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Chicago, IL 60625-4699

Office of Research Development

NIH Pilot Grant



Applicant Information

Personal Information

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Project Information

Title: Long-Term Effects Of "Unjust" War

Recommended Reviewer: _____ Email: _____

Recommended Reviewer: _____ Email: _____

Recommended Reviewer: _____ Email: _____

DESCRIPTION: See instructions. State the application's broad, long-term objectives and specific aims, making reference to the health relatedness of the project (i.e., relevance to the **mission of the agency**). Describe concisely the research design and methods for achieving these goals. Describe the rationale and techniques you will use to pursue these goals.

In addition, in two or three sentences, describe in plain, lay language the relevance of this research to **public** health. If the application is funded, this description, as is, will become public information. Therefore, do not include proprietary/confidential information. **DO NOT EXCEED THE SPACE PROVIDED.**

The primary aim of this study is to examine the long-term effects of traumatic war experiences on the former Japanese suicide bombers during WWII. No systematic inquiry of these individuals, let alone the assessment of their long-term psychological health status, has ever been conducted largely due to the "unjust" nature of the war—an overwhelming national resentment toward the war itself and people who were involved in that war. Although the literature suggest long-term detrimental effects of war among those who suffered a traumatic event, my preliminary study with eight former suicide pilots reveal that they felt a sense of personal growth due to the experience. Thus, I plan to investigate both the negative and positive psychological impact of war among this culturally and historically unique group of individuals.

Through personal friends of the principal investigator's deceased father (who was also a former pilot), a total of approximately 15 former pilots will be recruited by means of multiple-entry chain sampling. They all immigrated to the U.S. after the war, and the majority currently reside various parts of the West Coast. A one-on-one interview schedule addresses the conventional questions about their demographic characteristics, potential long-term Posttraumatic Stress Disorder (PTSD) status, subjective life satisfaction, depressive symptoms, and general health status. In addition, based on Erik Erikson's lifespan developmental framework, several open-ended questions will be also asked concerning their psychosocial strengths and their opinions and feelings about topics such as war and suicide missions.

In light of on-going military conflicts around the globe, the psychological health of those who experienced severe war-related trauma warrants immediate investigation. It is expected, therefore, that the present study serves as the foundation for further systematic research of this particular population as well as provides valuable public health information/resources to all veterans who experienced traumatic war-related events. Such an effort not only breaks new ground in the investigation of the psychosocial profile of this historically and culturally unique group of individuals, but also expands the growing literature examining either positive or negative long-term psychological effects of war in general.

PERFORMANCE SITE(S) (organization, city, state)

Northeastern Illinois University, Chicago, IL

Private residence of former suicide bombers in the U.S.

Principal Investigator/Program Director (Last, First, Middle): Rueckert, Linda / Takahashi, Masami

KEY PERSONNEL. See instructions. Use continuation pages as needed to provide the required information in the format shown below. Start with Principal Investigator(s). List all other key personnel in alphabetical order, last name first.

Name	eRA Commons User Name	Organization	Role on Project
Takahashi, Masami		Northeastern Illinois	PI

OTHER SIGNIFICANT CONTRIBUTORS

Name	Organization	Role on Project
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Human Embryonic Stem Cells No Yes

If the proposed project involves human embryonic stem cells, list below the registration number of the specific cell line(s) from the following list: <http://stemcells.nih.gov/registry/index.asp>. Use continuation pages as needed.

If a specific line cannot be referenced at this time, include a statement that one from the Registry will be used.

Cell Line

The name of the principal investigator/program director must be provided at the top of each printed page and each continuation page.

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Number of publications and manuscripts accepted for publication *(not to exceed 10)* _____

Other items (list): _____

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Masami Takahashi	POSITION TITLE Associate Professor		
eRA COMMONS USER NAME			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Houston-Clear Lake, Houston, TX	B.A.	1988	Psychology
University of Houston-Clear Lake, Houston, TX	M.S.	1990	Psychology
Temple University, Philadelphia, PA	Ph.D.	1999	Developmental Psychology

Please refer to the application instructions in order to complete sections A, B, and C of the Biographical Sketch.

A. Position and Honors

1999-2005 Assistant Professor of Psychology, Northeastern Illinois University, Chicago, IL
 2005-Present Associate Professor of Psychology, Northeastern Illinois University, Chicago, IL
 1997 Outstanding Achievement Award for Superior Teaching in Psychology, Temple University, Philadelphia, PA
 2002, 2003 Faculty Excellence Award (Research and Creative Activities), Northeastern Illinois University, Chicago, IL
 2005 & 2006

B. Selected Manuscript

Takahashi, M., & Overton, W. F. (1996). Formal reasoning in Japanese older adults: The role of metacognitive strategy, task content, and social factors. *Journal of Adult Development*, 3(2), 81-91.

Takahashi, M., & Bordia, P. (2000). The concept of wisdom: A cross-cultural comparison. *International Journal of Psychology*, 35(1), 1-9.

Takahashi, M. (2000). Toward a culturally inclusive understanding of wisdom: Historical roots in the East and West. *International Journal of Aging and Human Development*, 51(3), 217-230.

Takahashi, M., & Overton, W. F. (2002). Wisdom: Toward a culturally inclusive understanding. *International Journal of Behavioral Development*, 26(3), 269-277.

Takahashi, M., & Ide, S. (2003). Implicit theories of spirituality across three generations: A cross-cultural comparison in the U.S. and Japan. *The Journal of Religious Gerontology*, 15(4), 15-38.

Chapell, M. S., Blanding, Z. B., Silverstein, M. E., Takahashi, M., Newman, B., Gubi, A., & McCann, N. (2005). Test anxiety and academic performance in undergraduate and graduate students. *Journal of Educational Psychology*, 97(2), 268-274.

Takahashi, M., & Overton, W. F. (2005). Cultural foundations of wisdom: An integrated developmental approach. In R. J. Sternberg & J. Jordan (Eds.), *A Handbook of wisdom* (pp. 32-60). New York: Cambridge University Press.

- Takahashi, M. (Producer/Director). (2006). *Champuru: The Okinawan recipe for healthy aging* [Motion picture]. United States: phi phenom production.
- Takahashi, M. (producer/Director). (2006). *Last Kamikaze: Testimonials from the WWII suicide pilots*. [Motion picture]. United States: phi phenom production.
- Coste, J. K. (2007). Learning to speak Alzheimer's (trans. Ide, S. & Takahashi, M). Tokyo, Japan: Seishin-shobo.
- Ribaud, A., & Takahashi, M. (in press). Temporal trends in spirituality research: A meta-analysis of journal abstract between 1944 and 2004. *Journal of Religion, Spirituality, and Aging*.
- Takahashi, M. (in press). Religion and Spirituality. In Kaneko, A. (Ed.), *Shukyo shinrigaku gairon* [A handbook of religious psychology]. Kyoto, Japan: Nakanishiya

C. Research Support

- 2001 Principal Investigator, Committee on Organized Research Grant (*Implicit theories of spirituality across generations and cultures*), Northeastern Illinois University, Chicago, IL
- 2004 Principal Investigator, Committee on Organized Research Grant ("Narrative life story of former Japanese suicide bombers: An exploration of their psychosocial profiles and views on suicide missions"), Northeastern Illinois University, Chicago, IL
-This grant was used for a preliminary study of this project.
- 2004 Principal Investigator, Humanity Mini Grant, ("Last *Kamikaze*: Testimonials from the WWII suicide pilots"), Illinois Humanity Council, Chicago, IL
- 2005 Consultant, Scientific Research Grant, "Research on the system of Psychology of Religion," Japan Society for the Promotion of Science
-I played a consultant role for the establishment of the Japanese Society for the Study of Psychology of Religion
- 2006 Principal Investigator, Humanity Media Grant, ("Last *Kamikaze*: Testimonials from the WWII suicide pilots"), Illinois Humanity Council, Chicago, IL
-The Mini Grant (2004) was used as a "start-up" grant for producing a documentary film on the Kamikaze subject which was subsequently completed with the Media Grant (2006).

RESOURCES

FACILITIES: Specify the facilities to be used for the conduct of the proposed research. Indicate the performance sites and describe capacities, pertinent capabilities, relative proximity, and extent of availability to the project. If research involving Select Agent(s) will occur at any performance site(s), the biocontainment resources available at each site should be described. Under "Other," identify support services such as machine shop, electronics shop, and specify the extent to which they will be available to the project. Use continuation pages if necessary.

Laboratory:

Data analyses will be conducted in my office at Northeastern Illinois University (NEIU), Chicago, IL

Clinical:

Animal:

Computer:

Office:

NEIU, Chicago, IL

Other:

MAJOR EQUIPMENT: List the most important equipment items already available for this project, noting the location and pertinent capabilities of each.
Olympus Voice-Trek V-13

Research Plan

A. Specific Aims

The primary aim of this study is to examine the potential long-term effects of traumatic war experiences on former Japanese veterans who now reside in the U.S. No systematic inquiry of these individuals, let alone the assessment of their long-term psychological health status, has ever been conducted to date. This is largely due to the post-war national resentment toward the war itself and people who were involved in that war. Although the evidence of long-term detrimental effects of war experiences is abundant (e.g., Fischer, Struwe, & Lemke, 2007; Spiro, Schnurr, & Aldwin, 1994), my preliminary study with eight former suicide pilots reveals that they regard the war-related experiences not as a trauma but as an opportunity to grow as a person. In particular, these individuals report the development of novel psychosocial strengths (e.g., *hope*, *purposefulness*) that were not present prior to the war (Takahashi, 2007). Because of the small sample size of this preliminary study, however, I plan to examine both the negative and positive psychological impact of war in this proposed study. Thus, this study not only breaks new ground in the investigation of the psychological profile of this historically and culturally unique group of individuals, but also expands the growing literature examining the long-term posttraumatic mental state and the psychosocial developmental strengths in later life.

B. Background and Significance

Time spent in military service often shapes one's developmental trajectory. Motivations up to joining the military, actual experiences during the service, and post military service career all have significant influences on the life course of former soldiers. Although these individuals generally make necessary adjustments after the military service and achieve many life goals comparable to non-veteran counterparts (Elders, 1986), those who experienced traumatic events (e.g., deaths of comrades, hands-on combat, torture, etc.) report long lasting changes in their psyche.

On the one hand, these changes often involve psychological damages due to suffering and devastation. Numerous cross-cultural studies, for example, reveal that experiencing war-related traumatic events has negative impacts on the soldiers (e.g., Spiro, Schnurr, & Aldwin, 1994) and that posttraumatic stress disorder (PTSD) has both an immediate effect on the person's life as well as a long-term effect on his/her life trajectory (Cook, O'Donnell, Moltzen, Ruzek, & Sheikh, 2005; Solomon, Shklar, Singer, & Mikulincer, 2006). Further, recent clinical evidence suggests that the re-emergence of once subsided PTSD is not uncommon for those older individuals who experienced war-related stress more than several decades earlier (Bender, 1997; Coleman & Mills, 1997). For example, Fischer, Struwe, and Lemke (2007) report that one in ten evacuees of forced expulsion from German territories following WWII are diagnosed with PTSD according to the DSM-III-R criteria while only less than 2% of age-matched non-evacuees met these criteria. Waugh, Robbins, Davies, and Feigenbaum (2007) also report a similar finding with the former British evacuees of WWII.

On the other hand, there is also growing evidence that a person may go through a positive metamorphosis after experiencing a severe trauma. In fact, the phenomenon of posttraumatic growth (PTG) has been recognized since antiquity (e.g., Egyptian mythology of Phoenix, Book of Job, etc.). It is a "seismic" event that an individual experiences that necessitates the restructuring of his/her existing values and assumptions. As a result, some individuals may establish a better coping skill and stronger psychological structure to deal with other problems, all the while coming to appreciate what they now have (Tedeschi, Park, & Calhoun, 1998). Several studies involving war veterans and survivors also report long-lasting characteristic of PTG (e.g., Aldwin, Levenson, & Spiro, 1994; Lev-Wiesel & Amir, 2006)

Whether a person who experienced a trauma exhibits PTSD or PTG symptoms and to what extent these symptoms are expressed depend on a variety of factors such as one's personality traits and quality of trauma (Aldwin & Sutton, 1998). McCrae and Costa (1986), for example, suggest that

an extraverted person who is high in openness and low in neuroticism tends to gain a better perspective of life after experiencing adversity.

In this study, I propose to examine a group of soldiers who participated in the first well-orchestrated suicide operation in modern history, the one carried out by the air arm of the Imperial Japanese Navy during World War II. These pilots were systematically recruited and trained when they were in their low teens, and were eventually asked to “volunteer” to attack the Allied ships. Some, often against their will, were able to survive because the war ended before it was their turn to fly out. Their traumatic experiences include not only convincing themselves to participate in the suicide operations and waiting literally day by day for their first and final mission, but also enduring constant hazing by the superiors, engaging in firsthand combat in air raids by the Allied forces, and witnessing the final departure of their comrades.

While a number of memoirs have described individual anecdotes about their lives (e.g. Iwanami, 2000), their psychological health status was never evaluated after the war due to the post-war chaos, nor has there ever been a systematic study on these individuals whatsoever. Thus, this study not only breaks new ground in the investigation of the psychosocial profile of this historically and culturally unique group of individuals but also contributes to the theoretical understanding of the long-term effects of trauma. In particular, in depth analysis of this study may shed some light on the conditions in which PTSD and/or PTG may develop.

[Background]

In brief, so-called *Kamikaze* (divine (*kami*) wind (*kaze*)) operations originated in 1944 as a last ditch effort by the Japanese Imperial Navy to turn around the losing war. Although the earlier operations involved *zero* fighter planes, which were equipped with one quarter ton of explosives and carrying only enough fuel for one way, toward the end of the war, these flying missions were abandoned due to a lack of decent aircraft and raw materials, and other means of suicide tactics (e.g., boats, torpedoes, gliders, etc.) were developed and implemented costing Japan the lives of additional thousands of young men (Fukumoto, 1984).

Although it is generally assumed that the suicide missions involved only courageous “volunteer” pilots, and the earlier books in this field seemed to reinforce this assumption, the truth may not be as simple as it first appears to be. For example, Ohnuki-Tierney (2002) suggests that the assumption of “volunteer” pilots was distorted in the very first and thus influential book on this topic written in 1953 for non-Japanese readers. According to Ohnuki-Tierney, the authors, two former high ranking Japanese naval officers (Inoguchi & Nakajima, 1951), purposefully misrepresented the nature of “volunteerism” in order to advance the notion that these pilots were the embodiment of the Japanese traditional warriors.

Even the story of the very first suicide operation in the South Pacific battles of the late 1944 led by a young squadron leader Yukio Seki has two contrasting versions. On the one hand, the former high ranking officers such as Inoguchi and Nakajima (1951) maintain that the suicide mission was improvised by a group of young fighter pilots themselves who felt that the desperate situation for the country required desperate behavior from its soldiers. On the other hand, Ohnuki-Tierney (2002) and Onoda (1971) claim that the mission was instituted by the high ranking officers who “ordered” Seki to “volunteer.” In fact, Hattori (1996) points to the fact that none of the suicide operation advocates themselves in the military “volunteered” and died.

It is not surprising, however, that under the total control of military government and its massive propaganda campaign, coupled with wartime hysteria and losing battles, many young patriotic soldiers gave in to the idea that self-sacrifice for the country in the form of martyrdom was at least a viable option. Alternatively, as Ohnuki-Tierney suggests, the young pilots simply could not stand seeing, in good conscience, their comrades flying off to the mission while protecting their own lives. In

either case, these young pilots were under tremendous pressure and were likely to have regarded the experience as traumatic.

Although no systematic investigation of psychological effects on these pilots exists, there have been a few attempts to shed light on the personal profile of these youths. For example, after reviewing hundreds of suicide notes left by these pilots, Okamura (cited in Ohara, 1975) found that many young pilots were Christians and traumatized by the idea of suicide operation.

While these informal analyses provide valuable information especially about those who died in the suicide operations, a more systematic investigation of the “survivors” themselves is needed as such an analysis can provide more detailed information concerning their long term psychological health as well as their reflective views on the suicide mission. Erikson’s theoretical framework is particularly useful here due to its emphasis on accruing life strengths through a series of psychosocial crises across lifespan. Although these crises are not traumatic events, the basic assumption of drawing strength from adversity remains as a useful conceptual model for PTG.

In essence, Erikson (1950) postulates a theory (i.e., epigenetic principle) that human life span consists of eight psychosocial stages (i.e., *Trust vs. Mistrust, Autonomy vs. Shame/Doubt, Initiative vs. Guilt, Industry vs. Inferiority, Identity vs. Role Confusion, Intimacy vs. Isolation, Generativity vs. Stagnation, and Ego Integrity vs. Despair*) and that an individual must confront with a “crisis” or critical developmental task, along with seven other non-critical tasks, within each stage. The confrontation with each crisis implies the balancing of the opposite tendencies or syntonic and dystonic potentials (Erikson, 1959). If the dynamic balance of these potentials is being kept, new ego quality or life strength is added to the individual’s psychosocial profile; and thus one is able to maintain a healthy psychological state.

At the last stage of late adulthood, for example, *Wisdom & Perspective* may accrue from facing with the critical issue of *Ego integrity vs. Despair*. At the same time, the individual must deal with the issues from the previous seven stages and, if successful, he or she accrues the stage appropriate life strengths including *Hope & Faith, Willfulness, Independence, & Control, Purposefulness, Pleasure, & Imagination, Competence & Hard work, Value & Sense of Self, Love & Relationship, Care & Productivity, Wisdom & Perspective* (Kivnik, 1993). These life strengths are expressed, just like PTG, as an individual characteristics and attitudes and serve as a vital resource from which older individuals draw the very essence of their unique sense of self.

Further, Erikson maintains that his theory concerns the structure/function of human development in general, and he shows his theory’s cross-cultural and cross-temporal validity through the analyses of such historical figures as Mahatma Gandhi (1969) and Martin Luther (1962). In other words, although specific individual psychosocial tasks may vary, the fundamental developmental pattern and the essential nature of each task remain relatively consistent across time and cultures (Erikson, Erikson, & Kivnik, 1986; Kivnik, 1993; Takahashi & Overton, 2005).

In a rare study that explored the impact of military experience on the trajectory of the former soldiers’ developmental life course, Elder (1986) analyzed an archival dataset of the Berkley Guidance Study, a classic of American soldiers (Stouffer et al., 1949; Stouffer, Suchman, DeVinney, Star, & Williams, 1949). The study revealed that: (a) the boys from relatively deprived families and who were less successful in school were more likely to be attracted to join the military; (b) the Berkley boys were more likely to feel a sense of self-inadequacy, worthlessness, and social incompetence; and (c) the veterans achieved comparable status in their social and domestic lives by the middle-age despite the earlier shortcoming. These results suggest then that despite the deprived background, some of these former soldiers were eventually able to accrue stage appropriate life strengths in their later life stage such as *Competence & Hard work, Love & Relationship, and Care & Productivity*.

However, Hautamaiki and Coleman (2001) caution that the later outcomes of the war experience are significantly influenced by the “legitimacy” of the war. That is, in order to accrue life strengths by integrating the losses and gains, the soldiers’ and the societal attitude must converge

and regard a given war as “good” and legitimate. Otherwise, feelings of guilt and emptiness overwhelm the veterans as these feelings re-emerge during less occupied days of late adulthood, and this may result in resumed PTSD (Bender, 1997; Hunt, 1997). Fontana and Rosenheck (1994), for example, suggest that US veterans of WWII were much better off than those who participated in subsequent unpopular wars such as those in Korea and Vietnam. Furthermore, a majority of Japanese, both young and old, feel a sense of regret to have caused a significant turmoil to the neighboring nations, view the war-time experience as a tremendous hardship, and disagree with the statement that “It would have been better if we won the war” (Osada, 1995)

Given the fact that the Berkley boys and the former *kamikaze* pilots are from the same cohort born in 1920s (“Children of the Great Depression”), yet the societal attitudes toward the war were the mirror images between the U.S. and Japan in the post-war period, it is interesting to know whether or not the *Kamikaze* pilots share similar psychological characteristics and later life experiences with their American counterparts.

The primary purpose of this paper is then to examine the psychological health of the former pilots and explore their psychosocial profile. To achieve these goals, several components of their physical, psychological, and spiritual health will be examined including general physical and psychological health status, major illness(es) in the past, and PTSD and depressive symptoms (if any). With regard to their spiritual health, an open-ended question will address their religious/spiritual orientation and involvement.

Further, two open-ended questions will be asked. First, from the Eriksonian perspective, their psychosocial profile are explored by examining eight life strengths—*Hope & Faith, Willfulness, Independence, & Control, Purposefulness, Pleasure, & Imagination, Competence & Hard work, Value & Sense of Self, Love & Relationship, Care & Productivity, Wisdom & Perspective* (Kivnik, 1993). By attending to these life strengths, we will be able to not only understand the characteristics of PTG, but also be able to identify any remaining psychological issues (PTSD) that they may still have with that part of their lives.

In addition, the study will examine their views concerning the war, suicide missions, and their advice to future generations. Since many of these individuals went through a series of self-reflective and often traumatic periods after the war, accompanied by an extreme sense of guilt and nihilism (Ohnuki-Tierney, 2002) as their social status changed from that of a potential martyr to a “failed repatriate” (*Tokko kuzure*), and finally to a productive citizen, the participants are encouraged to describe their views on these issues, not as present abstractions, but rather as they progressed through each life stage (e.g., adolescence, young adulthood, late adulthood, etc.). It is expected that the recounting of the past and the critical evaluation of the present will elucidate their psychological health of the past and present.

This part of the interview is also critical in examining extremely long-term effects of war experience among these individuals who may have “gone beyond” PTSD. That is, this open-ended interview may provide an opportunity for them to express implicit psychological problems that may not be assessed by traditional PTSD instruments.

C. Preliminary Studies

A preliminary data collection had been carried out in 2005 and again in 2007. I have so far interviewed 20 former pilots (mean age=79.75) who reside both in the U.S and Japan. Most interviews took place at their residence, and each meeting took on average two hours.

I have already conducted a preliminary analysis of a part of this dataset ($n=8$) (Takahashi, 2007). Their general health status is somewhere between *good* and *fair*, and they have a relatively high level of life satisfaction ($mean=5.58$; $SD=1.34$) on the scale that ranges from 0 to 9, higher scores indicating higher life satisfaction. Their PTSD level is low ($mean=7.17$; $SD=7.68$) on the scale with a possible maximum score of 88. Similarly, they have a low level of depression ($mean=2.38$;

$SD=1.50$) on the scale that ranges from 0 to 15 with higher scores indicating more depressive symptoms. These results in conjunction with the findings from the qualitative data analysis suggest that their overall health is affected more by current personal issues (e.g., high blood pressure, marital conflict, etc.) than the past military experiences. More important, no one regarded being a member of a suicide squadron as a traumatic experience. Instead, several participants mentioned that constant hazing by the superior officers at the Training Institute (TI) and witnessing their comrades being killed in air raids were traumatic. Furthermore, their psychosocial strengths seem to be derived from two primary sources: the family and the war related experience including on-going comradeship.

First, given a strong emphasis on family lineage (*ie* system) in the traditional Japanese culture, it was not surprising to find that their spouses and children have been playing an important role in the lives of the former pilots. Their sense of hope and purpose and the feelings of love and care all evolve around their family. Several participants stated that they were willing to relinquish and relegate the family's primary decision making role to their adult children because they hope to create a more cohesive family unit by willingly becoming more interdependent and conforming to the traditional value of *ie*.

It was also found that the experience and the friendship at the TI more than 60 years ago still had a significant impact on these individuals. In other words, the lifelong comradeship and the TI experience continue to give them a sense of hope/security, self-confidence, purposefulness, industry, identity, intimacy, care, and wisdom/perspective. Several participants acknowledged that this robust relationship was nurtured because they collectively experienced war-related trauma (e.g., abusive training) while sharing a sense of ultimate self-sacrifice during a very sensitive teenage years.

Similarly, it is during these formative years that they seem to have established a solid attitude toward death. Although they do not regard being suicide pilots as a trauma, this experience seem to have given them a long-lasting strength ("I'm not afraid of death because I died once before").

D. Research Design and Methods

[Participants]

Through personal friends of my deceased father (who was also a former pilot), a total of approximately 15 community dwelling former pilots will be recruited by means of multiple-entry chain sampling. They all immigrated to the U.S. at different points in their lives after the war. Most of them now reside in the West Coast (e.g., Los Angeles suburbs). Because of the dwindling size of this population, coupled with the in-depth nature of this study, the sample size of 15 was deemed both appropriate and realistic. They are all men, and the age range is between 78 and 85 years.

[Materials]

Although it is customary and sensible not to include a dementia screening instrument in this type of study that involves community dwelling older individuals, a depression scale will be used as a screening device not only because of a high level of comorbidity of these diseases (e.g., Terri et al., 1999) but also because the questions in depression scales seem to be less offensive to healthy older individuals who live independently than those questions in dementia screening devices (e.g., "Name a pencil and watch.").

The interview schedule also addresses the conventional questions about the past and present demographic characteristics (e.g., educational attainment, socioeconomic status, etc.) of themselves as well as their parents, the impact of the war-related experiences, subjective life satisfaction, and general health status. To assess the impact of war-related experiences and potential PTSD, the Impact of Event Scale-Revised-Japanese (Asukai et al., 2002) will be used. This is a 22 item instrument (Weiss, 2004) and yields three components of PTSD: intrusion, avoidance, and hyperarousal. The score for each item ranges from 0 to 4, and thus the total score ranges from 0 to 88. Although this instrument was not developed as a diagnostic tool, Asukai et al. suggest using 24/25 cutoff in total score as a clinical concern of PTSD.

For subjective life satisfaction, a Japanese version of Life Satisfaction Index-K (Koyano, Shibata, Haga, & Suyama, 1989) will be used. This is a nine item, mostly “yes/no” response category questionnaire with higher scores indicating a higher level of life satisfaction. For the current physical health status, a question, “How do you rate your overall health at the present time?” will be asked. The response varies from *excellent*, to *good*, *fair*, and *bad*.

For possible depression, the Japanese version of Geriatric Depression Scale (Yatomi, 1994) will be used, which is a widely used 15 item “yes/no” questionnaire. The score ranges from 0 to 15, higher scores indicating higher frequency of depressive symptoms. The cutoff point for clinical depression has not yet been determined, and it varies from study to study. In this proposed project, however, a conservative 5/6 criterion will be used to screen out those who may be suffering from depression (Herrmann et al., 1994).

In order to explore the psychological profile of these individuals, personality will be assessed by the standardized Japanese version of the NEO-FFI (Shimonaka, Nakazato, Goto, & Takayama, 1998). The NEO-FFI is one of the most widely used personality assessment tools which have been validated in several studies (e.g., McCrae et al., 2000; Paunonen et al., 1996). Further, these personality traits are reported to be consistent over time (Borkenau & Ostendorf, 1998; Costa & McCrae, 1997; McCrae & Costa, 1990).

Several open-ended questions will also be asked concerning their psychosocial strengths, PTG tendencies, and their opinions and feelings about topics such as war and suicide missions. For the psychosocial questions, a portion of the Life Strengths Interview Guide (Kivnik, 1993) will be used to elicit information concerning eight ego strengths appropriate in late adulthood. The Guide was developed for those who were involved in elder care, and was based on Erikson’s original theoretical and empirical work (Erikson et al., 1986). While the number of questions for each developmental stage varied from six to ten items, with a total of 63 open-ended questions, there was some overlap in the question contents. In this study, therefore, five items that represent a broad range of psychosocial profile in each developmental stage were selected, totaling 40 open-ended items (see Appendix A).

With regard to the questions concerning their opinions and feelings about war and suicide operations, participants will be instructed to interpret the questions not as present abstractions of their thoughts and feelings, but to recount what their thoughts and feelings were as they went through seven different time periods: childhood; the period just before joining the Navy; the time they were in the Institute; immediately after the war; young adulthood (20s~30s); middle adulthood (40s~50s); and late adulthood (60s+) (see Appendix B). This approach not only produces rich, biographical data (Quinnan, 1994) but also provides evidence of their changing views on these issues as they went through these different developmental phases. In addition, they will be asked what their advice would be to future generations. The taped interviews will be transcribed and then used for subsequent analysis.

[Procedure]

Upon meeting a potential participant, I will explain the detailed nature of the study and answer any questions he may have. The participant will then be asked to read and sign an informed consent form. Participants will be encouraged at the beginning of the interview to describe each topic in as broad detail as possible. The interview will be digitally recorded.

The oral interviews also include asking questions from the structured questionnaires such as the GDS and NEO-PFI because older participants are often unwilling (or unable) to fill in written questionnaires. After completing the interview (approximately two hours), I will ask family members (if present) to confirm the accuracy of any factual information that he provides. The participants will also be asked to produce physical evidence to validate the self-claimed information (e.g., grade card, pilot uniform, etc.). Some of these artifacts that do not reveal the participants’ identity will be photographed with their permission.

Particular attention will be paid to the possible emotional fluctuation of the participants. If a participant expresses even a subtle reluctance to carry on the interview, he will be reminded that the interview is voluntary and that he may refuse to participate at any time without consequence or prejudice. However, if a participant indeed became upset during the interview, the session's focus would shift to comforting the participant until he recovers from the distress. In order to assure that all the participants leave the session in a positive mood, the interviewer will engage in a light-hearted, casual conversation at the end of the interview.

[Analysis]

Since only former pilots, and not their age-matched sample, will be recruited for this proposed study, the final analysis comparing these two groups has to wait until later. In the mean time, the following analyses will explore the current psychological and physical status of the former pilots.

As McCrae and Costa (1986) suggest a possible link between certain personalities (e.g., extraversion) and PTG, the relationship among PTSD, depression symptoms, and personality will be examined via a Pearson product-moment correlation coefficient. It is hypothesized that those who are less extraverted are more likely to score high on PTSD and depression scales than those who are more extraverted.

To explore the extent to which one's personality is associated with the decision to participate in the suicide operation, a z test will be performed for each component of the NEO-FFI (i.e., neuroticism, extraversion, openness, agreeableness, and conscientiousness). Their means and standard deviations for adult men are available in the manual (Shimonaka et al., 1998, p.42). It must be noted again that the answer to the question, whether the five personality components had an impact on the decision to participate in the suicide operation, has to wait until later time when the personality of the age-matched counterparts are assessed.

With regard to the qualitative analyses, the digitally recorded data will be transcribed and examined by a means of content analysis by using Word Miner® Version 1.1 (Japan Information Processing Co.). The content analysis involves finding themes (generalized statements based on the personal beliefs and values); patterns (the researcher's interpretation of the data); and topics (points frequently referred to by the participants) (Luborski, 1994). These analyses will yield the definitions and meanings for each theme from which a coherent set of organized story will emerge.

At least one NEIU student will be recruited as a research assistant who will help managing and analyzing quantitative data. One or two bilingual (Japanese/English) NEIU students will also be involved in analyzing the transcribed, qualitative data. In the future, the project is expected to expand its scope by including a control group who were the same cohort but decided not to enlist. The project is also expected to expand its sample size. Thus, the next step is to secure further grant(s) (e.g., NIH R15, National Humanity Endowment (NHE) Japan Fellowships) and recruit several NEIU undergraduates for data collection and analysis.

E. Human Subjects Research

Protection of Human Subjects

1. Risks to the subjects

a. Human Subjects Involvement and Characteristics

There will be a total of approximately 15 former pilots. They are all Japanese men currently residing in the U.S. whose age range is between 78 and 85 years. This is the age range of former pilots who enlisted in the suicide operations but did not fly out. There were no female pilots.

The initial contact will be made over the phone during which the PI will ask questions regarding their physical and psychological status. If the potential participant claims to have

health related problems that may interfere the interview, the PI will thank for their time and will exclude him from the project.

b. Sources of Materials

The interview schedule addresses the conventional questions about the past and present demographic characteristics (e.g., educational attainment, socioeconomic status, etc.), the impact of the war-related experiences, subjective life satisfaction, depressive symptoms, and general health status. The interview will be digitally recorded and then be transferred and securely stored in a lap-top computer. After the data collection phase, the data will be transferred to a hard drive which is located at the PI's office at NEIU.

Since this population is only loosely organized, the participants will be recruited from personal friends of the PI's father (who was also a former pilot) by means of multiple-entry chain sampling. Thus, only the PI has an access to these individuals.

c. Potential Risks

Although unprecedented in my preliminary study with 20 former pilots, there still exists a potential risk that the participants may experience emotional fluctuation.

2. Adequacy of Protection Against Risks

a. Recruitment and Informed Consent

Through personal friends of my deceased father (who was also a former pilots), the participants will be recruited by means of multiple-entry chain sampling. At present I have three individuals who are willing to participate.

I will ask but not emphasize signing a consent form because it is usually inappropriate to ask for a personal signature in the Japanese culture. If that is the case, I may ask their *hanko* (personalized stamp) which is the equivalent of written signature in that culture.

b. Protection Against Risks

If a participant expresses even a subtle reluctance to carry on the interview, he will be reminded that the interview is voluntary and that he may refuse to participate at any time without consequence or prejudice. However, if a participant indeed became upset during the interview, the session's focus would shift to comforting the participant until he recovers from the distress. In order to assure that all the participants leave the session in a positive mood, the interviewer will engage in a light-hearted, casual conversation at the end of the interview.

3. Potential Benefits of the Proposed Research to the Subjects and Others

Most participants in the preliminary study expressed gratitude for the opportunity to talk about their life experiences. This may be a result of their sense of urgency to leave their legacy behind for the future generation. Some participants were also appreciative of the information resources that I provided (e.g., local *kamikaze* pilot organization).

4. Importance of the Knowledge to Be Gained

This study not only breaks new ground in the investigation of the psychological profile of this historically and culturally unique group of individuals, but also expands the growing literature examining the long-term posttraumatic mental state and the psychosocial developmental strengths in later life. In addition, with further research in the field of suicide attack per se, this study may be able to both serves as the foundation for future systematic research for the suicide bombers, and also

provides valuable resources for the security of future generations by revealing what aspects of psychosocial and contextual information correlate with the choice to take part in this type of mission.

Inclusion of Women and Minorities

There were no female or minority pilots in the Japanese Imperial Navy.

Inclusion of Children

All former pilots are now in their 70s and 80s.

F. Vertebrate Animals

N/A

G. Select Agent Research

No select agents will be used in the proposed study.

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Targeted/Planned Enrollment Table

This report format should NOT be used for data collection from study participants.

Study Title: Long-term effects of "unjust" war: Psychological health of former suicide bombers

Total Planned Enrollment: 15

TARGETED/PLANNED ENROLLMENT: Number of Subjects			
Ethnic Category	Sex/Gender		
	Females	Males	Total
Hispanic or Latino	0	0	0
Not Hispanic or Latino	0	15	15
Ethnic Category: Total of All Subjects *	0	15	15
Racial Categories			
American Indian/Alaska Native	0	0	0
Asian	0	15	15
Native Hawaiian or Other Pacific Islander	0	0	0
Black or African American	0	0	0
White	0	0	0
Racial Categories: Total of All Subjects *	0	15	15

* The "Ethnic Category: Total of All Subjects" must be equal to the "Racial Categories: Total of All Subjects."

July 2008

Dear potential participant,

We are currently conducting interviews with the former *Yokaren* trainees, and I am asking you if you might be able to help us by voluntarily participating in this project.

Although a number of memoirs and history books have been published in the past, a systematic investigation exploring the trainees' profiles and their views on a variety of issues (e.g., war, religion, etc.) has never been conducted. In this project, we will ask you to describe your life history from the childhood to the present as well as your perspectives on these issues. Further, with your permission, we would like to audiotape the interview in its entirety. This is strictly on a volunteer basis; therefore, each participant will be free to refuse participating at any time.

After the interview, which may take up to 2 hours, you will receive a gift as a token of our appreciation along with a copy of interview tapes.

We believe that participating in this project will be an informative and enjoyable experience. If you have any questions, please feel free to contact me either by phone ((773) 442-5845) or by e-mail (m-takahashi@neiu.edu).

We thank you for your cooperation and look forward to your assistance.

Cordially,

Masami Takahashi, Ph.D.
Associate Professor
Psychology Department
Northeastern Illinois University
Chicago, IL 60625

Consent Form

Principal Investigator: Masami Takahashi, Ph.D.
Associate Professor
Department of Psychology
Northeastern Illinois University

I am currently engaged in a study of the former *Yokaren* trainees. Although a number of memoirs and history books have been published in the past, a systematic investigation exploring the trainees' profiles and their views on a variety of issues (e.g., war, religion, etc.) has never been conducted. To help us gain further insights into this area we will ask you to describe your life as well as your views on a variety of issues (e.g., war, religion, etc.).

The interviews will take approximately two hours and will be tape-recorded. These tapes will be kept in the **strictest confidence**. The tape will be transcribed. However, the transcripts will be **anonymous**. Furthermore, your participation and anything you say during the session will also be held in the **strictest confidence**.

We welcome questions about the research at any time. Your participation in this study is on **voluntary** basis, and you may refuse to participate at any time without consequence or prejudice.

Signing your name below indicates that you have read and understand the contents of this Consent Form and that you agree to take part in this study. Signing this form will not waive any of your legal rights.

Finally, we'd like to present a small gift and a copy of your interview tape as a token of our appreciation.

If you have any questions regarding this research, please feel free to call Masami Takahashi, Ph.D. (773-388-3015). Should you have any questions about your rights as a human subject, contact the Chair of the Human Subjects Committee, Northeastern Illinois University in Chicago, Saba Ayman-Nolley, Ph.D. (773-442-5844).

Participant's Signature _____ Date _____

Principal Investigator's Signature _____ Date _____



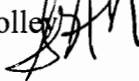
Northeastern
Illinois
University

5500 North St. Louis Avenue
Chicago, IL 60625-4699

Human Subjects Committee

MEMORANDUM

TO: Masami Takahashi, Ph.D.
Department of Psychology

FROM: Saba Ayman-Nolley 
Chair

DATE: March 24, 2008

SUBJECT: IRB#03-017, "Narrative Life Stories of Kamikaze Pilots"

The referenced protocol has been approved under expedited review. Your approval is valid for one year from the date of this memorandum. An annual report will be due at that time.

If there are any significant changes to the protocol, please advise the committee.

Appendix A

Life Strength Interview Guide (Kivnik, 1993)

HOPE & FAITH (Trust vs. Mistrust)

1. What is it in your life that gives you hope?
2. What about religion is most important to you, and if at all, how do you like to express your religious beliefs?
3. How do moral beliefs and values fit in you life?
4. In troubled times, what is it that gives you a sense of security?
5. What do you tell yourself or think about when you are afraid and you need to believe that things will be all right?

WILLFULNESS, INDEPENDENCE, & CONTROL (Autonomy vs. Shame/Doubt)

1. How is your health these days?
2. Do you have any physical limitations? Take medications?
3. What kinds of control are easier to give up? More difficult to give up?
4. What is it that has always given you confidence in your self?
5. What kind of decisions is absolutely most important that you make for your self?

PURPOSEFULNESS, PLEASURE, & IMAGINATION (Initiative vs. Guilt)

1. What kinds of things do you enjoy doing? What kind of activities give you pleasure?
2. What kind of activities have always given you pleasure?
3. What have you done, in your life, that makes you proudest?
4. What is there that you've been always curious about?
5. What do you want to do, most of all, with the rest of your life?

COMPETENCE & HARDWORK (Industry vs. Inferiority)

1. What have you worked hard at?
2. What would you like to be working at now if you were able?
3. What kind of things have you always been good at?
4. What is it that you've always wanted to learn, but never quite gotten around to?
5. What do you wish you could do better?

VALUES & SENSE OF SELF (Identity vs. Confusion)

1. What is it about life that makes you feel most like yourself? And why?
2. Do you have a philosophy of life that has guided the way you live your life?
3. What kind of person would you say you are? You always have been?
4. What is the image that you carry around inside, about who you are in the world?
5. When people describe you, what do they say? What would you like them to say?

LOVE & RELATIONSHIP (Intimacy vs. Isolation)

1. Who is important to you in your life today (Where do they live)?
2. Whom do you count on these days?
3. Who count on you?
4. Can you tell me about your marriage? Best friend?
5. How do you feel about being alone these days?

CARE & PRODUCTIVITY (Generativity vs. Self-absorption)

1. Whom or what do you especially care about?
2. How do you show your caring?
3. What is there about yourself and your life that you want to make sure people remember?
4. What is the most important thing for you to do with your life these days?
5. Who is the person who makes you think, "This is the one who will carry on for me when I'M gone"?

WISDOM & PERSPECTIVE (Integrity vs. Despair)

1. What is there about your life that you wish had been different?
2. What has been the most meaningful about your life so far?
3. What strategies have you used for coping with fear?
4. What are your thoughts about your own death (Are you afraid of dying)?
5. Have these thoughts changed over the years?

Appendix B

Interview Format

[Demographic Questions]

- 1) Age:
- 2) Marital status:
(Family structure)
- 3) Educational attainment:
- 4) Current occupational status:
- 5) Primary occupational status:
- 6) Religious affiliation:
- 7) Religious involvement: Low; Middle; High
- 8) Current financial status: Low; Middle; High

[Opinion/Attitude toward the country/war/suicide mission/spirituality/religion]

	Patriotism	War	Suicide mission	<i>Yokaren</i> Institute	Spirituality	Religion
Childhood						
Just Before joining the Institute						
Time during the Institute						
Immediately after the war						
Young Adulthood (20s~30s)						
Middle Adulthood (40s~50s)						
Late Adulthood (60s and up)						

*Questions will be asked in the following format:

“During (column), what did you think of / feel about (row)?”

-“Reflecting upon your life as a *Yokaren* veteran, what one advice would you give to the future generation?”