Research Statement

**Cumulative Exposure to Stressful Events and Health among the Elderly: Environmental and Personal Factors**

The proposed study will explore the correlation between cumulative exposure to stressful events and deteriorating health among the elderly. It will investigate environmental and personal factors that may impact this correlation. Various state-level environmental factors are considered: metrics of income equality, an index of social resilience, and policies. Personal factors include coping behaviors such as lifestyle, exercise, and alcohol use. This comparative analysis is based on longitudinal data from various European countries collected in the 14-year Survey of Health, Aging and Retirement, conducted in Europe and Israel (SHARE).

The aim of the proposed study is to contribute to the literature, current research trends, and work in the field by integrating the topics of stressful events and aging. A stressful event is defined as any objective, external threat that poses a potential for trauma or distress in a person. These may be as varied as: displacement due to war, physical assault, discrimination, extended illness, and more. Interest in and research on these topics have increased in recent years, in light of the numerous wars, terrorist attacks, and natural disasters occurring throughout the world. At the same time, over the last century, life expectancy has risen to the longest in human history. The percentage of elderly people in many populations continues to rise, and the global population is aging. During the course of a long life, individuals may be exposed to a greater number of stressful events.

The few studies integrating the topics of stress and old age have yielded ambiguous results. Some have found that long-term exposure to stressful events has cumulative negative health consequences in old age. Others claim that exposure to a moderate amount of stress has health benefits. The present study will clarify this ambiguity and contribute to the field by considering aspects not explored in previous research. Most previous studies considered variables from the examined datasets at only a single point in time, making it difficult to draw conclusions about processes. Thus, cross-sectional studies on this subject yield an incomplete picture, especially given that old age is characterized as a transitional stage during which changes occur rapidly over a relatively short time. Furthermore, the cumulative impacts of stress on elderly individuals may be reflected not only in poor health at one point in time, but also in an accelerated rate of health deterioration, as compared to natural deterioration due to age. The proposed longitudinal study will fill this gap in the research literature by examining data spanning approximately 14 years.

In addition, the study will examine various resources that may impact the consequences of stressful events in old age. The study will incorporate theories of resource use that have primarily been applied to childhood trauma and its implications among a general population. The current study will investigate whether these models can be applied to older age groups. Theories of resource use may be particularly relevant to this stage of life, which often necessitates recruitment of new resources to deal with the changes it entails. Thus, this study will consider environmental and personal resources that have not been previously tested in research. One of the primary types of resources is those provided by the state. The representative samples from European countries can yield a rich and broad picture of the situation among older populations in a large number of countries. Moreover, given the multiple stressful events that have been occurring in recent years in Europe, another distinct contribution of the proposed research is an innovative investigation into current events, and an international comparison of the implications these events have on elderly populations in the various countries.

In order to examine the research questions, I intend to build the general research model within the framework of Structural Equation Modeling (SEM). This type of analysis uses a system of regression equations, which allows a particular variable to function simultaneously as an explanatory variable and a dependent variable. It has the advantage of enabling simultaneous assessment of multiple hypotheses, including hypotheses of indirect regression relationships. In the present case, the equation system incorporates assessment of latent health variables and observed or manifested variables, as shown in Figure 1.

The model examined in this study poses multiple challenges, such as the complex statistical methods required to build a longitudinal model; coping with dropout from survey participants; ensuring the results are not biased; and accurately identifying the specific environmental and personal factors relevant to the aging process. The essence of the study is theoretical, but the choice of variables representing coping resources increases the applied value of the research. I intend to present the results of this research in academic journals, at conferences and conventions, as well as at meetings attended by policy makers, with the goal of improving understanding of the impact of traumatic events, and ultimately improving life among the elderly population.

In summary, the proposed research is expected to make several contributions. First, this longitudinal study fills a gap in the field. Aging is a dynamic process entailing multiple changes and trends, but while this life stage has been increasingly studied in recent decades, there has been insufficient investigation of these changes via longitudinal studies. Thus, the proposed longitudinal research may be considered pioneering in the field. Second, this study will contribute to the literature on trauma and stress by re-examining theories regarding use of resources for coping with stress, as they apply to elderly populations. The consideration of state-provided resources in European countries makes this study currently relevant and of international importance. Finally, at the applied level, the study may contribute to the identification of vulnerable populations among the elderly. For example, if it is found that cumulative exposure to stress has long-term implications for health throughout old age, then it will be verified that older people who have been exposed to multiple stress events are at increased risk of an accelerated decline in their physical and mental health. Furthermore, identifying resources that may mitigate the consequences of stress will help this population on a practical level, by encouraging the support, strengthening, and expansion of resources to help them cope, thereby improving the health and quality of life of those in need. Identifying the environmental resources available in various countries may help establish new policies that will benefit the physical and mental health of the elderly population. The research will strive to provide practical directions, both in terms of state policy and personal factors, regarding how older individuals and the environment in which they live can best meet the needs of this population.