALL'S TAU B = 0.05223 SIGNIFICANCE (2-TAILED) = 0.0001

KENDALL'S TAU C = 0.03669 SIGNIFICANCE (2-TAILED) = 0.0001

GAMMA = 0.11473 SIGNIFICANCE (2-TAILED) = 0.0001

SOMERS'S D (ASYMMETRIC) = 0.06340 WITH AGE DEPENDENT. = 0.04303 WITH METHOD DEPENDENT.

SOMERS'S D (SYMMETRIC) = 0.05126

ETA = 0.07020 WITH AGE DEPENDENT. = 0.06953 WITH METHOD DEPENDENT.

PEARSON'S R = 0.05532 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 289

		ALCOHOL		
	COUNT I			
	ROW PCT	NO	YES	ROW
	COL PCT I			TOTAL
	TOT PCT I	1 I	2 I	
AGE				
	0 I	973 I	281 I	1254
<LO-19>	I	77.6 I	22.4 I	23.4
	I	27.4 I	15.6 I	
	I	18.2 I	5.2 I	
	1 I	1947 I	1135 I	3082
<20-39>	I	63.2 I	36.8 I	57.5
	I	54.8 I	62.9 I	
	I	36.3 I	21.2 I	
	2 I	540 I	374 I	914
<40-64>	I	59.1 I	40.9 I	17.1
	I	15.2 I	20.7 I	
	I	10.1 I	7.0 I	
	3 I	93 I	15 I	108
<65-HI>	I	86.1 I	13.9 I	2.0
	I	2.6 I	0.8 I	
	I	1.7 I	0.3 I	
COLUMN		3553	1805	5358
TOTAL		66.3	33.7	100.0

RAW CHI SQUARE = 125.35793 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.15296
CONTINGENCY COEFFICIENT = 0.15120
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH ALCOHOL DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01193 WITH AGE DEPENDENT. = 0.01939 WITH ALCOHOL DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01477
KENDALL'S TAU B = 0.10496 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = 0.10730 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = 0.20666 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = 0.12008 WITH AGE DEPENDENT. = 0.09174 WITH ALCOHOL DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.10401
ETA = 0.09346 WITH AGE DEPENDENT. = 0.15297 WITH ALCOHOL DEPENDENT.
PEARSON'S R = 0.09346 SIGNIFICANCE = 0.0000

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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                        BY  DIE       <PLAN TO DIE>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                 DIE
          COUNT  I
        ROW PCT  INO       YES       ROW
        COL PCT  I                   TOTAL
        TOT PCT  I      1  I      2  I
AGE     --------I--------I--------I
              0  I  1177  I     77  I  1254
  <LO-19>        I  93.9  I    6.1  I  23.4
                 I  24.9  I   12.4  I
                 I  22.0  I    1.4  I
                -I--------I--------I
              1  I  2713  I    369  I  3082
  <20-39>        I  88.0  I   12.0  I  57.5
                 I  57.3  I   59.3  I
                 I  50.6  I    6.9  I
                -I--------I--------I
              2  I   765  I    149  I   914
  <40-64>        I  83.7  I   16.3  I  17.1
                 I  16.2  I   24.0  I
                 I  14.3  I    2.8  I
                -I--------I--------I
              3  I    81  I     27  I   108
  <65-HI>        I  75.0  I   25.0  I   2.0
                 I   1.7  I    4.3  I
                 I   1.5  I    0.5  I
                -I--------I--------I
         COLUMN     4736      622      5358
          TOTAL     88.4     11.6     100.0

RAW CHI SQUARE =    75.43619 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
CRAMER'S V =  0.11866
CONTINGENCY COEFFICIENT =  0.11783
LAMBDA (ASYMMETRIC) =  0.0     WITH AGE      DEPENDENT.          =  0.0     WITH DIE      DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00684 WITH AGE      DEPENDENT.          =  0.01979 WITH DIE      DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.01017
KENDALL'S TAU B =    0.10885  SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C =    0.07542  SIGNIFICANCE (2-TAILED) = 0.0
GAMMA =    0.31148  SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) =  0.18376 WITH AGE      DEPENDENT.          =  0.06448 WITH DIE      DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.09547
ETA =  0.11749 WITH AGE      DEPENDENT.          =  0.11870 WITH DIE      DEPENDENT.
PEARSON'S R = 0.11749  SIGNIFICANCE =  0.0000
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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                                BY  PLANNED   <ATTEMPT PLANNED>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *   PAGE  1 OF  1

                 PLANNED
          COUNT  I
         ROW PCT INO       YES        ROW
         COL PCT I                    TOTAL
         TOT PCT I     1  I     2  I
AGE      --------I--------I--------I
               0 I  1201  I    53  I  1254
  <LO-19>        I  95.8  I   4.2  I  23.4
                 I  24.0  I  15.1  I
                 I  22.4  I   1.0  I
                -I--------I--------I
               1 I  2879  I   203  I  3082
  <20-39>        I  93.4  I   6.6  I  57.5
                 I  57.5  I  57.8  I
                 I  53.7  I   3.8  I
                -I--------I--------I
               2 I   835  I    79  I   914
  <40-64>        I  91.4  I   8.6  I  17.1
                 I  16.7  I  22.5  I
                 I  15.6  I   1.5  I
                -I--------I--------I
               3 I    92  I    16  I   108
  <65-HI>        I  85.2  I  14.8  I   2.0
                 I   1.8  I   4.6  I
                 I   1.7  I   0.3  I
                -I--------I--------I
         COLUMN     5007      351      5358
          TOTAL     93.4      6.6     100.0

RAW CHI SQUARE =    29.65877 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0000
CRAMER'S V =  0.07440
CONTINGENCY COEFFICIENT =  0.07420
LAMBDA (ASYMMETRIC) =  0.0     WITH AGE       DEPENDENT.          =  0.0     WITH PLANNED  DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00248 WITH AGE      DEPENDENT.          =  0.01066 WITH PLANNED  DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00403
KENDALL'S TAU B =    0.06446  SIGNIFICANCE (2-TAILED) = 0.0000
KENDALL'S TAU C =    0.03450  SIGNIFICANCE (2-TAILED) = 0.0000
GAMMA =    0.23763  SIGNIFICANCE (2-TAILED) = 0.0000
SOMERS'S D (ASYMMETRIC) =  0.14088 WITH AGE      DEPENDENT.          =  0.02949 WITH PLANNED  DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.04878
ETA =  0.07164 WITH AGE      DEPENDENT.          =  0.07451 WITH PLANNED  DEPENDENT.
PEARSON'S R = 0.07165  SIGNIFICANCE =  0.0000
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AGE <AGE> BY DIRECTED <ATTEMPT DIRECTED>

* PAGE 1 OF 1

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	DIRECTED: YES 1	PARENT FAMILY 2	FRIEND LOVER 3	ROW TOTAL
<LO-19>	0	49	102	69	220
		22.3	46.4	31.4	20.8
		18.2	55.4	11.4	
		4.6	9.6	6.5	
<20-39>	1	164	59	424	647
		25.3	9.1	65.5	61.1
		61.0	32.1	70.0	
		15.5	5.6	40.0	
<40-64>	2	51	18	107	176
		29.0	10.2	60.8	16.6
		19.0	9.8	17.7	
		4.8	1.7	10.1	
<65-HI>	3	5	5	6	16
		31.3	31.3	37.5	1.5
		1.9	2.7	1.0	
		0.5	0.5	0.6	
	COLUMN TOTAL	269	184	606	1059
		25.4	17.4	57.2	100.0

2 OUT OF 12 (16.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.780
RAW CHI SQUARE = 175.68050 WITH 6 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.28800
CONTINGENCY COEFFICIENT = 0.37721
LAMBDA (ASYMMETRIC) = 0.10437 WITH AGE DEPENDENT. = 0.07285 WITH DIRECTED DEPENDENT.
LAMBDA (SYMMETRIC) = 0.08786
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.07292 WITH AGE DEPENDENT. = 0.07423 WITH DIRECTED DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.07357
KENDALL'S TAU B = 0.10545 SIGNIFICANCE (2-TAILED) = 0.0002
KENDALL'S TAU C = 0.08963 SIGNIFICANCE (2-TAILED) = 0.0002
GAMMA = 0.17097 SIGNIFICANCE (2-TAILED) = 0.0002
SOMERS'S D (ASYMMETRIC) = 0.10341 WITH AGE DEPENDENT. = 0.10753 WITH DIRECTED DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.10543
ETA = 0.27305 WITH AGE DEPENDENT. = 0.14856 WITH DIRECTED DEPENDENT.
PEARSON'S R = 0.07038 SIGNIFICANCE = 0.0110

NUMBER OF MISSING OBSERVATIONS = 4299

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	COMMUN NO	COMMUN YES	ROW TOTAL
	0	1195	58	1253
<LO-19>		95.4	4.6	23.4
		23.7	18.8	
		22.3	1.1	
	1	2891	187	3078
<20-39>		93.9	6.1	57.5
		57.3	60.5	
		54.0	3.5	
	2	856	58	914
<40-64>		93.7	6.3	17.1
		17.0	18.8	
		16.0	1.1	
	3	102	6	108
<65-HI>		94.4	5.6	2.0
		2.0	1.9	
		1.9	0.1	
	COLUMN	5044	309	5353
	TOTAL	94.2	5.8	100.0

RAW CHI SQUARE = 4.09339 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.2516
CRAMER'S V = 0.02765
CONTINGENCY COEFFICIENT = 0.02764
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH COMMUN DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00038 WITH AGE DEPENDENT. = 0.00181 WITH COMMUN DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00063
KENDALL'S TAU B = 0.02263 SIGNIFICANCE (2-TAILED) = 0.0848
KENDALL'S TAU C = 0.01142 SIGNIFICANCE (2-TAILED) = 0.0848
GAMMA = 0.09105 SIGNIFICANCE (2-TAILED) = 0.0848
SOMERS'S D (ASYMMETRIC) = 0.05248 WITH AGE DEPENDENT. = 0.00976 WITH COMMUN DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.01646
ETA = 0.02195 WITH AGE DEPENDENT. = 0.02770 WITH COMMUN DEPENDENT.
PEARSON'S R = 0.02197 SIGNIFICANCE = 0.0540

NUMBER OF MISSING OBSERVATIONS = 5

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AGE <AGE> BY CHILDREN <HAVE CHILDREN>

AGE	CHILDREN COUNT ROW PCT COL PCT TOT PCT	NO 1	YES 2	ROW TOTAL
<LO-19>	0	1213 96.7 27.9 22.6	41 3.3 4.1 0.8	1254 23.4
<20-39>	1	2485 80.6 57.1 46.4	597 19.4 59.4 11.1	3082 57.5
<40-64>	2	587 64.2 13.5 11.0	327 35.8 32.5 6.1	914 17.1
<65-HI>	3	68 63.0 1.6 1.3	40 37.0 4.0 0.7	108 2.0
	COLUMN TOTAL	4353 81.2	1005 18.8	5358 100.0

RAW CHI SQUARE = 395.56836 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.27171
CONTINGENCY COEFFICIENT = 0.26221
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH CHILDREN DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.04016 WITH AGE DEPENDENT. = 0.08640 WITH CHILDREN DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.05484
KENDALL'S TAU B = 0.25788 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = 0.21775 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = 0.59044 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = 0.35723 WITH AGE DEPENDENT. = 0.18616 WITH CHILDREN DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.24477
ETA = 0.26731 WITH AGE DEPENDENT. = 0.27172 WITH CHILDREN DEPENDENT.
PEARSON'S R = 0.26731 SIGNIFICANCE = 0.0000

AGE	COUNT / ROW PCT / COL PCT / TOT PCT	DEPENDEN NO	DEPENDEN YES 1	DEPENDEN YES 2	ROW TOTAL
	0	1148	104		1252
<LO-19>		91.7	8.3		23.5
		25.6	12.3		
		21.5	2.0		
	1	2540	525		3065
<20-39>		82.9	17.1		57.5
		56.6	62.3		
		47.6	9.8		
	2	705	203		908
<40-64>		77.6	22.4		17.0
		15.7	24.1		
		13.2	3.8		
	3	97	11		108
<65-HI>		89.8	10.2		2.0
		2.2	1.3		
		1.8	0.2		
	COLUMN	4490	843		5333
	TOTAL	84.2	15.8		100.0

RAW CHI SQUARE = 88.77960 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.12902
CONTINGENCY COEFFICIENT = 0.12796
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH DEPENDEN DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00862 WITH AGE DEPENDENT. = 0.02051 WITH DEPENDEN DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01214
KENDALL'S TAU B = 0.10894 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = 0.08599 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = 0.27942 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = 0.16152 WITH AGE DEPENDENT. = 0.07347 WITH DEPENDEN DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.10100
ETA = 0.10419 WITH AGE DEPENDENT. = 0.12903 WITH DEPENDEN DEPENDENT.
PEARSON'S R = 0.10419 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 25

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* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                            BY  ILLNESS   <PAST ILLNESS>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                 ILLNESS
         COUNT  I
        ROW PCT I<NO>      <YES>      ROW
        COL PCT I                     TOTAL
        TOT PCT I       1  I       2  I
AGE     --------I--------I--------I
              0 I  1205  I    49  I  1254
  <LO-19>       I  96.1  I   3.9  I  23.4
                I  24.5  I  11.1  I
                I  22.5  I   0.9  I
               -I--------I--------I
              1 I  2859  I   223  I  3082
  <20-39>       I  92.8  I   7.2  I  57.5
                I  58.1  I  50.7  I
                I  53.4  I   4.2  I
               -I--------I--------I
              2 I   777  I   136  I   913
  <40-64>       I  85.1  I  14.9  I  17.0
                I  15.8  I  30.9  I
                I  14.5  I   2.5  I
               -I--------I--------I
              3 I    76  I    32  I   108
  <65-HI>       I  70.4  I  29.6  I   2.0
                I   1.5  I   7.3  I
                I   1.4  I   0.6  I
               -I--------I--------I
         COLUMN    4917      440      5357
          TOTAL    91.8      8.2     100.0

RAW CHI SQUARE =    154.53534 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0
CRAMER'S V =  0.16985
CONTINGENCY COEFFICIENT =  0.16745
LAMBDA (ASYMMETRIC) =  0.0      WITH AGE      DEPENDENT.          =  0.0     WITH ILLNESS  DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.01150 WITH AGE      DEPENDENT.          =  0.04205 WITH ILLNESS  DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.01806
KENDALL'S TAU B =    0.13939  SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C =    0.08278  SIGNIFICANCE (2-TAILED) = 0.0
GAMMA =    0.43708  SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) =  0.27451 WITH AGE      DEPENDENT.          =  0.07078 WITH ILLNESS  DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.11254
ETA =  0.15749 WITH AGE      DEPENDENT.          =  0.16986 WITH ILLNESS  DEPENDENT.
PEARSON'S R = 0.15750  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      1
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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE        <AGE>                                                    BY  ACCIDENT  <ACCIDENT>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                  ACCIDENT
          COUNT  I
        ROW PCT  I<NO>      <YES>      ROW
        COL PCT  I                     TOTAL
        TOT PCT  I      1  I      2  I
AGE      --------I--------I--------I
              0  I  1240  I     14  I  1254
  <LO-19>        I  98.9  I    1.1  I  23.4
                 I  23.7  I   12.1  I
                 I  23.1  I    0.3  I
                -I--------I--------I
              1  I  3016  I     66  I  3082
  <20-39>        I  97.9  I    2.1  I  57.5
                 I  57.5  I   56.9  I
                 I  56.3  I    1.2  I
                -I--------I--------I
              2  I   884  I     30  I   914
  <40-64>        I  96.7  I    3.3  I  17.1
                 I  16.9  I   25.9  I
                 I  16.5  I    0.6  I
                -I--------I--------I
              3  I   102  I      6  I   108
  <65-HI>        I  94.4  I    5.6  I   2.0
                 I   1.9  I    5.2  I
                 I   1.9  I    0.1  I
                -I--------I--------I
        COLUMN      5242       116      5358
         TOTAL      97.8       2.2     100.0

    1 OUT OF     8 ( 12.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  2.338
RAW CHI SQUARE =     17.76573 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0005
CRAMER'S V =  0.05758
CONTINGENCY COEFFICIENT =  0.05749
LAMBDA (ASYMMETRIC) =  0.0     WITH AGE      DEPENDENT.          =  0.0     WITH ACCIDENT DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00150 WITH AGE      DEPENDENT.          =  0.01491 WITH ACCIDENT DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00272
KENDALL'S TAU B =     0.05143  SIGNIFICANCE (2-TAILED) = 0.0001
KENDALL'S TAU C =     0.01619  SIGNIFICANCE (2-TAILED) = 0.0001
GAMMA =    0.31876  SIGNIFICANCE (2-TAILED) = 0.0001
SOMERS'S D (ASYMMETRIC) =  0.19109 WITH AGE      DEPENDENT.          =  0.01384 WITH ACCIDENT DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.02581
ETA =  0.05652 WITH AGE      DEPENDENT.          =  0.05784 WITH ACCIDENT DEPENDENT.
PEARSON'S R = 0.05652  SIGNIFICANCE =  0.0000
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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                                BY  VIOLENCE  <FAMILY VIOLENCE>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *   PAGE  1 OF  1

                     VIOLENCE
            COUNT   I
           ROW PCT  I<NO>      <YES>      ROW
           COL PCT  I                     TOTAL
           TOT PCT  I      1  I      2  I
AGE        --------I--------I--------I
                 0  I  1170  I    83  I  1253
  <LO-19>           I  93.4  I   6.6  I  23.4
                    I  23.6  I  21.0  I
                    I  21.8  I   1.5  I
                   -I--------I--------I
                 1  I  2825  I   257  I  3082
  <20-39>           I  91.7  I   8.3  I  57.5
                    I  56.9  I  64.9  I
                    I  52.7  I   4.8  I
                   -I--------I--------I
                 2  I   860  I    54  I   914
  <40-64>           I  94.1  I   5.9  I  17.1
                    I  17.3  I  13.6  I
                    I  16.1  I   1.0  I
                   -I--------I--------I
                 3  I   106  I     2  I   108
  <65-HI>           I  98.1  I   1.9  I   2.0
                    I   2.1  I   0.5  I
                    I   2.0  I   0.0  I
                   -I--------I--------I
           COLUMN      4961      396      5357
            TOTAL      92.6      7.4     100.0

RAW CHI SQUARE =     12.89671 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.0049
CRAMER'S V =  0.04907
CONTINGENCY COEFFICIENT =  0.04901
LAMBDA (ASYMMETRIC) =  0.0      WITH AGE        DEPENDENT.          =  0.0      WITH VIOLENCE DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00134 WITH AGE      DEPENDENT.          =  0.00528 WITH VIOLENCE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00214
KENDALL'S TAU B =    -0.01047  SIGNIFICANCE (2-TAILED) = 0.4298
KENDALL'S TAU C =    -0.00593  SIGNIFICANCE (2-TAILED) = 0.4298
GAMMA =   -0.03883  SIGNIFICANCE (2-TAILED) = 0.4298
SOMERS'S D (ASYMMETRIC) = -0.02164 WITH AGE      DEPENDENT.          = -0.00507 WITH VIOLENCE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.00821
ETA =  0.01632 WITH AGE      DEPENDENT.          =  0.04915 WITH VIOLENCE DEPENDENT.
PEARSON'S R =-0.01630  SIGNIFICANCE =  0.1164

NUMBER OF MISSING OBSERVATIONS =      1
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* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *

AGE <AGE> BY DEATH <DEATH OF SIG OTHER>

* PAGE 1 OF 1

AGE		COUNT / ROW PCT / COL PCT / TOT PCT	DEATH <NO> 1	<YES> 2	ROW TOTAL
	0	COUNT	1200	54	1254
<LO-19>		ROW PCT	95.7	4.3	23.4
		COL PCT	23.9	16.2	
		TOT PCT	22.4	1.0	
	1	COUNT	2906	175	3081
<20-39>		ROW PCT	94.3	5.7	57.5
		COL PCT	57.9	52.4	
		TOT PCT	54.3	3.3	
	2	COUNT	832	81	913
<40-64>		ROW PCT	91.1	8.9	17.0
		COL PCT	16.6	24.3	
		TOT PCT	15.5	1.5	
	3	COUNT	84	24	108
<65-HI>		ROW PCT	77.8	22.2	2.0
		COL PCT	1.7	7.2	
		TOT PCT	1.6	0.4	
COLUMN TOTAL			5022	334	5356
			93.8	6.2	100.0

RAW CHI SQUARE = 67.66769 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.11240
CONTINGENCY COEFFICIENT = 0.11170
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH DEATH DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00448 WITH AGE DEPENDENT. = 0.01993 WITH DEATH DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00732
KENDALL'S TAU B = 0.07667 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = 0.04010 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = 0.27799 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = 0.17146 WITH AGE DEPENDENT. = 0.03429 WITH DEATH DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.05715
ETA = 0.09182 WITH AGE DEPENDENT. = 0.11246 WITH DEATH DEPENDENT.
PEARSON'S R = 0.09182 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 2

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F * * * * * * * * * * * * * * * * * *
AGE <AGE> BY ATTEMPTS <PRIOR ATTEMPTS>

AGE		COUNT / ROW PCT / COL PCT / TOT PCT	ATTEMPTS <NO> 1	<YES> 2	ROW TOTAL
<LO-19>	0	COUNT	1069	185	1254
		ROW PCT	85.2	14.8	23.4
		COL PCT	25.6	15.7	
		TOT PCT	20.0	3.5	
<20-39>	1	COUNT	2316	766	3082
		ROW PCT	75.1	24.9	57.5
		COL PCT	55.4	64.9	
		TOT PCT	43.2	14.3	
<40-64>	2	COUNT	700	214	914
		ROW PCT	76.6	23.4	17.1
		COL PCT	16.8	18.1	
		TOT PCT	13.1	4.0	
<65-HI>	3	COUNT	92	15	107
		ROW PCT	86.0	14.0	2.0
		COL PCT	2.2	1.3	
		TOT PCT	1.7	0.3	
		COLUMN TOTAL	4177	1180	5357
			78.0	22.0	100.0

RAW CHI SQUARE = 57.99309 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.10405
CONTINGENCY COEFFICIENT = 0.10349
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH ATTEMPTS DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00555 WITH AGE DEPENDENT. = 0.01093 WITH ATTEMPTS DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00737
KENDALL'S TAU B = 0.06270 SIGNIFICANCE (2-TAILED) = 0.0000
KENDALL'S TAU C = 0.05620 SIGNIFICANCE (2-TAILED) = 0.0000
GAMMA = 0.14369 SIGNIFICANCE (2-TAILED) = 0.0000
SOMERS'S D (ASYMMETRIC) = 0.08180 WITH AGE DEPENDENT. = 0.04806 WITH ATTEMPTS DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.06054
ETA = 0.05618 WITH AGE DEPENDENT. = 0.10405 WITH ATTEMPTS DEPENDENT.
PEARSON'S R = 0.05617 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 1

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* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGE       <AGE>                                               BY  PRIOTYPE  <PRIOR CONTACT TYPE>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    PRIOTYPE
            COUNT  I
          ROW PCT  INO        SERVICE     ROW
          COL PCT  ISERVICE               TOTAL
          TOT PCT  I      1  I      2  I
AGE       --------I--------I--------I
                0  I    33  I    62  I    95
  <LO-19>          I  34.7  I  65.3  I  12.5
                   I  11.0  I  13.4  I
                   I   4.3  I   8.1  I
                  -I--------I--------I
                1  I   200  I   309  I   509
  <20-39>          I  39.3  I  60.7  I  66.8
                   I  66.7  I  66.9  I
                   I  26.2  I  40.6  I
                  -I--------I--------I
                2  I    63  I    84  I   147
  <40-64>          I  42.9  I  57.1  I  19.3
                   I  21.0  I  18.2  I
                   I   8.3  I  11.0  I
                  -I--------I--------I
                3  I     4  I     7  I    11
  <65-HI>          I  36.4  I  63.6  I   1.4
                   I   1.3  I   1.5  I
                   I   0.5  I   0.9  I
                  -I--------I--------I
           COLUMN      300      462      762
            TOTAL     39.4     60.6    100.0

    1 OUT OF      8 ( 12.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  4.331
RAW CHI SQUARE =     1.64611 WITH     3 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.6490
CRAMER'S V =  0.04648
CONTINGENCY COEFFICIENT =  0.04643
LAMBDA (ASYMMETRIC) =  0.0     WITH AGE      DEPENDENT.          =  0.0     WITH PRIOTYPE DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00120 WITH AGE      DEPENDENT.          =  0.00162 WITH PRIOTYPE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00137
KENDALL'S TAU B =   -0.04052  SIGNIFICANCE (2-TAILED) = 0.2550
KENDALL'S TAU C =   -0.03962  SIGNIFICANCE (2-TAILED) = 0.2550
GAMMA =   -0.08284  SIGNIFICANCE (2-TAILED) = 0.2550
SOMERS'S D (ASYMMETRIC) = -0.04150 WITH AGE      DEPENDENT.          = -0.03956 WITH PRIOTYPE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.04051
ETA =  0.03937 WITH AGE      DEPENDENT.          =  0.04648 WITH PRIOTYPE DEPENDENT.
PEARSON'S R =-0.03937  SIGNIFICANCE =  0.1389

NUMBER OF MISSING OBSERVATIONS =  4596
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* * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * *
AGE <AGE> BY CONTYPE <CONTACT TYPE>
* PAGE 1 OF 1

AGE		COUNT / ROW PCT / COL PCT / TOT PCT	CONTYPE: NO SERVICE 1	SERVICE 2	ROW TOTAL
<LO-19>	0	COUNT	407	842	1249
		ROW PCT	32.6	67.4	23.4
		COL PCT	19.1	26.1	
		TOT PCT	7.6	15.7	
<20-39>	1	COUNT	1279	1798	3077
		ROW PCT	41.6	58.4	57.5
		COL PCT	60.1	55.8	
		TOT PCT	23.9	33.6	
<40-64>	2	COUNT	392	522	914
		ROW PCT	42.9	57.1	17.1
		COL PCT	18.4	16.2	
		TOT PCT	7.3	9.8	
<65-HI>	3	COUNT	49	58	107
		ROW PCT	45.8	54.2	2.0
		COL PCT	2.3	1.8	
		TOT PCT	0.9	1.1	
		COLUMN TOTAL	2127	3220	5347
			39.8	60.2	100.0

RAW CHI SQUARE = 36.38458 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.08249
CONTINGENCY COEFFICIENT = 0.08221
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.0 WITH CONTYPE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00333 WITH AGE DEPENDENT. = 0.00515 WITH CONTYPE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00405
KENDALL'S TAU B = -0.07062 SIGNIFICANCE (2-TAILED) = 0.0
KENDALL'S TAU C = -0.07476 SIGNIFICANCE (2-TAILED) = 0.0
GAMMA = -0.13361 SIGNIFICANCE (2-TAILED) = 0.0
SOMERS'S D (ASYMMETRIC) = -0.07802 WITH AGE DEPENDENT. = -0.06393 WITH CONTYPE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.07028
ETA = 0.07204 WITH AGE DEPENDENT. = 0.08248 WITH CONTYPE DEPENDENT.
PEARSON'S R =-0.07202 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 11

* * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F * * * * * * * * * * * * * * * * * *

AGE <AGE> BY REASON <REASON FOR ASSESS>

AGE	REASON COUNT ROW PCT COL PCT TOT PCT	UNABLE CONTACT 1	REFUSAL KIN-PROF 2	AGENCIES INVOLVED 3	OTHER 4	ROW TOTAL
<LO-19>	0	154	115	110	55	434
		35.5	26.5	25.3	12.7	19.3
		15.0	28.6	28.1	12.7	
		6.8	5.1	4.9	2.4	
<20-39>	1	700	208	200	240	1348
		51.9	15.4	14.8	17.8	59.8
		68.1	51.7	51.2	55.4	
		31.1	9.2	8.9	10.6	
<40-64>	2	162	73	68	117	420
		38.6	17.4	16.2	27.9	18.6
		15.8	18.2	17.4	27.0	
		7.2	3.2	3.0	5.2	
<65-HI>	3	12	6	13	21	52
		23.1	11.5	25.0	40.4	2.3
		1.2	1.5	3.3	4.8	
		0.5	0.3	0.6	0.9	
	COLUMN TOTAL	1028	402	391	433	2254
		45.6	17.8	17.3	19.2	100.0

RAW CHI SQUARE = 118.25435 WITH 9 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0000
CRAMER'S V = 0.13224
CONTINGENCY COEFFICIENT = 0.22327
LAMBDA (ASYMMETRIC) = 0.0 WITH AGE DEPENDENT. = 0.00734 WITH REASON DEPENDENT.
LAMBDA (SYMMETRIC) = 0.00422
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.02436 WITH AGE DEPENDENT. = 0.01940 WITH REASON DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.02160
KENDALL'S TAU B = 0.04696 SIGNIFICANCE (2-TAILED) = 0.0113
KENDALL'S TAU C = 0.03936 SIGNIFICANCE (2-TAILED) = 0.0113
GAMMA = 0.07242 SIGNIFICANCE (2-TAILED) = 0.0113
SOMERS'S D (ASYMMETRIC) = 0.04258 WITH AGE DEPENDENT. = 0.05178 WITH REASON DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.04673
ETA = 0.15453 WITH AGE DEPENDENT. = 0.14884 WITH REASON DEPENDENT.
PEARSON'S R = 0.08291 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 3104

A P P E N D I X D

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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   AGELEVEL                                                        BY  SEX         <SEX>
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     SEX
            COUNT   I
           ROW PCT  IFEMALE   MALE       ROW
           COL PCT  I                    TOTAL
           TOT PCT  I      1  I      2  I
AGELEVEL   --------I--------I--------I
                1  I    46  I    23  I    69
  <65 TO 74>        I  66.7  I  33.3  I  63.9
                    I  63.9  I  63.9  I
                    I  42.6  I  21.3  I
                   -I--------I--------I
                2  I    26  I    13  I    39
  <75 TO 99>        I  66.7  I  33.3  I  36.1
                    I  36.1  I  36.1  I
                    I  24.1  I  12.0  I
                   -I--------I--------I
            COLUMN      72        36       108
             TOTAL    66.7      33.3     100.0

CORRECTED CHI SQUARE =      0.0     WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  1.0000
      RAW CHI SQUARE =      0.0     WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  1.0000
PHI =    0.0
CONTINGENCY COEFFICIENT =  0.0
LAMBDA (ASYMMETRIC) =  0.0     WITH AGELEVEL DEPENDENT.          =  0.0     WITH SEX      DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00000 WITH AGELEVEL DEPENDENT.          =  0.00000 WITH SEX      DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00000
KENDALL'S TAU B =     0.0      SIGNIFICANCE (2-TAILED) = 0.8325
KENDALL'S TAU C =     0.0      SIGNIFICANCE (2-TAILED) = 0.8325
GAMMA =    0.0      SIGNIFICANCE (2-TAILED) = 0.8325
SOMERS'S D (ASYMMETRIC) =  0.0     WITH AGELEVEL DEPENDENT.          =  0.0     WITH SEX      DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.0
ETA =  0.0     WITH AGELEVEL DEPENDENT.          =  0.0     WITH SEX      DEPENDENT.
PEARSON'S R = 0.0      SIGNIFICANCE =  0.5000

NUMBER OF MISSING OBSERVATIONS =  5250
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AGELEVEL	COUNT / ROW PCT / COL PCT / TOT PCT	MARITAL 1 SINGLE	2 MARRIED	3 WIDOWED	4 DIV-SEP	ROW TOTAL
1 <65 TO 74>		3	21	17	9	50
	ROW PCT	6.0	42.0	34.0	18.0	63.3
	COL PCT	33.3	70.0	54.8	100.0	
	TOT PCT	3.8	26.6	21.5	11.4	
2 <75 TO 99>		6	9	14	0	29
	ROW PCT	20.7	31.0	48.3	0.0	36.7
	COL PCT	66.7	30.0	45.2	0.0	
	TOT PCT	7.6	11.4	17.7	0.0	
COLUMN TOTAL		9	30	31	9	79
		11.4	38.0	39.2	11.4	100.0

2 OUT OF 8 (25.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 3.304
RAW CHI SQUARE = 10.23098 WITH 3 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0167
CRAMER'S V = 0.35987
CONTINGENCY COEFFICIENT = 0.33861
LAMBDA (ASYMMETRIC) = 0.10345 WITH AGELEVEL DEPENDENT. = 0.08333 WITH MARITAL DEPENDENT.
LAMBDA (SYMMETRIC) = 0.09091
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.12587 WITH AGELEVEL DEPENDENT. = 0.06729 WITH MARITAL DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.08770
KENDALL'S TAU B = -0.15954 SIGNIFICANCE (2-TAILED) = 0.1500
KENDALL'S TAU C = -0.17882 SIGNIFICANCE (2-TAILED) = 0.1500
GAMMA = -0.27761 SIGNIFICANCE (2-TAILED) = 0.1500
SOMERS'S D (ASYMMETRIC) = -0.13229 WITH AGELEVEL DEPENDENT. = -0.19241 WITH MARITAL DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.15679
ETA = 0.35987 WITH AGELEVEL DEPENDENT. = 0.20895 WITH MARITAL DEPENDENT.
PEARSON'S R =-0.20894 SIGNIFICANCE = 0.0323

NUMBER OF MISSING OBSERVATIONS = 5279

AGELEVEL	COUNT / ROW PCT / COL PCT / TOT PCT	METHOD 1 SELF-INJURY	METHOD 2 SELF-POISON	METHOD 3 OTHER	ROW TOTAL
1 <65 TO 74>		8	59	1	68
	ROW PCT	11.8	86.8	1.5	64.2
	COL PCT	61.5	65.6	33.3	
	TOT PCT	7.5	55.7	0.9	
2 <75 TO 99>		5	31	2	38
	ROW PCT	13.2	81.6	5.3	35.8
	COL PCT	38.5	34.4	66.7	
	TOT PCT	4.7	29.2	1.9	
COLUMN TOTAL		13	90	3	106
		12.3	84.9	2.8	100.0

3 OUT OF 6 (50.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 1.075
RAW CHI SQUARE = 1.35470 WITH 2 DEGREES OF FREEDOM. SIGNIFICANCE = 0.5080
CRAMER'S V = 0.11305
CONTINGENCY COEFFICIENT = 0.11233
LAMBDA (ASYMMETRIC) = 0.02632 WITH AGELEVEL DEPENDENT. = 0.0 WITH METHOD DEPENDENT.
LAMBDA (SYMMETRIC) = 0.01852
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00931 WITH AGELEVEL DEPENDENT. = 0.01222 WITH METHOD DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.01057
KENDALL'S TAU B = 0.02609 SIGNIFICANCE (2-TAILED) = 0.8967
KENDALL'S TAU C = 0.01816 SIGNIFICANCE (2-TAILED) = 0.8967
GAMMA = 0.07153 SIGNIFICANCE (2-TAILED) = 0.8967
SOMERS'S D (ASYMMETRIC) = 0.03448 WITH AGELEVEL DEPENDENT. = 0.01974 WITH METHOD DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.02510
ETA = 0.11305 WITH AGELEVEL DEPENDENT. = 0.03055 WITH METHOD DEPENDENT.
PEARSON'S R = 0.03053 SIGNIFICANCE = 0.3780

NUMBER OF MISSING OBSERVATIONS = 5252

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* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
   AGELEVEL                                                       BY  PLANNED   <PLANNED TO DIE>
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                 PLANNED
         COUNT  I
       ROW PCT  INO        YES        ROW
       COL PCT  I                     TOTAL
       TOT PCT  I      1  I      2  I
AGELEVEL  --------I--------I--------I
             1  I     52  I     17  I     69
  <65 TO 74>    I   75.4  I   24.6  I   63.9
                I   64.2  I   63.0  I
                I   48.1  I   15.7  I
               -I--------I--------I
             2  I     29  I     10  I     39
  <75 TO 99>    I   74.4  I   25.6  I   36.1
                I   35.8  I   37.0  I
                I   26.9  I    9.3  I
               -I--------I--------I
        COLUMN        81        27       108
         TOTAL      75.0      25.0     100.0

CORRECTED CHI SQUARE =     0.0      WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  1.0000
      RAW CHI SQUARE =     0.01338 WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  0.9079
PHI =    0.01113
CONTINGENCY COEFFICIENT =  0.01113
LAMBDA (ASYMMETRIC) =  0.0      WITH AGELEVEL DEPENDENT.          =  0.0     WITH PLANNED  DEPENDENT.
LAMBDA (SYMMETRIC) =  0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00009 WITH AGELEVEL DEPENDENT.          = 0.00011 WITH PLANNED  DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00010
KENDALL'S TAU B =     0.01113  SIGNIFICANCE (2-TAILED) = 0.9083
KENDALL'S TAU C =     0.00926  SIGNIFICANCE (2-TAILED) = 0.9083
GAMMA =     0.02665  SIGNIFICANCE (2-TAILED) = 0.9083
SOMERS'S D (ASYMMETRIC) =  0.01235 WITH AGELEVEL DEPENDENT.          =  0.01003 WITH PLANNED  DEPENDENT.
SOMERS'S D (SYMMETRIC) =  0.01107
ETA =  0.01110 WITH AGELEVEL DEPENDENT.          =  0.01112 WITH PLANNED  DEPENDENT.
PEARSON'S R = 0.01113  SIGNIFICANCE =  0.4545

NUMBER OF MISSING OBSERVATIONS =  5250
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AGELEVEL BY PRIOR <PRIOR ATTEMPT>

* PAGE 1 OF 1

AGELEVEL	PRIOR COUNT ROW PCT COL PCT TOT PCT	NO 1	YES 2	ROW TOTAL
1 <65 TO 74>	COUNT	59	10	69
	ROW PCT	85.5	14.5	64.5
	COL PCT	64.1	66.7	
	TOT PCT	55.1	9.3	
2 <75 TO 99>	COUNT	33	5	38
	ROW PCT	86.8	13.2	35.5
	COL PCT	35.9	33.3	
	TOT PCT	30.8	4.7	
COLUMN TOTAL		92 86.0	15 14.0	107 100.0

CORRECTED CHI SQUARE = 0.0 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 1.0000
RAW CHI SQUARE = 0.03623 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.8491
PHI = 0.01840
CONTINGENCY COEFFICIENT = 0.01840
LAMBDA (ASYMMETRIC) = 0.0 WITH AGELEVEL DEPENDENT. = 0.0 WITH PRIOR DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00026 WITH AGELEVEL DEPENDENT. = 0.00042 WITH PRIOR DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00032
KENDALL'S TAU B = -0.01840 SIGNIFICANCE (2-TAILED) = 0.9202
KENDALL'S TAU C = -0.01223 SIGNIFICANCE (2-TAILED) = 0.9202
GAMMA = -0.05600 SIGNIFICANCE (2-TAILED) = 0.9202
SOMERS'S D (ASYMMETRIC) = -0.02536 WITH AGELEVEL DEPENDENT. = -0.01335 WITH PRIOR DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.01749
ETA = 0.01839 WITH AGELEVEL DEPENDENT. = 0.01836 WITH PRIOR DEPENDENT.
PEARSON'S R =-0.01840 SIGNIFICANCE = 0.4254

NUMBER OF MISSING OBSERVATIONS = 5251

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AGELEVEL BY CONTYPE <CONTACT TYPE>
* PAGE 1 OF 1

AGELEVEL	COUNT / ROW PCT / COL PCT / TOT PCT	CONTYPE: INO SERVICE 1	SOME SERVICE 2	ROW TOTAL
1 <65 TO 74>	COUNT	33	36	69
	ROW PCT	47.8	52.2	64.5
	COL PCT	67.3	62.1	
	TOT PCT	30.8	33.6	
2 <75 TO 99>	COUNT	16	22	38
	ROW PCT	42.1	57.9	35.5
	COL PCT	32.7	37.9	
	TOT PCT	15.0	20.6	
COLUMN TOTAL		49	58	107
		45.8	54.2	100.0

CORRECTED CHI SQUARE = 0.13372 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.7146
RAW CHI SQUARE = 0.32308 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.5698
PHI = 0.05495
CONTINGENCY COEFFICIENT = 0.05487
LAMBDA (ASYMMETRIC) = 0.0 WITH AGELEVEL DEPENDENT. = 0.0 WITH CONTYPE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00233 WITH AGELEVEL DEPENDENT. = 0.00219 WITH CONTYPE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00226
KENDALL'S TAU B = 0.05495 SIGNIFICANCE (2-TAILED) = 0.7159
KENDALL'S TAU C = 0.05241 SIGNIFICANCE (2-TAILED) = 0.7159
GAMMA = 0.11521 SIGNIFICANCE (2-TAILED) = 0.7159
SOMERS'S D (ASYMMETRIC) = 0.05278 WITH AGELEVEL DEPENDENT. = 0.05721 WITH CONTYPE DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.05490
ETA = 0.05495 WITH AGELEVEL DEPENDENT. = 0.05495 WITH CONTYPE DEPENDENT.
PEARSON'S R = 0.05495 SIGNIFICANCE = 0.2870

NUMBER OF MISSING OBSERVATIONS = 5251