A Giiatric Life History Interview
Schedule: Its Design and Construction

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A geriatric life history schedule was designed in the late stages of a longitudinal study of aging twins. The purpose of this study, begun in 1946 by Franz Kallmann, Lissy Jarvik and associates, was to discover factors relating to longevity and successful aging. The survivors of the original sample now in their 80's, have been located and follow-up interviews are being conducted throughout the United States. For this research, longevity and successful aging were defined independently of the information being collected in the newly constructed life history schedule. Longevity was simply defined as survival, that is, it was the fact of being alive approximately 20 years after the initial interview. Successful aging was defined in terms of the following four characteristics:

1. Physical health. The individual currently enjoys good physical health as determined by a thorough medical examination.

2. Appearance. Current observer ratings indicated the person looks well or appears younger than his age.


4. Psychiatric diagnosis. The individual is free of psychopathology associated with old age.

A case history of the C twins will serve to illustrate what is meant by longevity and successful aging. Eighty-two year old Ned and Ted, dizygotic twins, were first seen twenty years ago. At that time, the disparity in their physical appearance was observed and may be seen in Slide 1. One of the twins, Ned, was about four inches taller than his brother, weighed 25 pounds more, had barely begun to gray and looked at least ten years younger than his age. His brother had white hair and looked older than his age. From the same slide, you may see that 20 years later they still look markedly different.

Despite their different appearance they can both be classified on other dimensions as examples of successful aging. They are both spry, active, and enjoy good health. In general, their abilities as measured by the psychological test

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battery remain essentially unchanged over the years of the study. There was no evidence of psychiatric disorder.

In order to test sociological, psychological, biomedical and common sensical hypotheses about factors which contribute to longevity and successful aging, it was necessary to construct a geriatric life history schedule. A search of the literature for such a schedule proved unsuccessful. Needless to say, the problem of deciding what sort of information to gather and what to omit in constructing such an instrument was especially great because it was to cover the entire life span of an aged individual. Two general approaches guided the construction of the schedule. One was that of subjective record keeping as suggested by Dailey (1958), who chronicled significant episodes and reactions to them. Another approach was the more objective and dynamic one suggested by Nancy Bayley (1963) who stressed collecting data on patterns of growth and change by means of longitudinal studies.

Our geriatric life history schedule was constructed as a standard, comprehensive, structured and codifiable interview to provide information on life experiences during childhood, adulthood and senescence. It covers the following areas: health, nutrition, critical maturational events, residential settings, activities and habits, religiosity, sociability, education, work and retirement, as well as parental, marital, offspring and sibling relationships. It was designed to elicit retrospective and current data provided by the subject, his co-twin and other informants.

The following are descriptions of only some of the content and rationales for the biomedical, sociological, and psychological sections of the geriatric life history schedule:

1. Biomedical

While some aspects of longevity are hereditary, it isn't clear how heredity works or if rates of aging are also hereditary. The case study of the M twins will illustrate this point because only one of them aged successfully.

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These 85-year-old, monozygotic M twin brothers shown on the next slide lived together on their parents' farm until age 21. The twins then jointly bought a farm of their own on which they worked together for the next nine years. It was not until age 30, that their intimate and almost constant contact diminished. At that time Hank went into the cattle and wool business and became a financially successful salesman while Frank continued to run the farm, also successfully. Both twins had four children, three daughters and a son born in that order to the wife of each. Both twins were in excellent health until the age of 70. Then, Frank became hypertensive, had a prostatectomy at age 74, a cerebrovascular accident at age 82, a severe gastrointestinal hemorrhage at age 83 and a probable coronary thrombosis at age 84. During this period he deteriorated mentally, his eyesight became impaired, as did his motion, owing to
osteoarthritic changes in his knee joints and a slight hemiparesis. Today he is confused, demented and unable to care for himself. In contrast, Hank is still in good physical and mental health, and is still active and running his business successfully.

To explain such discrepancies biomedically the following areas are explored:

1.) Patterns of activity and amount of exercise. To distinguish between the passive, sedentary person and the active energetic person, many questions were included to cover lifelong activities, interests, habits as well as changes in them.

2.) Sleep patterns. Questions were included about time of day preferred to distinguish the day and night people and soundness of sleep to distinguish the light-sleepers from the heavy sleepers. Also included were questions to determine whether lack of sleep of which older persons complain represents a real decrease in amount of sleep or a change in pattern to that of taking numerous short naps.

3.) Nutritional factors. An attempt was made to get detailed information on life-long weight changes and dietary habits e.g., number and size of meals eaten and dietary constituents with specific emphasis upon saturated and unsaturated fats, sugar content, protein content, vitamins, caffeine, salt and spices. Similarly, questions about habits regarding ingestion of liquids, such as H2O, soft drinks and alcoholic beverages are included. Questions on smoking and self-medicated or prescribed drug intake were also asked.

2. Sociological

Various social factors such as unsuccessful marital history, stress, and enforced isolation have been thought to interfere with longevity and successful aging.

The case of the dizygotic V twins will serve as an example of two sisters with different marital histories, both of whom aged successfully.

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Slide 3 here

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Nina and Linda were born 79 years ago, daughters of a building contractor in a small town. They lived together until Linda's marriage at the age of 24. Nina, who never married, studied music. She worked first in her father's office and later in the clothes factory which Linda, who had studied fashion design, and her husband, a lawyer, developed into a prosperous family business. Both sisters maintain a youthful appearance as can be seen from the photograph taken this year, although they have certainly aged when compared to their appearance 20 years ago. (Incidentally, the other two ladies in the photograph are the twins' only siblings, also twins born 10 years earlier. One of them is still alive, the other died 13 years ago.) Nina has some signs of arteriosclerotic cardiovascular disease and moderate hypertension, while Linda has remained in excellent health. Nina and Linda are mentally alert, free from psychopathology and continue to be active socially as well as in business.
A second sociological hypothesis is that successful aging is precluded by a history of social isolation. Some empirical investigations of the aged population concerning various aspects of the consequences of social isolation, found that loss of contact among the aged negatively affects their adjustment. Others found that reduced social interaction was implicated as an etiological factor in mental illness in old age. To test these ideas, the adulthood and current isolation indices of Bennett, et. al. were incorporated into the schedule. The adulthood isolation index takes into account the number of interpersonal relationships experienced by the individual during adulthood. Role relationships to the following are assessed: children, siblings, friends, relatives, parents, spouse, work and voluntary organizations. The role dimensions measured are: number, frequency of activation, and duration.

A third hypothesis holds that experiencing numerous environmental changes over time, including change in socioeconomic status and location of residence or experiencing numerous life stresses are detrimental to successful aging. Life stress items, taken from Langner & Michael (1963) were included in the geriatric life history schedule. Some of the stress items concern poor health in childhood, frequent disagreements with parents in childhood, parental psychosomatic symptoms, parental "worrying", broken homes, and death of both parents.

3. Psychological

The following psychological hypotheses are being tested:

1.) Mental breakdown prior to senescence precludes longevity and successful aging. Questions are included to cover lifetime hospitalizations and other indicators of prolonged illness, e.g., long absences from work and school.

2.) Ability to adapt to change and stress is a requirement for successful aging. Descriptions of personal reactions to a wide variety of experiences and events over a lifetime are being assessed, for example reaction to loss of spouse. Subjective "experiencing" and life satisfaction measures are also included.

3.) Rates of developmental changes influence longevity. It has been suggested that persons who mature early show early decline and possibly a shortened life span. The schedule elicits information regarding maturation patterns, age of first job and age at onset of dating behavior.

DISCUSSION

In constructing the questionnaire, we tried to combine the virtues of an instrument that can be easily coded and machine analyzed with those of the customary, open-ended history which often yields great riches in the form of personal information, attitudes and points of view. Thus, for any given area there are some questions that are rigidly structured and others that are open-ended with space for additional comments. We are only too aware of the deficiencies of any instrument which relies on retrospective data but hope that this study will help demarcate fruitful areas for future longitudinal research. In part to attempt to compensate for some of its deficiencies, the geriatric life history schedule is administered in conjunction with psychological tests, a
mental status schedule as well as a medical examination and history. Hopefully, this study will make it possible to determine which background factors are valid predictors of longevity and successful aging.