New Zealand Vietnam Veterans' Intergenerational Health

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ABSTRACT

This qualitative project describes the experiences of two New Zealand Vietnam veterans (NZVVets) and three generations of their families demonstrating the passage of intergenerational health. Both NZVVets served in South Vietnam (Vietnam) with frontline New Zealand infantry companies that formed a part of 2, 4, or 6 RAR/NZ ANZAC Battalions. NZVVets served in a direct-action combat role (direct action) against the Viet Cong (VC) and the North Vietnamese army (NVA).

The research question posed was,

W*hat experiences do New Zealand Vietnam Veterans and families have that demonstrate the passage of intergenerational health conditions?*

The two NZVVets interviewed realised they had mental health problems due to the Vietnam war after returning to New Zealand as they could not adjust to the world outside of the military. Epidemiological studies link environmental exposure, such as direct-action combat, to extreme stress thus leading to poorer health determinants for a wide range of diseases. As well as both NZVVets, their wives, a child, and a grandchild from each family were interviewed.

Family A (NZVVet A1) has a lifestyle now "close to ideal but still a work in progress." This family has recognised and defined their health problems and have worked as a family unit on problem-solving. In the process of problem-solving, they have perfected different methods of communication to help the family group dynamics. Family A has not been afraid to step out of their comfort zone and has invested time and money in an alternative education programme. NZVVet A1 has returned to his roots in te Ao Māori, which has given him further peace.

NZVVet B1 still suffers significantly from a service-related accident and other health issues, including post-traumatic stress disorder (PTSD). According to NZVVet B1, there has been a history of mismanaged notes primarily by the New Zealand Defence Force and an associated military from another country, differing standards of healthcare, and less than efficient interdepartmental communications in the New Zealand health system. If not managed carefully NZVVet B1's health care could provide a significant challenge for healthcare workers. In saying that, he has reached out to become a participant in this research. He has undergone 40 to 50 years of health treatment, in the process becoming a very experienced patient. Family B continues to struggle on their own with the treatment options that have not been successful to date, they need help. Research findings from this study demonstrated the passage of intergenerational health and provides research evidence for health support of NZVVets and families.

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ATTESTATION OF AUTHORSHIP

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning."

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Important journeys are never undertaken without support from family. Without them, you have nothing. In this respect, I have been blessed. To have my wife Kataraina, sons Peter and Herangi, daughter Moira, and ngā moko Kairi, Kimi and Nikau – Arohanui. My wife and children have completed similar journeys, so there is an element of the "old man" wanting to prove "I can do it too."

You are never too old to learn and contribute. We need to reequip ourselves with better skills to protect our families. To the NZVVets and other NZ war veterans, there is still work to be done in recognising, providing and future-proofing intergenerational health problems. We must work together.

I wish to acknowledge the two research participant families who contributed to this study. I have done my best to retain your anonymity. None the less, people familiar with your stories may recognise them. Thank you for your trust. We each have our own reason for doing the things we do. Mine is to help my fellow veterans, I hope I have.

Arohanui Eddie.

The research was approved by the Auckland University of Technology Ethics Committee (AUTEC), 22/116, on 14 June 2022 (Appendix 1).

CHAPTER 1: INTRODUCTION

The first New Zealand combat troops deployed to South Vietnam was 161 Battery, Royal New Zealand Artillery. They arrived in Vietnam on the 17th of July 1965 to spend the first year in South Vietnam attached to 173RD Airborne Brigade US Army at Bien Hoa. In 1966, 161 Battery was reassigned to the 1st Australian task force based at Nui Dat, joining the Royal Australian Artillery, and providing artillery support for operations In Phuoc Tuy Province until returning to New Zealand, arriving late in the night of the 11th of May 1971.

On the 13th of May 1967, V1, the first operational New Zealand infantry company, arrived in Vietnam. On the 9th of December 1971, the last active New Zealand infantry company V6 departed Vietnam (Howell, 2021). There were 6 Victor and 3 Whiskey infantry companies. 4 Troop NZSAS (New Zealand Special Air Service) operated with the Australian SAS Regiment from November 1968 until February 1971. There were also two New Zealand training teams, a medical team and various other New Zealand armed forces engineers, mechanics, and nurses and doctors needed to keep things running smoothly – true ANZAC soldiers.

RESEARCH RATIONALE

NZVVets suffered from injuries and health issues caused by operational war service and should be and are, in most cases, supported by Veterans Affairs New Zealand (VANZ) (Cox et al., 2015). This study aims to identify evidence relating to intergenerational health problems caused by service in Vietnam. Therein providing an evidence-based practice model of intergenerational health problems.

OVERVIEW OF THE STUDY

Chapter 1 provides an overview of the topic for this dissertation.

Chapter 2 reviews the literature, and focuses on intergenerational and epigenetic transmission, post-traumatic stress disorder, and Agent Orange.

Chapter 3 provides a description of the research methodology and methods used in this research, and how data were collected and managed. The ethical issues are also described within this chapter.

Chapter 4 presents the findings from the interviews across three generations for two families.

Chapter 5 provides a discussion of the key findings and outlines the limitations of the research.

Chapter 6 summarises and concluding remarks are made for this dissertation.

CONCLUSION

This study reasons that if reliable intergenerational links can be established between an NZVVet receiving or having needed VANZ support for intergenerational health problems partly or wholly caused by service in Vietnam. VANZ should be required to cover later generations of the NZVVet suffering from the same problem.

Precedence exists in the Vietnam Veterans Memorandum of Understanding (MOU) (2006), which is currently undergoing review by the Ministry of Defence, VANZ and representatives of the New Zealand Vietnam Veterans Association executive.

CHAPTER 2: LITERATURE REVIEW

Direct action in Vietnam was a traumatic experience that inadvertently impacted both NZVVets and later, their families causing intergenerational health issues. There have been no known studies on the intergenerational health of NZVVets and families as a population. Therefore NZVVets should sanction evidenced-based studies accordingly. Evidenced-based research can contribute findings providing NZVVets and families with solutions for intergenerational health issues, such as assisting NZVVets and families to navigate the health system quickly and accurately. This research study has discovered evidence NZVVets, and families were battling health issues in spite of using over 50 years of health resources.

SEARCH STRATEGY

Most research on Vietnam War veterans comes from Australian or American sources. Numerous studies examine how traumatic, psychological, and environmental health problems resulting from service in Vietnam has been passed down intergenerationally. Although, the two countries have similar war histories to New Zealand and are good comparison groups (Richardson et al., 2020). Key factors differ between these two countries and New Zealand. For example, there is a cultural difference between America and the large resources available to millions of American veterans.

The primary researcher searched the Auckland University of Technology (AUT) library using EBSCO an advanced search option. Using the four words, New Zealand Vietnam veterans. As long as these four words were in the title in any order, the literature was included in the literature review. Five papers were explicitly about New Zealand soldiers but did not contain all four words in the title. The articles with the correct words numbered 10 in the first 100 peer-reviewed full-text academic papers. Next, I searched for titles with the three words **Australian Vietnam veteran** under the same conditions. There were 100 peer-reviewed full-text academic papers in the first 100 titles.

Another noticeable feature in my search for research papers is that most initial studies concerning behavior and environment were published in the mid-1980s to early 1990s (Rosenheck & Nathan, 1985). Presumably representing the 10 to 20 years gap it took for veterans to realise what was happening with their health. Boscarino (1996) suggested a direct link between severe stress exposures and broad-spectrum human diseases.

My main search ploy to find research material to answer the research question was to have key words to search with, sometimes using combinations of the same words. An example appears

above. Other times I would use a single word or a well-known abbreviation, for example, genetic, epigenetics, PTSD and then build on it as in child PTSD and veteran PTSD or Vietnam veteran PTSD. Combining the components of the research interviews with reliable sources of pertinent research was the final part of the process to answer the research question.

CONCEPTS OF INTERGENERATION TRANSMISSION.

Epidemiology is the branch of medicine that deals with the incidence and variation in traits and disease risk in populations (Barrow & Michels, 2014). Epidemiology explains some epigenetic changes at specific population levels. Typically readers should have some molecular knowledge of the parallels between environmental factors and human disease phenotypes. Epigenetic epidemiology can identify epigenetic markers (Blacker et al., 2018) for environmental disease risk. This can lead to gene-environmental interactions helping to recognise mechanisms that emphasise environmentally driven health issues.

The following is a brief introduction to genetics that explains how our environment plays an integral part in reaching our genetic potential as people. The aim is to explain our environment's genetic actions on our person (traits).

GENETICS

Deoxyribonucleic acid is the scientific term for encoded genetic material carrying the blueprint for our growth, body, and traits. The scientific term for genetic material has been shortened to the more recognisable term DNA or gene. Due to advancements in all areas of science, more is understood concerning our minds, behaviors, and body's bi-directional interaction between genes and the environment. While our genes carry the blueprint for our life, some mechanisms control how our genes regulate our body's environment (Walton, 2021). These mechanisms, discovered in the 1950s, are called "epigenetic" mechanisms. Scientists are interested in epigenetics because of the potential to understand more about our behaviors (Palumbo et al., 2018). Using our knowledge about genes, we can understand how all biological, psychological, and social dimensions are interrelated and how they are interconnected during various processes which mutually influence each other and can cross multiple levels to formulate human function (Walton, 2021).

Our genes reflect integrative co-dependency when they exert effects on traits that are dependent on our environment. For example, suppose your genetic potential is to be athletic and confident, but due to a family environment of neglect and poor nourishment. You are at risk of turning out a skinny, awkward adult. This is an obvious observation. The point is your genes are not your destiny.

Although the genetic code is fixed, traits can change, as in the example above. Some other mechanisms exist to mediate genes beyond the genetic code. These mechanisms are called epigenetic. They create changes in an organism's traits. They are engineered to modify how the genes are expressed rather than change the genes themselves (Walton,2021).

DNA is our code for life, consisting of four molecules called nucleotides attached along two spines that curve around each other. The genome comprises the complete DNA sequence in every cell's nucleus. Certain DNA sections are reproduced to provide instructions to build proteins. (Pinei et al., 2019). DNA provides the blueprint, and proteins provide the building blocks of who we are. Proteins provide all the molecular materials for biological functioning. These sections of our DNA are our genes. Some genes are constantly copied to produce proteins to attain essential functions. For example, other proteins are copied when needed in the presence of stressors. Genes contain instructions for proteins to start a process of building proteins, and protein fulfils life's essential functions (Walton, 2021).

We receive two copies of each gene, one from each parent. Due to DNA's natural variation, the copies may have minor differences in the nucleotide sequence. Genes can have various versions, and each of the two particular versions inherited by an individual makes up a genotype. Humans have approximately 20,000 genes, many with multiple versions (Carey, 2012). The number of genotypes a person can inherit and the potential blend of genotypes between people is vast. When a gene is transcribed, the consequences expressed in personal traits depend on the genotype. This means genotypes are the basis of individual variation (Walton, 2021).

An expression of genotype is called the phenotype. Phenotypes can be detected in a person's physical traits, for example, eye colour. Also included are biological functions such as susceptibilities to disease. Some phenotypical functions can be measured, such as personality or behaviors. Traits have a genetic basis, but the environment contextualises their expression or development. Heritability is the term used to explain the amount of genetic variation in a trait and is a statistic of population. Heredity refers to the extent to which passing a trait on to an individual by their parents (Walton, 2021)

The Role of Epigenetics

Adding the *Greek* prefix epi-, which means to 'on, upon, in addition', to the word genetic, a different word, epigenetics, is formed. Epigenetics, in addition to genetics, refers explicitly to molecular modification altering how our genes are expressed without altering the genes themselves (Pinei et al.,2019). We have already learnt about transcription, the process of building proteins by copying a gene.

DNA methylation is the best known of these epigenetic molecular mechanisms for change, where a methyl group attaches to cytosine on a stretch of DNA, rendering it less active. It is a common mechanism in nature, accounting for environmental influences (Launer, 2016). Other processes include histone modifications and the actions of small and long coding RNAs. They result in epigenetic molecular mechanisms encouraging or discouraging transcription, quickening, slowing, turning off temporarily or permanently thus influencing phenotypical production. An example is in reference to the survivors of the World Trade Centre attacks. They have frequently shown altered stress responses and metabolism. Furthermore, these changes are associated with epigenetic mechanisms, including modified DNA methylation that imprints genes (Kleeman, 2022).

Some confusion with words which seem to be used interchangeably in veteran reports. Of note is the importance of the terms *heritability* – an estimate of genetic variation in a population of the study, and *heredity* – the passing on of genetic information. *Hereditary* - passing on a title such as the new king received after his mother's death.

Parental Exposure to Stress

Empirical data obtained from studies of holocaust survivors and other populations supports the idea that future generations can be affected by parental trauma or exposure to stress (Lev-Wiesel, 2007). Findings now include lesser forms of stress, and variances in physical, behavioral, and cognitive outcomes in affected offspring. Generalised conceptions, family, and individual development are basic building blocks within a theoretical perspective.

Theories focused on multigeneration, intergenerational or transgenerational changes typically emphasise processes in family development and patterns across generations and life cycle events (Bowers & Yehuda, 2015). Genetic and social learning theories support stress-mediated effects. The importance of understanding stress-mediated results in the offspring of a traumatised parent is

because they may be at greater risk of physical, behavioral, and cognitive issues, including psychopathology.

Early childhood experience with primary attachment figures, such as parents and older siblings, shape us and becomes the template for future interactions. Before birth, babies understand their environment through their mothers' rhythms, sounds and smells. Childhood trauma can last into adulthood, impacting parenting styles and contributing to intergenerational challenges (Farina et al., 2020).

POST TRAUMATIC STRESS DISORDER (PTSD)

PTSD is a prevalent psychiatric disorder associated with military veterans. PTSD has chronic symptoms and some disabling conditions characterised by intrusiveness, avoidance, negative cognitions, mood swings, and altered arousal and reactivity. Epigenetic mechanisms are associated with PTSD's etiology. DNA methylation is very important when identifying the molecular biomarkers for PTSD (Montalvo-Ortiz et al., 2021).

Studies have demonstrated that traumatic events are not only limited to those involved in traumatic experiences, but also family, friends, and caregivers (Dekel & Goldblatt, 2008). Non-traumatised persons can acquire secondary or vicarious traumatisation responses from a person experiencing a primary traumatic event. Vicarious traumatisation has been recorded in the children and grandchildren of holocaust survivors (Lev-Wiesel, 2007) and the children of war veterans (Dekel & Goldblatt, 2008).

Theories focusing on multigeneration, intergenerational or transgenerational environmental behaviors' typically emphasise two distinct processes – developing multigenerational environment family patterns and life cycle events. Emerging evidence suggests that environmentally influenced epigenetic changes can have lasting effects on the cognition and behavior of an individual, with changes being passed down intergenerationally (Jawaid et al., 2018).

Compelling causes of poor health amongst NZVVets include but are not limited to Post-Traumatic Stress Disorder (PTSD), Agent Orange (AO) and Psychological Injury (PI) traumatic and stress injuries to the body caused by operating and clashes against the then enemy. Significantly NZVVets are identified as suffering in similar numbers per capita to American Vietnam veterans (Long et al., 1992). Vietnam veterans exposed to Agent Orange are twice as likely to be diagnosed with dementia, even adjusting for competing risk of death, demographic variables, and medical and psychiatric comorbidities (Martinez et al., 2021).

AGENT ORANGE (AO)

Vietnam veterans' chemical exposure to Dioxin an element in Agent Orange, has attracted much attention over the past 50 years from ecological and human health perspectives, possibly at the expense of other risk factors, including widespread tropical diseases and parasites in the veteran (Young, 2018). An example is that 20 percent of 50 veterans recently tested by the American Department of Veterans Affairs were infected by slow-killing parasitic worms called liver flukes, known to cause cholangiocarcinoma, a bile duct cancer (Moa, 2017).

Young (2018) obtained a PhD in agronomy in 1968 and was a USAF Colonel from 1971 to 1977, becoming responsible for the environmental studies of dioxin and has written extensively about Agent Orange. Young does not believe epidemiological studies of Vietnam veterans have shown a higher mortality rate for the diseases presumptively connected to Agent Orange exposure (Brown, 2011). Nor is there consistent, credible evidence from the American Institute of Medicine (IOM) of a causal link between disease and Agent Orange exposure (Young, 2018).

The counterargument is that Agent Orange and other endocrine disruptor disturbances in the parental environment can affect the disease susceptibility of offspring through epigenetic inheritance (Nicolella & De Assia., 2022). Studies also record health problems attributed to Agent Orange affecting Vietnamese civilians and war veteran populations decades later (Le et al., 2021). Concerns about the location and repair of the ecosystem damage caused by herbicidal warfare are currently being undertaken by the Vietnamese government and Western non-government organisations (Zierler, 2011).

PSYCHOLOGICAL INJURY

Research links environmental exposure, specifically in the initial stages of development to changes leading to intergenerational health issues or that may contribute to disorders later in life (Mostafalou & Abdollahi, 2013). These disorders include psychological burdens. For some NZVVets' the experiences of societal exclusion on returning home have led to issues relating to social isolation (Hopner, 2014).

Psychological injury can occur from exposure as a young person to the consequences of extreme and repeated violence, such as in the Vietnam War or domestic violence. The still-developing brain of an adolescent or young adult comes under tremendous stress, particularly at the prefrontal cortex. The physiological outcome is brain function disruption, making self-regulation and executive capacities difficult for healthy functional problem-solving (Betancourt, 2022). Both NZVVets were in the correct

age group and combat environment for brain dysfunction to happen, as was A3 with his stressful man-of-the-house experience, discussed later in this report.

CONCLUSION

A literature review plans to find essential information that supports research ideas and theories and then uses the information to draw conclusions for readers. There are bewildering biological terms, processes, and mechanisms reviewed in the studies about genetics. I have only included enough information to whet readers' appetites. We have all studied something in the past, so we understand that knowledge is about constructing a sound base and building on that knowledge base.

Given the limitations of intergenerational research, much research, information, ideas, and theories in the environmental scientific community make the debate around epigenetic mechanisms sometimes confusing for those with less than expert knowledge. Mitchell's (2019) writing about epigenetics highlights:

> The idea that epigenetics modifications of DNA can be "passed down" is intended in terms of cell division but makes it sound like epigenetics responses to experience can be passed down from organism to offspring. Though such a mechanism does exist in plants and nematodes, there is no convincing evidence that this is the case in mammals, especially not in humans.

Environmental health focuses on the relationship between people and their environment. Life experience has a lasting impression on our cognition and behavior. Cognition and behavior effects involve gene expression and cellular signaling pathways in the brain (Jawald et al., 2018). Recent evidence suggests that environmentally induced epigenetic changes can persist and be transmitted to subsequent generations. (Yehuda & Lehrner, 2018). Epigenetic modifications occur on genomic DNA and histones that influence gene expression (Yehuda & Lehrner, 2018)..

Discoveries in epigenetic knowledge have found inheritance is not based solely on DNA sequence but on how DNA is utilised (Sharma, 2019). Sharma (2019) explained that one environmental mechanism is the transmission of "paternal environmental information to offspring via sperm and small RNAs are environmentally responsive epigenetic molecules in sperm" (p.10). I am unsure if the expert views of Sharma and other researchers in the field are convincing enough evidence. However, all these opinions illustrate how quickly knowledge is expanding in the genetic area and the importance of discovering scientific proof about the mechanics involved in epigenetic responses.

CHAPTER 3: RESEARCH METHODOLOGY

The research question asks, what experiences do New Zealand Vietnam veterans (NZVVet) and their families have that demonstrate the passage of intergenerational health? Qualitative descriptive methodology refers to the research theoretical stance, structure, and methods or practical means used in research (Grant & Gidding, 2002). Essentially qualitative descriptive research methods are chosen when there is a need to answer a research question emphasising the who, what, where and why. The emphasis is on the subjective meaning and experience of a poorly understood topic or issue (Whitely & Crawford, 2005). Qualitative descriptive studies can offer a comprehensive summary of events in a straightforward and uncomplicated format (Sandelowski, 2000).

WHY QUALITATIVE DESCRIPTIVE RESEARCH IS APPROPRIATE?

Qualitative descriptive research generates knowledge about the lived experience of people or an issue using words as data (Whitely & Crawford, 2005). Eliciting relevant information directly from those that have experienced an issue helps participants and researchers identify the reasons for different ways of interaction. Within the epidemiology of the triad of participant, host and environment, the descriptive methodology can explain health determinants by exploring how the participant interacts with an agent and environment (Bradshaw et al., 2017). It then becomes the researcher's responsibility to analyse and describe participants' experiences using their words (Grant & Gidding, 2002).

IDENTIFYING QUALITATIVE RESEARCH METHODS

Qualitative descriptive research tends to be less encumbered by existing theoretical or philosophical knowledge studies than other methodologies (Lambert & Lambert, 2012). Nonetheless, some methods are applied to help conduct the research process by seeking the truth about the research question (Krauss, 2005).

Descriptive research began with the work of Husserl (1970) and was developed further by Merleau-Ponty. Husserl believed descriptive research data is necessary to understand what motivates people to make decisions (Lopez & Willis, 2004). This qualitative descriptive research seeks to provide

detailed documented accounts by investigating health issues by giving voice to NZVVets and families through transcribing and then describing interview data in a naturalistic way (Braun & Clarke, 2013).

Data collected by qualitative descriptive studies concentrate on seeking the true nature of the events under investigation (Lambert & Lambert, 2012). A popular data collection method for descriptive research is the interview, asking open-ended questions. Husserl's (1970) belief was that the subjective interview experiences of research participants should be important to researchers seeking to understand what motivates people as actions are influenced by what a person perceives to be real. Most people go about their lives without critically reflecting on their daily experiences. Thus, addressing the lack of critical reflection is a systematic approach to collecting and highlighting the fundamental elements experienced by certain groups of people under study (Lambert & Lambert, 2012).

A philosophy attributed to Heidegger is the idea of 'being in the world'. Heidegger believed humans cannot remove themselves from the world. Therefore, it is not just human subjectivity researchers are after but what is implied about a person and their experience (Lopez & Willis, 2004). A critical realist approach takes data at face value by using an interrogative technique to express meaning and understanding in qualitative data and uses them to investigate some other phenomenon. In critical qualitative research, the accent is not on language as a means to get inside somebodies head. The interest here is how language conforms to social realities. However, critical research is essentially about language as communication. Concern shifts away from the semantic meaning of words to language being the primary mode of communication (Braun & Clarke, 2013).

THE CRITICAL THEORY PARADIGM

The lack of critical reflection by participants can be overcome by the researcher using a systematic approach to collecting and highlighting all of those fundamental elements experienced by certain groups of people under study (Lambert & Lambert, 2012). It is not just conversational subjectivity researchers need to interpret about participants' experiences, but also what can be implied about the person, their language, and their experience (Lopez & Willis, 2004).

A critical theory approach takes data at face value using an interrogative technique to gather participant experiences to investigate some phenomenon. Concern shifts away from the semantic meaning of words to language becoming the primary mode of communication (Braun & Clarke, 2013). The interest here is how language conforms to social realities – enabling researchers to

produce findings that reflect the conversations from the original research question (Bradshaw et al., 2017).

The choice of specific research methods promote a uniform system to answer the research question logically (Dowling & Cooney, 2012). Qualitative descriptive studies assume a naturalistic inquiry committed to studying something in its natural state within the context of the research arena. There is no pre-selection or manipulation of study variables and no prior commitment to any theoretical view of the phenomenon under study. Although, qualitative descriptive studies are different from other qualitative research designs as they may have some of the suggestions of the other approaches (Bradshaw et al., 2017**)**.

A qualitative descriptive researcher studies and describes an issue or group of people in their natural environment. Researchers cannot explain everything, but they have a choice on what is significant to answering the research question. This factor can create validity risks. Researchers must accurately describe the findings and report the correct sequences, experiences and actions of specific people and groups socially and culturally (Lambert & Lambert, 2012). The aim is to give voice to the issue, or a group of people so described.

For a description of a subjective experience to be considered valid, commonality in participants' experiences should be identified so that a generalised description of participant experience across the research is possible (Sandelowski, 1994). An assumption underpinning Husserl's (1970) understanding of human consciousness is that there are elements to any lived experience shared by all persons having the same experience. These shared experiences are called universal essence (Natanson, 1973).

RESEARCH METHODS: GIVING INTERGENERATIONAL VOICE TO NZVVETS AND THEIR FAMILIES

This descriptive qualitative research project aims to seek raw data in the form of spoken words from recorded Zoom internet interviews of an NZVVet, the NZVVets partner, one of their children, and one of their grandchildren about the family's intergenerational health. To answer the research question, four family members from two families, including the two NZVVets. Hence, three generations from the two families.

ADVERTISING THE RESEARCH

A research advertisement was published in the June 2022 New Zealand Vietnam Veterans Association magazine, "Contact" (Appendix 2). This advertisement described the participant criteria and outlined the objectives of the research. Veterans and families who met the criteria were invited to contact the Primary researcher (PR) for a Research Information Sheet. The Primary Researcher (PR) requested mobile phone contact details if the family was still interested in becoming research participants and able to meet all the participant research criteria. The phone details enabled contact with the family spokesperson to arrange a family information meeting. This meeting gave the family a chance to ask questions and to have discussions on what participant role expectations are.

RESEARCH PARTICIPANTS

The inclusion criteria required all four generations of the family members to be willing participate in the research project. The first two families meeting the inclusion criteria and completing the family information meeting were accepted as Family A and Family B.

Research participants were limited to eight family members from two families representing three generations of each family. The two NZVVets and their wives represented generation one. A child from each NZVVets family represented generation two, and a grandchild from each NZVVets family represented generation three. The two families were named Family A and Family B. Each family Zoom interview began with the NZVVet. Therefore, Family A NZVVet was referred to as A1 and the NZVVet for Family B became B1. NZVVets wives became A2 and B2, children became A3 and B3, and grandchildren became A4 and B4. The interviews were conducted via Zoom internet video recording, asking open-ended questions.

Opening questions established whether NZVVets suffered health problems that could be attributed to Vietnam service, particularly Post Traumatic Distress disorder (PTSD), Agent Orange (AO), Psychological Injury (PI), or any other health issue. A second question(s) asked how the NZVVet dealt with these health issues. Hopefully, the researcher can record evidence about the NZVVets' health problem(s) transferring to spouse, child, and grandchild. The spouse was then asked what health problems she believed the NZVVet had that affected her and how these problems have affected her partner, children, and grandchildren. The process goes onto interview the child and grandchild (over the age of 16 years) in the same way. Zoom-recorded data collection is thus established, with transcription into the text being the next stage.

COLLECTING QUALITATIVE PARTICIPANT TEXTUAL DATA

The primary researcher (PR) was responsible for conducting the Zoom interviews with participants. Interviews lasted 30 to 45 minutes and were transcribed. Copies of the original transcriptions were then sent to individual participants for review by them for accuracy or queries.

Opening questions established if NZVVets suffered from health problems attributed to their Vietnam service. A second question(s) asked how the NZVVets dealt with these health issues. This provided an opportunity to record the health effects of the NZVVets being transferred to their spouses, children, and grandchild. The spouse can then be asked what health problems she believed the NZVVet had affected her and how these problems have affected her partner, children, and grandchildren. The process proceeded to interview the child and grandchild (over the age of 16 years) in the same way. The Zoom interview was recorded for data collection and transcribed into text for the next stage.

The interviews provided data that yielded insights into participants' experiences (Lopez & Willis,2004). Although interview transcripts, notes and observations offer a certain amount of descriptive research data, they cannot provide explanations (Burnard et al., 2008). It is the researcher's task to investigate and explain the data collected. Careful re-reading of a participant's data (described experience) has been evaluated against how other research participants described the same or similar experience within the same family environment.

A critical approach takes data at face value, using an interrogative technique to express meaning and experience within the qualitative data to investigate some phenomenon. In critical qualitative research, the accent is not on language as a means to get inside somebodies head. The interest here is how language conforms to social realities. However, critical research is essentially about language as communication. Concern shifts away from the semantic meaning of words to language being the primary mode of communication (Braun & Clarke, 2013).

ZOOM INTERNET INTERVIEWS

A qualitative research interview aims to ask people to share their stories. (Jacob & Furgerson 2012). Semi-structured, one-on-one interviews with family members were also digitally recorded using Zoom. Open-ended questions guided the discussions and did not seek a right or wrong answer.

For the semi-structured interview approach, a pre-interview list of questions was developed was not rigidly adhered to. If, for example, the participant brought up an interesting subject that was not on the interviewer's question list. The interviewer is free to investigate the new subject, much like a detective follows a new lead in a police investigation. This interview technique uses the natural impulse in all of us to become storytellers. With just a little encouragement from the researcher, the storytelling impulse can sometimes reveal unimaginable results (Mellon, 1998). This interviewing technique aims to uncover the human part of the story. Unlike a conversation, an interview has a clear purpose and structure (Adams, 2010). The resulting output from the interview becomes a spoken account of the participants' subjective knowledge of lived experience concerning the research subject.

Research interviews yielded insights from the experiences described by a participant (Lopez and Willis, 2004). Although interview transcripts, notes and observations provided some descriptive research data, they did not offer explanations (Burnard et al., 2008). It was the researcher's task to analyse, investigate and explain the collected research data (Lopez & Willis,2004).

DATA ANALYSIS

The critical realist offers an ontological and epistemological view that assumes that the world has a true, knowable, and real nature. We can find this through experience and research because we can recognise some fundamental facts (Braun & Clarke, 2013). Research data comes from subjective meanings described in words participants place on their lived experiences. The PR identified and described interview patterns supporting the research epistemology. Refinements of the data set are a reflexive process during thematic analysis (TA). Therefore, when performing data analysis, the researcher becomes the mechanism for analysis, making judgements about themes and contextualisation of the data (Stark & Trinidad, 2007). Every qualitative research approach has its special techniques for conducting research. Ultimately, the researcher must ensure research is credible (Lorelli et al., 2017).

Meaning is not produced in a vacuum. An important key to working with qualitative research is information and knowledge. The primary researcher in this research project assumed the leading causes of NZVVets' and families' poor health are PTSD, Agent Orange, and Psychological Injury but discovered one NZVVet also had a health problem caused by an accident in training for Vietnam. The research's primary focus is to demonstrate the passage of health through three generations of a NZVVets family.

This research project aimed to produce information that validates participant perspectives and relates to the research question. (Braun & Clarke, 2013). This being the case, we should look at useful approaches that may help push data interpretation into hitherto unthought-of directions. Using a qualitative descriptive research approach places strong emphasis on the lived experience from a participant's subjective point of view (Kim et al., 2017, p.23).

A philosophy attributed to Heidegger is the idea of 'being in the world'. Heidegger believed humans cannot remove themselves from the world. Therefore, it is not just human subjectivity researchers are after but what can be implied about the experience (Lopez & Willis,2004). Data analysis of qualitative descriptive research, distinct from other qualitative approaches, does not use pre-determined guidelines produced by philosophical or epistemological disciplines creating a specific research approach. To summarise, the qualitative descriptive approach should be the design of choice when basic descriptions of an issue are required (Lambert & Lambert, 2012).

INDUCTIVE APPROACH DATA ANALYSIS

A qualitative inductive approach does not set out to prove or disprove a hypothesis. It sets out to analyse data from the bottom up. A qualitative inductive approach seeks to analyse and reveal more about the research question (Broom, 2005). Some researchers believed descriptive studies have less interpretive value than interpretive descriptions, as they are closer to the research data and abstract depictions of data are not needed (Sandelowski, 1994).

THEMATIC ANALYSIS

Thematic analysis methods used in this research focus on the lived experience of eight research participants under study. The aim was to seek raw data in the form of spoken words from recorded Zoom interviews of an NZVVet, and family concerning the family's intergenerational health. In this way, voice could be given to NZVVets and their families and providing answers to the research question.

Normally when we experience something in our lives, we make our interpretations of the experience. However, somebody else involved in that experience may go away with a different perception of that experience. Who has the correct impression of the experience? They all have because each has made their interpretation of the experience based on their own life experience. How could it be any different?

Qualitative researchers should use and develop a constant comparison method during data analysis (Burnard et al., 2008). Rreflexive thematic analysis (RTA) is a precise, systematic, and reflexive process where the primary researcher pursues an active analytical approach to coding transcripts that generally capture a single idea of interest within a data segment (Vaismoradi et al., 2016). When RTA takes place, the primary researcher constantly questions the meaning and whether analytical claims are supported by data evidence.

Theme development identifies common recurring patterns across codes is called the central organising concept, which summarises and is the building block for theme. Do themes have identifiable characteristics but still connect to the central organising concept? The PR achieved this by systematically and constantly re-reading and cross-checking in a reflexive process to reduce the themes to a maximum of approximately six key themes, best demonstrating the research interest (Braun & Clarke, 2006).

ETHICAL CONSIDERATIONS

The research was approved by the Auckland University of Technology Ethics Committee (AUTEC), 22/116, on 14 June 2022 (Appendix 1).

PRIVACY AND TRANSCRIPTION

I understood that 'once online, always online'. Therefore, privacy and ethical issues are fundamentally the same as face-to-face interviews and require ethics approval. Transcription was performed automatically by Zoom over the internet and then manually by the primary researcher, with copies saved to the research passport memory device. Family meetings and interviews were then deleted from Zoom. I assigned a personal identity code to protect the participant's identity. Safety observation protocols included confidentiality of personal information as interviews occurred in participants' homes. No research data was shared with anyone except the participant it belonged to. Any data transmitted in the research findings retain participant anonymity. Other health and safety measures for

participants were restricted to occasional phone or internet contact enquiries about participants' general health or further research matters.

INFORMED CONSENT

Participants were briefed on the research processes and what was expected of them. A participant information sheet (Appendix 3) and consent form (Appendix 4) has been made available to participants. Participants were then invited onto Zoom for a question-and-answer family Zoom meeting to review the information sheet and ask questions. The family Zoom allowed the family to experiment with Zoom. Voice only was in place to protect participants' identity if they did not want to use Zoom video recording. Switching off the video recording or cellular phone was a secondary option for participant briefing and interview. At the beginning of each interview, each participant read the research consent form aloud and agreed to its content.

All interviews were saved to a research passport memory device, and the Zoom interviews video and voice were erased. All interviews, transcriptions and saved notes were transferred to a portable memory device and handed to my supervisor for storage, and any notes were erased from my computer.

RIGOUR

Generally, qualitative descriptive research does not provide just a single answer (Sandelowski, 1994. p.336). Qualitative descriptive tells only one story among many that could be told from the data collected (Sandelowski, 2004). What underpins qualitative descriptive research are the basic assumptions and important methodological decisions necessary (Dowling & Cooney, 2012). Qualitative descriptive health research helps researchers unpick the socio-psychological fabric of the lived experience of patients, families, and professionals, such studies being necessary in all health fields (Issacs, 2014).

Processes that are accurate and consistent through systematic data collection and analysis equal the reliability of research data (Mays & Pope, 1995). If the reader is uncertain about how the research data was collected and analysed, they will not have confidence in the findings (Malterud, 2001). Research methods used in this research were proven structures, procedures, and techniques applied rigorously and methodically to identify credible research results (Lorelli et al., 2017). Zoom internet interviews were the data collection method used in this research. The data collection safety strategy involved saving the Zoom interview recordings and transcripts on a passport storage device. Where

they are available for frequent checking by the principal researcher and, when necessary, the research supervisor (Mays & Pope, 1995).

My strategy to ensure rigour is not to take the participants' comments personally. Having expressed my feelings about positionality was not difficult. I am also genuinely interested in participants' stories and the larger prize of contributing to the intergenerational health of NZVVets and families. I constantly analysed the language features of different participants using different research tools. Examples appear in the research findings where relevant situations or participants are compared one with the other.

VALIDITY AND RELIABILITY

Producing valid and reliable research is a subject of concern for every researcher. When defining validity, we should first break validity down into two essential parts, internal and external. A researcher gains internal validity by using legitimate methods to select participants and to record and develop data. External validity is often called generalisability, which means whether or not the data produced from the study is transferable to other populations of interest. It is important to note without internal validity, one cannot have external validity (Lakshmi & Mohideen, 2013). One of generalisability's essential functions is to generate universal laws pertaining to research. A function many researchers believe is not a feasible goal for qualitative research due to assumptions around the contextual nature of knowledge in research and interest in the different aspects of the phenomenon under investigation (Braun & Clarke, 2013).

The descriptive researcher starts to study and describe an issue or group of people in their natural environment. Researchers cannot explain everything, but they have a choice on what is significant to answering the research question. This factor can create validity risks. Findings must be accurately described and carefully used in the correct sequence. Experience and actions are based on specific people and groups socially and culturally (Lambert & Lambert, 2012). The aim is to give voice to the issue, or a group of people so described.

For a description of a lived experience to be considered valid, commonality in participant experience must be identified so that a generalised description of participant experience across the research is possible (Sandelowski, 1994) An assumption underpinning Husserl's (1970) understanding of human consciousness is that there are elements to any lived experience shared by all persons having the same experience. These shared experiences are called universal essence (Natanson, 1973).

CONTEXTUAL METHOD

The experiential (experience) approach prioritises understanding by interpreting participant meaning within the context of their experience. Social and objective experience is a crucial driver of knowledge construction. Most researchers would agree there is more than one way of learning from interpreted meaning and constructing data being analysed. Something as simple as a family event where everyone has their view of what happened needs careful consideration (Phillipe & Lauder, 2018).

SUBJECTIVITY AND REFLEXIVITY

In research, a prime objective is avoiding bias. Subjectivity is the personal views on how one reads a situation based on your interpretation of the facts. Subjective perceptions can influence research unintentionally due to poor research practice.

However, all research can be influenced in some way. Subjectivity is just one way, and researcher bias is another way. Researcher bias can be described as a subjective research method where all the knowledge, values, and assumptions belong to the researcher to assist the research process. In effect, it reveals who we are as people; therefore, any knowledge produced by a researcher will reflect this fact. In qualitative research, subjectivity can be practical if the researcher practices balanced consideration (Braun & Clarke, 2013).

Research analysis using reflexivity is an essential method in qualitative research. Reflexivity is related to critical reflection as a practice method within a person's research role concerning their knowledge. Reflexive research recognises the part of the participant and researcher in creating knowledge. It reflects on research positionings and how they influence data collection and analysis (Braun & Clarke, 2013). There are two forms of reflexivity. Personal reflexivity includes the participant and researcher as part of the research process, while functional reflexivity gives critical attention to how we use our research tools.

Our functional reflexivity research strategy uses two preliminary analysis interviews and eight reflective interviews. The two initial interviews in this research were called family information meetings. These family information meetings allowed participants and the primary researcher to ask questions and listen to the answers. Thus we could reflect and learn our research responsibilities as a group and experiment with Zoom Internet, a new skill for most of us (myself and the participants).

Reflexivity is further achieved by eight family reflective interviews over three generations being asked similar questions. This approach enabled crosschecking relevant information between generations and between the two families (Pessoa et al., 2019).

Researcher positionality

My experience as a NZVVet, father and grandfather belong to me alone. It is my reality of how I know what I know. It is natural to be constantly discovering and evolving as a person. Interpreting one's environment and living in the moment might be the closest we come to reality. Often, I find myself reflecting hermeneutically about different experiences. This is a word I once had difficulty pronouncing, let alone using conversationally. It demonstrates the nature of knowledge and how exposure to new knowledge becomes life changing. We need the right environment to learn and help grow; otherwise, we wither and die. My research worldview is one of interpretivism, where subjective social experience unique for each of us is addressed. In this study, I am a human research instrument. My challenge was to remain balanced, assume nothing and expect research decisions only humans can make. My position is as a primary researcher, so I aimed to be true to the research philosophy and myself as a researcher.

Conclusion

In research, methodology is the structure or framework of the research, while methods are the tools the researchers have in their toolbox if needed to develop the research (Braun & Clarke, 2013). In the section above, I have described the methods to increase the possibility of collecting unbiased data. Qualitative descriptive studies can offer a comprehensive summary of events in a straightforward and uncomplicated format (Sandelowski, 2000). The emphasis is on the subjective meaning and experience of a poorly understood topic or issue (Whitely & Crawford, 2005).

CHAPTER 4: FINDINGS

How Did the NZVVets Know They Had a Problem?

Both NZVVets had been diagnosed with Post Traumatic Stress Disorder (PTSD), developed during active training for service and active service in the Vietnam war. The NZVVets experienced direct action in serving with different New Zealand infantry companies against the Vietcong and also soldiers of the North Vietnamese Army.

A1, in his interview, says on returning to New Zealand after Vietnam, he "eventually realised he had a mental health problem." He has since been diagnosed with PTSD. His immediate focus was to return to the life he knew before his deployment to Vietnam. Unfortunately, the old normal no longer existed for him, so A1 had to make the most of a new normal, including living with PTSD. He said he "suffers from psychological injury (PI)" concerning his treatment by friends from his childhood turning their backs on him for serving in Vietnam. His local Returned Service Association refused to let him celebrate his 21st birthday in their clubrooms for the same reason. He chose to manage his mental health problem by re-enlistment in the army because this was what many other NZVVets suffering the consequences of Vietnam had decided to do. A1 knew they could trust each other because of their shared experiences.

B1 was traumatised by a training accident during final preparation for active service in Vietnam. His back injuries continued to trouble him from the time of the accident until he collapsed at work some years later. Finally, realising he had an accident condition that would probably affect him for the rest of his life. A spinal specialist advised him to give up work or be confined to a wheelchair. With that news, he headed home, acutely aware he had a wife, children, and no job. He was devastated and said, "That is when the PTSD set in." He has followed his specialist's instructions, but ongoing care has been unsuccessful for his PTSD, and his back injury still troubles him.

Initially discharged from the army, he rejoined, missing the army camaraderie, and failing to readjust to civilian life. B1 has suffered through 40-plus years. Each day he is physically reminded of his army service in the form of back pain from his serious spinal injury. He also has PTSD, both health problems severely affecting the quality of life for this NZVVet and his family. He and his family continue to struggle in the face of what seem to be impossible odds of becoming free from PTSD and back pain. He has not opted for spinal surgery due to risk factors involving mobility.

WERE THERE ANY SERVICES OR SUPPORT AVAILABLE, AND WHAT WERE THESE?

VANZ followed the lead of the United States of America and Australian with a presumptive list of automatically accepted health problems subjected to qualifying service for AO exposure. Presumptive lists exist in New Zealand for the Gulf conflict, former prisoner of war, and exposure to nuclear radiation for some navy veterans. Vietnam veterans have 16 presumptive health conditions, eight relate to AO and are supported by VANZ if registered with that organisation (https:/www.veteransaffairs.mil.nz).

What are the key messages about the passage of intergeneration health? A key message concerning the passage of intergenerational mental health is it is not limited to PTSD in military veterans. There is an increased risk of health issues being passed onto wives and offspring, a concept known as intergenerational transmission. Veterans' PTSD in the general population can be linked to substance abuse, poorer parenting, increased risk of domestic violence and psychiatric problems in wives of veterans and other family (Taft et al., 2005). However, the precise mechanisms allowing transmission to take place remain unknown (O'Toole, 2021) and remains so on completion of this research project.

FAMILY A

WHAT WERE THE HEALTH PROBLEMS FOR THE FAMILIES?

Realising that other people have noticed your inner turmoil can trigger emotive urges leading to problematic health issues and require in many cases a new mindset learning to seek help (Noqueiras, 2017). In the case of A1, it was his granddaughter A4 who started the conversation about his mental health. A1 claimed in his interview that the societal exclusion he received, because he was a Vietnam veteran left him with psychological injuries, "That still bugs him to this day," and he has been diagnosed with PTSD for combat related health issues.

A2 was a victim of a domestic violence environment in her childhood perpetrated by her father with undiagnosed PTSD. He was an infantryman in WW2. Violent childhood events follow children into adulthood and negatively affect their relationships (Farina et al., 2020). She has also had to deal with her husband's A1 PTSD. Living with an individual with a severe mental health condition such as PTSD contributes to increased rates of mental health conditions such as psychological injuries among

other household members (Manguno – Mire, 2007). These are all good reasons to believe the passage of intergenerational mental health problems due to relationships with a WW2 veteran and a NZVVets have been passed down intergenerationally by the two infantrymen across at least three generations in family A.

A3's son used his research interview to explain his views of the ”man of the house” psychological injury problem he was dealing with at the time. I believe this was just something he needed to get off his chest. The reality for A3, from my understanding, is a boy who was given the responsibilities of a grown man without the knowledge, support, or privileges somebody might normally receive in this position of trust. Meanwhile, his part-time taskmaster, the real 'man of the house, pops in’ from time to time for inspection, and if things were not up to standard, there were discipline retributions. Research studies found that veteran parenting was distinguished by controlling over, protective, and demanding relationships (Lev-Wiesel, 2007).

A4 looks back. It was her high school project outlining A1’s service in Vietnam and her attending descriptions of the problems A4 felt he faced as a result of that service. Which provided the necessary motivation to begin A1’s process of healing and including more effective family communications. A4 is regretful that the family responsibility given to her as tuakana by her grandfather made her feel like she was treated in the same way her father, A3, was treated, leaving her expressing deep regrets about her negative interactions with her grandfather A1 at the time.

How did the NZVVet Manage His Problem?

As well as some support from the NZ government VANZ. The most important family healing opportunities and recognition processes were PARADE 98, instigated by NZVVets themselves, and the government-instigated Tribute 08 Parade provided important family healing opportunities and recognition of processes (Kellett, 2022). Both are viewed as such by the extended family of A1. For the welcome home parade, Tribute 08, the whole family gathered to support A1 to help him unload mentally and share. When the family marched to Parliament, A3 said, “It was a big thing for the family getting in touch with their father”. Further life healing was gained by family participation in a special education program. This was seen as family resilience through a self-motivated effort in solving their intergenerational family health problems and was referred to as such by both A1 and A2 in their interviews.

When finally becoming aware of having mental health issues. A1 faced these realities as he always has and how the army has taught him by defining the problem, followed by a deliberate action plan. However, there were also other supportive opportunities and intergenerational family help. A1 says in his interview, “I eventually returned to his Māori culture, this family has a tradition of service in the Pioneer Bn WW1, WW2, and Korea. He would sit with his grandfather and listen because he greatly respects his elders.”

It was noticeable reading the nominal roles in (Awatere, 2003; Gurr, 2009; Subritzky & Smith, 2016; Souter, 2019; Howell, 2021; Kellet, 2022;) The intergenerational awareness Awatere and Souter both Maori, place on family names to identify the geographical region soldiers come from. Therefore you can observe some family service histories reoccurring intergenerationally through the years and the wars New Zealand has been involved in.

INTERVIEW OF THE THIRD GENERATION FAMILY A (A4) GRANDDAUGHTER

A4 lives with her extended family. She is the daughter of A3 and the granddaughter of A1, the NZVVet and his wife A2. A4 has made life choices that reflect those of her father, A3, as she was prepared to take on family responsibility as the oldest grandchild. Like her father, she has an advanced education in the computer industry and is now working through further postgraduate studies.

A4 is a woman in her 20s, has a degree in information technology and recently finished postgraduate studies in business management. A4 loves anything to do with the technological world. How fast it is and everything that goes along with computers, phones, or tablets. She also enjoys spending time with family and getting to know people. Whether through social media, face-to-face, or just generally getting the chance to meet new people from different walks of life. She tells them a little about herself, where she is from and what she stands for.

What did your grandfather tell you about Vietnam? A4 replied, “He told me a few stories when I was a teenager more to do with how it affected him personally, also how he felt it affected my grandmother, father, aunties, and uncles. What life was like way back then, especially being 18 or 19 when he went [to Vietnam]. Some of the protocols that they had to agree to, and that not only was it a huge sacrifice for himself personally, but also for the country. He mentioned how very little thanks not only himself, but all the veterans received when they came home, which was unfortunate from my perspective.”

Healthwise, A4 believes A1 was traumatised by the Vietnam war. As she got older, she could interpret some of her “papa’s behavior as being the result of suffering mental health effects from Vietnam. A4 believes her “papa’s mental health took its toll on the family.”

A4 believed her grandmother was affected by her grandfather's traumatic experiences in Vietnam, although she did not notice anything as a child. However, she says, “Not until my early adulthood years, about 18 or 19. I didn't actually sit down and have a conversation with my grandmother about how it affected her. I could only imagine what she went through, having to raise a family by herself. Knowing her husband was often absent, she had my father and his siblings to look after. From the very little conversations that I did have, she found it hard, more so when he came back rather than when he was away. Having to watch him go through different rollercoasters of emotions changing from one scenario, like being in Vietnam, to having, to remembering how to be around his family, children, wife and then eventually around his grandkids, great grandkids. I can say it was hard for her from my perspective, being her grandchild.”

A4 says her grandmother is a ”staunch woman who keeps a lot to herself. It has been painful for her grandmother to watch her husband and her son go through all the traumatic events while remaining strong for her family.” Taking on emotional responsibilities for her husband and son and the difficulties they endured at an important learning period in the development of a new family infrastructure.

How did your father cope? A4 said, “It was a huge range of emotions for my dad having to take on responsibilities at such a young age. Dad has mentioned, and from what I've seen growing up, there was a lot of hurt, a sort of feeling of abandonment, because his dad wasn't there. And I don't blame him or papa. There was miscommunication between them because they wanted to understand how the other felt. Being staunch males it was hard for them to express their feelings, and toward to each other”.

A4 says her father A3 mentions “How difficult it was for him becoming the man of the house when his father was absent. He was about eight years old when he was given the task of supporting his mother A2, looking after the younger siblings and the house. He told her,” I wish things could have been different. A4 says, “Because of these household responsibilities, he believes he missed out on having a normal childhood. However, due to more effective communications with his father, most of these problems have been resolved.” A4 says she “thinks that her dad was quite disappointed how little recognition the NZVVets got when they returned.” A4 and A3 are now happy within their family, even though the transition was not immediate.

A4 mentions, "The biggest regret I have is I feel like as the eldest grandchild at times, I have struggled to understand my papa. I've had to take on a lot of responsibilities for my cousins, nieces, and nephews when their own parents were available. I felt like I was in the same position as my dad, having to take responsibility for being the tuakana of Nana and Papa's grandchildren. I guess my regret would be arguing with my grandfather about these things. I was hurt being responsible for my grandparent's expectations when I wanted to live my own life."

A4 says her family takes whakapapa very seriously. "For example, we had a family visit to my great grandfather's gravesite, only me and my brother. Papa's mission, from his conversations and snippets of information, was to give us knowledge about our genealogy. He was passing on information to me and my brother, and to dad being the next in line. This is the intergenerational aspect of passing on valuable family information. The lessons you learn you keep until that knowledge is needed. Whether it's Māori or me being the oldest or the youngest on my dad's side. Vice versa, on my mother's side, there are whānau and tribal teachings too."

A4 Principle Intergenerational Theme

A significant intergenerational behavior linked to trauma is the thrice repeated cycle of older siblings, very young themselves, having the responsibility for younger siblings, starting From A2, who, with her sister, took care of their younger siblings, to A3 having the same responsibility for his younger siblings. To A4, having responsibilities as the oldest grandchild for the wellbeing of her grandparents and younger relatives. Responsibilities were thrust upon all of them very early by controlling fathers or grandfathers traumatised by war.

Interview Of The Second Generation A3 Son

A3 is a man in his 50s, married with a family, including grandchildren. He is well-educated and skilled working in a field with managerial responsibilities. During his early years, he was an army brat (child of a serviceperson) and is reasonably conversant with military culture.

His father had "told him nothing about the war in Vietnam in the past." An experience many of the army brats talk about is sitting quietly in the room when old mates visit their fathers. Listening hopefully unnoticed by the men as they spoke about their adventures. A3 adds, "The kids want to

hear the stories because they are proud of their father and grandfather." A3 believed his father "was traumatised in Vietnam. His coping mechanisms were alcohol, smoking, avoidance by walking away and not talking." He also believed his father was "affected by Agent Orange (AO) because he operated in the areas where they were actively spraying." A3 has lost two children, "a daughter with a malformed vital organ and a son with a malformed heart. My brother has a son suffering a specific illness with no history in the family." A3 says, "The family often wonders if the cause of these early deaths and illness are AO related."

A3 claims his father admits to psychological injury (PI) due to the hurt he suffered when friends turned their backs on him and the previously mentioned RSA saga. While discussing psychological injury, A3 added, "what about my psychological injury?"

Evidently, A3 never really got on with his father until later in life. It seems he used to get hidings, and his father picked on him. He said he "took it because it came with the territory of being the oldest son living at home". A3 said, " I never got to play sports as much as I wanted to because I had to be home to support my mother." His priority was always to look after his mother. She told him, "he should be playing sports, but he wasn't. He was doing the lawns, making sure everything was done".

A3 believed for "some reason, he always used to get the worst of any situation." Whatever the reason, when he looks back, A3 is frustrated because he believes he "never really had a chance to be a child." Due to the responsibilities thrust upon him by his father's frequent absences. As far as A3 is concerned, "The situation of being the man of the house affected him psychologically, to the point where he and his father always fought".

A3 says his biggest regret was "trying to stab his father with his diving knife." The situation occurred when some of the family had been gathering kaimoana (seafood). While carrying their catch-up from the beach, his sister somehow lost his new mask and snorkel. A3 was upset at losing his new diving gear and berated his sister so much that his father stepped in. The argument escalated to the point where A3 felt threatened and outnumbered. Unsheathed his diving knife and attempted to use it on his father. Whereupon he was knocked to the ground.

Understandably A3 and his father are deeply remorseful for this event. Both men said they learnt from what happened, mentioning this during their interviews. A3 said, "As he gets older, he is able to see beyond the family negatives he has had to endure." He says, "some of the events happened because of the way his father was brought up, and some of it was instinctive because the army was so infused into his life".

A3 Principle Intergenerational Theme

A3 used this research interview as a forum to explain his views of the 'man of the house' problem he was dealing with at the time. He described this problem as a psychological injury (PI). It could be due to secondary exposure to his father's PI problem as well as the household environment and events. A3 has likely questioned his place in the family, including his worldly beliefs (Lamrock, 2023).

Interview of the first-generation A2 wife

A2 says her husband was "traumatised by his service in the Vietnam war, never talking about it. His ploy was to distract people with humor. He was like two different people while on duty he was the RSM (Regimental Sergeant Major) representing the army, which he really loved, at home quiet and withdrawn." A2 says the army came first, and Vietnam trauma was often mixed up with family trauma.

A4 said, her "grandmother keeps a lot to herself." Interestingly, A2's childhood followed a similar pattern to A3, her son, growing up quickly, working hard, and looking after the younger siblings. Her father, a WWII veteran, and an infantryman was traumatised by war. He was a hard taskmaster and a very bad-tempered man who died young, all symptoms that can be related to stress from traumatic experiences (Beckham et el., 1996). During one of her husband's many army duty absences, A2 suddenly became so sick she couldn't tend to the children. During the night, it had snowed, blocking the exit to the house. When she woke the next day, all her hungry children were huddled in bed with her. This experience made her think, "If she had died, what would have happened to her children." Later when her husband informed her he was being posted to Burnham, A2 said, "No, me and the kids are staying here," so A1 completed his final posting by himself.

A2 mentioned how "deeply held sentiments came out when she broke down in a shared psychologist appointment with her husband." What could be the cause she guards by keeping so much to herself? Research identifies negative maternal relationships due to trauma leading to children internalising problems (Fitzgerald et al., 2020). I believe she carries intergenerational trauma from her childhood and shares similar intergenerational family trauma with her son A3. Both were in their primary school years when they were given the responsibility of caring for younger siblings by war-traumatised fathers. Their fathers probably saw such an arrangement that employed the older children as caregivers, keeping the family together and helping their wives. A2 and A3 are the second generation in their respective family of origin. A third passage of intergenerational health

link exists between A2's family of origin and her grandchildren in her marriage to AI. A similar suggestion exists for A1's with their mutual grandchildren, including A4.

A2 Principle intergenerational theme

A2 made only three statements about her mother " My mother was spoilt," " My mother didn't know how to access the resources, and my mother used to say I was blunt." These comments suggest a dismissive attitude by A2 towards her mother's inability to provide any positive influence in her life, at least as far as a school-age child. Infants seek protection and maternal support from their primary caregiver, usually their mother (Suardi et al., 2021). Despite his bad-tempered and demanding ways, A2 seemed to identify her father filling the primary support role.

Interview of the first generation A1 NZVVet

At 19 years, A1 served as a New Zealand infantryman in the South Vietnam War. A1 was traumatised by the experience saying in his interview, "Although I was very well prepared tactically, I was not prepared psychologically." He adds, "The first ten years after Vietnam, my mental health due to my experiences in Vietnam were disturbing, then they mellowed slightly." His way of dealing with the trauma was to continue to serve in the army surrounded by similarly stricken NZVVets. No mental health options were offered or asked for. The veterans existed in their own bubble, sympathetically listening to their collective stories drinking and smoking to excess.

When A1 married, his wife was particularly supportive, and he says, "She was the one more than anyone else that offered stability in their lives. She was the one that smoothed the gap being made when the kids asked her what was wrong with their father." Besides trauma, A1 was exposed to Agent Orange. He also admitted to having a psychological injury (PI) problem from how his communities treated him when he returned from Vietnam.

Both A1 and A3 refer in their interviews to their physical altercation as a regretful part of the family history, which has motivated them to improve their relationship. The altercation happened because of a release of buildup of tension between father and son, when A3 believed treatment by his father was unfair. As terrible as a family altercation can be, it was a gamechanger in their respective relationship. There has been a number of what are called game-changers for the participants in this research study. A game-changer is an important justification or reason causing a specific positive action to take place. A1 mentioned a number of important game-changers in his interview. For

example, his granddaughter's school project about his experience in Vietnam made him realise he had a mental health problem requiring some sort of affirmative action for healing to occur.

PRINCIPLE INTERGENERATIONAL THEME A1

Further intergenerational health conceptual links could be discovered by investigating the history of both families of A1 and A2 to identify shared traumatic symptomology for A1 and wife A2.

FAMILY B

WHAT WERE THE HEALTH PROBLEMS FOR THE FAMILY?

According to interview data the chronic nature of B1's accident and mental health issues have had an unavoidable impact on family B. All the family have in some way been affected by mental health issues likely passed on by B1's traumatic experiences. The parents have had to live with mental health issues all their married lives, for the children and grandchildren it has been a life time sentence. There are mental health issues concerning B2 his wife, at least two of three children a grandchild diagnosed with ADHD and another grandchildren with learning issues.

B1 was traumatised by a training accident during final preparation for active service in Vietnam. His back injuries continued to trouble him from the time of the accident until he collapsed at work some years later. He was advised by a spinal specialist to give up work or be confined to a wheelchair for the rest of his life. With that news he headed home at the same time realising he had a wife, children and now no job. He was devastated and he says "that is when the PTSD set in." He has followed the specialists instructions, but ongoing care has been unsuccessful for his PTSD, and he has decided not to have a back operation at this stage, due to surgical risks.

HOW DID THE NZVVET MANAGE HIS PROBLEM**?**

Since his collapse at work B1, has had ongoing treatment for chronic illnesses and injuries including those suffered in the training accident. BI has put his trust in New Zealand health system for 40 plus years. I do not believe the New Zealand health system (NZHS) has been up to the challenge for him. According to B1 he has experienced differing standards of care and treatment. At present he has a

good team around him in which he has confidence, a concern I have is as people move on, his current team will change.

Further damage to the spine equalling long-term care (still chronic treatment status) but a lesser quality of life due to being wheelchair bound. The army doctor told him to keep "the weight off his spine and find somewhere quiet to live." B1 has done so by moving from the hustle of the city, he now finds transport and accommodation costs attending appointments in the cities difficult and expensive. B1 is struggling financially, his usual access to funding is drying up. There are funds especially for those NZVVets facing financial hardship. Apparently the trust funds set up for NZVVets have made monetary contributions to B1 in the past, but regular funding over lengthy periods of time is the responsibility of the New Zealand Government. BI along with his family are in survival mode, they need help.

How did the family manage the problem for the NZVVet?

The family have not managed the NZVVets health problem well, possibly due to the chronic nature of the physical injury adding to mental health issues. One answer for the lack of progression in solving B1's health problem could be encapsulated in B3's answer to the following question. When B3 was asked, If there was anything he might like to add about his father's health problems? He answered, "That's basically up to dad he's the one been there, done that." When I asked him "do you think it is his problem?" he replied, "Well no, he doesn't help, or he is getting help, and he should solve it." I believe this illustrates a level of detachment for his father's long standing health problems.

The detachment could be attributed to his B3's Traumatic Brain Injury (TBI) from an assault, or it could be for some other reason. For example, informal caregiver burnout, which can be defined as a tridimensional reaction to stress in a caregiver context. Significant symptoms include feelings of detachment or depersonalisation toward the person being cared for, lessening of caregiver fulfillment through resulting caregiving, and emotional exhaustion (Gerain & Zech, 2019). The caregiver burnout may result from all the family having lived their entire lives in the shadow of B1's accident and mental health issues.

A study on Australian youth living with a veteran parent with mental health issues such as PTSD mentions a superordinate family theme, "Growing in Silence." This subordinate family theme covers four subordinate themes: Taking care; Self-reliance; a family disconnected; our family. The

intergenerational transfer of avoidance of mental health was also recognised. While Australian youth described being careful about parental stress, rarely seeking help, being protective of family, at the same time believing the family was disengaged (McGaw & Reupert, 2022).

WHERE ARE THE FAMILY POSITIONED TODAY IN THEIR INTERGENERATIONAL HEALTH?

The constant long-term invasive pressure of living with a person with chronic injuries and mental illnesses has caused many of B1's family to have mental health issues as well. Positive links to mental health issues can be environmentally established, providing a clear passage of intergenerational mental health issues beginning with B1 and spreading to the rest of the family.

When B2 said in her interview, " I am not going to back away but a hopefully people will be more understanding and be less judgmental about our position." Suggests a different or a less tolerant view of the family position exist. B2 said she is "devoted to the kids" (Grandkids), and like other wives of a veteran seems to be the glue holding the family together. According to interview data she stands alone struggling along without any support of her own. B2 and the rest of the family are victims of PTSD intergenerationally as much as B1 is and should receive support pertinent to intergenerational health.

INTERVIEW OF THE FIRST GENERATION B1 NZVVET

B1 was a New Zealand infantryman diagnosed with PTSD resulting from the South Vietnam war. His work history indicates a person of strong work ethic. After a lengthy stay in hospital with extreme injuries from a training accident he persevered and went on to complete a full tour in South Vietnam in spite of pain from back injuries. An accomplishment many other supposedly fit and well soldiers were not able to achieve. One of B1's senses affected by the accident is the smell of burning flesh from rope burns, he says in the interview " And then that smell, and I smell it now. But right up to then I didn't realize what that smell was till I smelt it in Nam."

A further incident of note occurred for A1 with his eldest son. "He was about six or seven at the time, I had him up the wall by his throat. Because he broke through, I used to just black out, shut everything out. I'd just sit there, and you break through, and I'd lose it. He broke through, he dropped a cup and then I had him up against the wall before I knew anything of what I was doing, that shocked the, shit out of me."

Since his collapse at work, B1 has had ongoing treatment for chronic illnesses and injuries including those suffered in the training accident in the time he has been in New Zealand health system he has experienced differing standards of care and treatment. At present he has a good team around him in which he has confidence, a concern I have is as the team members move on, what happens to B1?

The Vietnam Veterans and family trust fund was designed to help veterans and families experiencing financial hardship. B1 says has received trust funds in the past but has been told they cannot keep subsidising his care. BI along with his family are in survival mode, they need help.

PRINCIPLE INTERGENERATIONAL THEME B1

A probable intergenerational theme is the undiagnosed case of PTSD of the eldest son. Dating from the time he was a six to seven years old and was held up against the wall by B1 who was suffering a black-out. In fact anybody who witnessed this event is likely similarly affected. The son was not a research participant, a theoretical pathway for child PTSD could still serve a useful purpose.

INTERVIEW OF THE FIRST GENERATION B2 WIFE

B2 in her 70s, lives in retirement with her husband of 40 or so years. In those years she has absorbed immense mental pressure from her husband who suffers from PTSD and debilitating injuries from a training accident while in the army. So much so, she now has her own mental health problems

B2 had a sheltered upbringing with just her parents and all other siblings grown up living away from home. B2 said she has “No regret we got married that was it”. When she says, “ I am not going to back away but hopefully people will be more understanding and be less judgmental about our position.” This statement suggests a different or a less tolerant view of the family position exist.

B2 says she is devoted to the kids (Grandchildren) and like our other wives of a veteran seems to be the glue holding the family together. B2 finds relaxation by ”spinning and knitting, finding it difficult to interact with her husband at times. “When he is anxious he can change very quickly. It’s like walking on eggshells. If I make a noise when he is watching TV or something, it can unsettle him and he’s yeah very quick to react or not to wake him if he is asleep.” In effect, the whole family walks a tight rope. B2 lacks supportive friends, she says of veteran wives, “There's not many that will talk, and there's not many that have been with their partners right through. I haven't really met anyone

that would (talk). “One did talk at the reunion, she has the same things happening to her. Oh, yeah, Basically I am going through the same as they are. So it's not only that one person that I spoke to you know. But they are few and far between the ones that have been with them for a long time, and they don't like talking.”

B2 Principle intergenerational theme

The constant long term all invasive pressure of living with a person with chronic injuries and mental illnesses has caused B2 to have mental health issues as well. Therefore, positive links to mental health issues can be established providing an intergenerational pathway between B1 and B2 and the rest of the family.

Interview of B3 son

B3 is the youngest sibling in the family. Both parents were working when he was growing up. His sister was his home carer, so he saw little of his parents. His father worked night shift while the mother worked day shift. This meant B3 could not express himself as young boys do. It was clear to him the consequences of waking his father from sleep, the reverse side is family economics are important.

He admits to having regrets way back philosophically adding “that’s life.” B3 was a victim of assault in the community where he lives as a result has permanent neurological deficit due to traumatic brain injury (TBI). If allowed to take his time he comes up with basic but plausible answers to interview questions. When asked if there was anything he might like to add about his father’s health problems. It seems to me he may well be washing his hands of his father long standing health history. Which has placed at times extreme stress on the rest of the family or is it a feeling of helplessness as he does not have the skills or knowledge to help his father?

Previously existing mental health issues such as depression and temperament could have had some bearing on the cause of the assault in the first place. Therefore could be linked to intergenerational health as both an older brother and one of B1’s grandchildren have problems with a fiery temperament. The family history of fiery temperament is unhelpful. Particularly in terms of the family pooling its resources to seek solutions to the mental health affecting all of the family at some stage. It seems not to have occurred to the family there are other resources they could access. While it is understood financially the New Zealand health system is sometimes the only option. The family does mention they do not believe treatments have always been relevant.

B3 Principle intergenerational theme

B3 has been the victim of traumatic brain injury (TBI), a factor I believe was behind his basic answers to the interview questions. The constant long term invasive pressure of living with a person with chronic injuries and illnesses has caused intergenerational mental health issues for B3. In some way it may have contributed to B3 getting into the altercation leading to his assault and TBI.

Interview of grandson B4

B4 is the youngest son of B3. When asked if his grandfather was traumatised by his experiences in the Vietnam war he says, “probably” but he could not explain why. B4 does not live in the same house as his grandparent. Therefore, he did not have the lived experience of chronic illness and injuries quite as much as his father has endured. But there can be little doubt he is aware of the health issues of his grandparents and has a up and down relationship with them. He has seen his grandfather go off for a drive when he gets stressed and his grandma knits, for the same reason. Probably over time living and health issues are actually improving in the house, after all these years his grandparent deserve some peace. B4 has heard a little about Agent Orange and used to have eczema and asthma but he is no longer troubled by these problems. The most excited he got during the interview was when I asked him what was the biggest game-changer in his life recently? His reply was his father taking him out more, getting his license, and having his own scooter. He is perhaps just a normal 16-year-old boy very absorbed in his own world, and why not.

Principle intergenerational theme B4

Probably with age the environment within the family improved. As a result the family relationships so often tumultuous are now more settled, time being the great healer. His grandparents having developed coping mechanisms by finding private space for themselves to contemplate and recover from stress. The mental health of B4 and the rest of the third generation of this family is an interesting subject for further intergenerational investigation particularly in regard to temperament.

CONCLUSION

During the interviews, Family A reflected on solving problems as members of a family team. There seemed to be a continuum of ideas, forethought, and togetherness. If there was a problem, all of the family participants were quick to point it out and did not have any issues discussing and then adjusting to a new situation. I believe they have moved on and are in a better place with real intentions to keep improving all facets of family management systems. They all functioned well individually and within the family infrastructure. All participants acknowledged past mistakes and moved forward as a family group. However, I believe an important intergenerational health issue is still to be resolved concerning two family members A2 and A3.

Family B is a very different group. They do not seem to be a cohesive family moving forward to help improve their health issues. Some health issues are caused by chronic physical injury. However, they are a very tight family unit, and I believe receiving appropriate, consistent health care would significantly improve the entire family situation. There are traceable intergenerational health issues that have been discussed. Arising from this intergenerational health issue, the whole family has mental health issues to some degree. This situation should not have been allowed to continue because it has been a drain on the family and health system resources.

CHAPTER 5: DISCUSSION

LIMITATIONS OF THIS RESEARCH .

There is much research, information, idea's, and theories in the environmental scientific community. Making the debate around the epigenetic mechanisms sometimes confusing for those with less than expert knowledge. One review by Associate Professor of Genetics and Neuroscience, Trinity College Dublin has written this about epigenetics:

> We come wired differently, with innate predispositions affecting intelligence, personality, sexuality and even the way we perceive the world. These innate psychological traits do not necessarily determine our behavior on a moment to moment basis, but they do influence it, both at any given moment and by guiding the development of our habits and the emergence of other aspects of our character over our lifetime. But can epigenetics really overwrite these genetic effects on our psychology?
>
> The idea that epigenetics modifications of DNA can be "passed down" is intended in terms of cell division but makes it sound like epigenetics responses to experience can be passed down from organism to offspring. Though such a mechanism does exist in plants and nematodes, there is no convincing evidence that this is the case in mammals, especially not in humans" (Mitchell, 2019).

Environmental health focuses on the relationship of people and their environment. Life experience has a lasting impression on our cognition and behavior. Cognition and behavior involve gene expression and cellular suggested pathways in the brain (Jawald et al., 2018). Recent evidence suggests that environmentally induced epigenetic changes can persist and be transmitted to subsequent generations (Yehuda & Lehrner, 2018). Epigenetic modifications occur on genomic DNA and histones to influence gene expression. Epigenetics describes fixed chemical changes to DNA and histones and affect gene expression without changing nucleotide sequences which can be inherited (Kan et al., 2022).

A research paper published nine months after by another acknowledged expert in the field of genetics argues differently. Conceding that inheritance of an acquired trait was previously contested, as the mechanism that can environmentally alter DNA transferred from parent to offspring was unknown. With developments in epigenetic knowledge, it has been discovered that

inheritance is not based on DNA sequence, but how DNA is utilised. Sharma (2019) explained one environmental mechanism believed to substantiate that claim "Recent advances in our understanding of intergenerational inheritance revealed that paternal environmental information is transmitted to offspring via sperm and that small RNAs are enviromentally responsive epigenetic molecules in sperm" (Sharma 2019, p.10).

I am unsure if the expert views of Sharma and three other researchers in field is convincing evidence for fellow expert Mitchell. However, this group's opinions illustrates how quickly knowledge is expanding in the genetic field and the importance of discovering scientific biological proof about the mechanics involved in epigenetic responses. Explanations in which all the scientific community can agree with.

SUMMARY OF FINDINGS

I have decided to focus on one theme from each of the families to demonstrate the passage of intergenerational of health conditions in relation to the veteran's PTSD. The twin approach has meant staying close to the research objectives and methods outlined in the methodology.

FAMILY A

The overall family interview pattern as far as effects of PTSD on AI has a feel of successful accomplishment, coupled with optimism for the future. The theme I am going to investigate was not immediately apparent, revealing itself slowly as I probed and crosschecked information collected. First of all A2's interview data will be used to investigate a passage of understanding in reference to her present personal history and relevancy to demonstrating the passage of intergenerational transmission of health conditions (trauma).

Clearly as A2 states her father was traumatised WW2. Life was just hard work growing up with no time to be a child. Just as clearly A2 states her mother was spoilt and was not equipped to help her find the resources to study physiotherapy. In the light of these two comments A2 made about her mother. I believe there was little or no child-parent attachment. Infants seek protection and maternal support from their primary caregiver usually their mother (Suardi., et al, 2021). In this

instance in spite of his bad tempered and demanding ways, A2 seemed to identify her father as filling this role.

In a study of Australian Vietnam veterans' sons and daughters, Vietnam veterans' sons had a higher risk of being exposed to trauma than the children of the non-deployed same era soldier. Together with increased risks of PTSD and co-morbid health issues of substance abuse, depression, and anxiety (O'Toole, et al. 2016). Another study of women partners of American Vietnam veteran with PTSD were asked why they stayed in a stressful relationship. The findings indicated the women had a tendency to idealise their parents' relationships despite having evidence the relationships were otherwise. These woman idealised their fathers while having negative identifications with their mothers. As primary caregivers in their families of origin they are generally the oldest siblings. In adulthood relationships they were still the primary caregivers assuming primary responsibility for their families and partner alike (Maloney, 1988).

My assumption, based on the strength of interview data and available literature, is that A2 has secondary traumatisation (Rosenheck & Nathan, 1985). Due to her father's overbearing behavior and likely domestic violence towards at least the two oldest girls A2 being one of them. A granddaughter's commented about her grandmother holding in a lot . Coupled with A2's comment, "I always knew in my mind I would not marry any person who was going to hit me." This is a specific phase reflective of a very stressful even traumatic passage in the young life of A2.

A very important question is how does this experience reflect on A2 and Family A in which she is wife to husband A1 (Jordon et al., 1992). A son, A3 claimed in his interview of once having a psychological problems due his father delegating him responsibility for being the man of the house. A similar responsibility was allocated to A2 during her childhood. Both being the older siblings at the time in their respective second generation family of origin. The responsibilities which we dealt with in the interviews restricted A3's social life and he was regularly beaten by his father A1. Causing significant resentment toward his absent father (Forest et al., 2018).

For A2, it was history repeating itself with the two influences of trauma one from her father and the other from her husband likely to interact in some way (Yehuda & Lehrner, 2018). A2 must have recognised what her son was going through but did not intervene as much as A3 would have chosen. Even though there was a key functioning element by A3 of not wanting to let his mother down (Frederikson et al., 1996), I believe A2 has not quite finished with the past.

We have a situation where two lines of trauma exist between two unrelated war veterans intersecting at the second generation of family A. A2 was exposed to trauma in two families as a

daughter of a veteran in one family and the wife of a veteran in another. A2 has mentioned in her interviews there were many general family and relationship problems due to her husband and her father struggling with PTSD.

What could be the effects of a compound dose of trauma? Researchers in the field of social deprivation have one answer. As a consequence of intergeneration transmission, characteristics might be produced inhibiting recovery from adverse events (Scorza, et al. 2018). Was A2 so affected by previous trauma she unable to function adequately leaving A3 to sort the man of the house problem all by himself? The answers to these questions we may never know and would worthy of additional intergenerational research.

The passage of traumatic health conditions are easily visualised in family A. The third intergenerational health link is to A4 the granddaughter has also been established. The third generation tends to be more secure in their own sense of self than their second generation parents. Giving them the ability to identify with the first generation (Lev-Wiesel, 2007). As A4 has demonstrated by her identifying with and supporting both her grandmother and grandfather.

FAMILY B

The theme for this family presented itself immediately. I shall let B1 explain as he did in the interview. " He was about six or seven at the time. I had him up against the wall by his throat. Because he broke through, I used to just black out, shut everything out. I'd just sit there, and you break through, and I'd lose it and he broke through, he dropped a cup and then I had him up against the wall before I knew anything of what I was doing. That shocked the shit out of me,"

Blackouts result in reaction to the brain losing its ability to consolidate memories in the hippocampus, causing anterograde amnesia memory loss usually temporary, but can lead to worsening conditions. Alcohol is one of the risks factors for blackouts. (Miller, et al 2022). Health problems among children of a parent suffering from PTSD can result in significant mental health issues for later child development (Litrownik, et al., 2003). Due to the long term effects of parental mental health behaviors including but not limited to blackouts, anxiety, aggression, substance abuse, and depression (Forest, et al 2018).

The poor unfortunate who dropped the cup was A1's oldest son. A traumatic event for the child and anybody witnessing it. Even his father received a nasty shock, more importantly he has learnt from

this episode. I believe it is a very specific example of an experience by a NZVVet demonstrating the passage of an intergenerational health condition. In this case it was the mental health condition of PTSD passed from father to son in very traumatic and tragic circumstances.

Unfortunately that son was not available for interview. The boy is now grown and like his father is quick tempered and works in a dangerous job. Children of veterans tend to mimic their veterans fathers (Sherman, et al 2016). With veterans leading active lifestyles outside of the military and being attracted to dangerous activities, this could be a reasons why the adult son works in the hazardous occupation he does (O'Toole, et al 2021). Because there is a different style of verbal communications in this family reflexivity and investigating the abstractions in participants accounts was especially necessary (Vaismoradi, 2016).

The mother of the child in the meantime must have witnessed the traumatic event between her husband and son. She too has mental health issues now as well (O'Toole et al., 2016). There is little doubt in my mind this event caused or at least contributed to her mental health issues. The couple's second child could possibly have witnessed her older brothers plight and she too would be affected by the whole scenario. The youngest son also lives under this cloud of PTSD received severe Traumatic Brain Injury (TBI) from an assault from which has not fully recovered, in some way the home environment and the assault could be connected.

In summary, for Family B the NZVVet, B1 was traumatised by a training accident. His back injuries continued to trouble him from the time of the accident until he collapsed at work some years later. He was advised by a spinal specialist to give up work or be confined to a wheelchair for the rest of his life. He has followed the specialists instructions, but ongoing care has not been successful for his PTSD, and he has decided not to have a back operation at this stage, due to surgical risks.

Unfortunately the chronic nature of B1's accident and mental health issues have had an unavoidable impact on his family. To the extent each family member has some mental health issues as well. There are mental health issues concerning B1, his wife, their three children and including a grandchild diagnosed with ADHD and other grandchildren with health issues.

CONCLUSION

During his interview, A1 brought up a very interesting concept concerning his return to te Ao Maori. As the rest of the family also identify as Maori, te Ao is important. It also has particular relevance to

the teaching of Tumatauenga, the Maori god of war, a philosophy in part adopted by The New Zealand Army. Its importance in cleansing the soldiers returning from war could have real advantages for the future of veterans and families (Awatere,2003). Or at least they would not be worse off than they already are. It is also imperative to decide as an organisation how the interested parties should use the information gathered. This brings us to the idea that not everybody wants to live in the cities. Poor people have to pay for travel to health appointments far away from their homes. Finally, the system needs to be benevolent toward veterans and their families. It is not just a process of box ticking.

CHAPTER 6: CONCLUSION

Family A has been successful in the fight to overcome the effects of PTSD A1 suffered from. The health experiences by the family demonstrates the passage of intergenerational health including the predictability of the third generation a granddaughters' supportive actions to help her grandparents (Lev-Wiesel, 2007). The family have been privately resourceful and are lucky to have these resources at their disposal. There is still problem solving to be done but then there always will be unfortunately that is life. However they have set a fine example of what a small cohesive cross trained group can do. Working as one to achieve a common goal not alike well trained recruits in the New Zealand army.

With Family B, not only can we trace the passage of intergenerational health through three generations but there is evidence to suggest all the family suffer intergenerational mental health conditions related to the NZVVets PTSD.

We have had recent problems with Covid-19, drawing an analogy with the covid-19 epidemic to illustrate a point. If a person living in your house has Covid-19, they must isolate, wear masks, perform aseptic procedures, and get treated for covid by being vaccinated, or others in the house will become infected with Covid-19. The same analogy applies for all communicable health issues. PTSD has that communicative ability in the respect it can spread and engulf families, as noted in Family B. The concept of PTSD communicativeness could be a subject for further research.

The controversy that engulfed the NZVVets community continues to abate. We have had our parade and we have had our apology. We are now working on a health legacy program to support our families should they need health care attributable to our service in Vietnam after we are gone. Vietnam veterans from around the world battled not only in a foreign land but also in their own countries for the right to be treated fairly.

Sending people to war is not just an exercise of training and equipment. There is a human cost in theatre and also when the men and women come home and long after. Many service men and women face the rest of their lifetime being treated for wounds in their war. As we have discovered with B1, there are no good times for those who have to deal with agonising or debilitating physical wounds. If that is not bad enough the same people and others of their families they have infected suffer from mental health conditions that seemingly do not have any effective treatment after decade upon decade. Such treatment is a waste of time and valuable health resources, we all can and need to do much better.

Veterans' families leave them or take on the burden of being their primary caregiver. There is little thanks for their position as primary caregiver only criticism, they cannot win. If they leave they are selfish, if they stay in the home they will eventually succumb the very same mental health condition.

At least Veterans affairs New Zealand (VANZ) will mostly take responsibility for the veteran, but what about the family, mostly the opposite. Why? It probably comes down to providing legitimate evidence to enable funding. VANZ is a small government department having limited resources to fund mental health treatment. The New Zealand Ministry of Health expenditure was estimated at $12 billion for mental health alone in year 2018 (Mental Health Act 2019). In reality, it is not anybody's fault. The Ministry of Health are trying to do better. However, I cannot help but wonder what has been the monetary cost alone of 40 to 50 years of unsuccessful treatment.

The New Zealand Vietnam veterans association are embarking on a campaign to cover present and future generations of our families for health issue attributed to our service in South Vietnam. We want to do that from a position of honesty and integrity within an environment of evidence based practice. We should continue to keep abreast of the latest trends in intergenerational health and work together NZVVets, families, the services, and health practitioners to find resources that are fit for the task they were developed for or develop new ones. The New Zealand Vietnam Veterans Association is morphing into an intergenerational association. Peopled by well-educated and capable son and daughters of Vietnam veterans. We are at a crossroads, what will the future look like for NZVVets families, it is for you to decide.

APPENDIX 1: ETHICS APPROVAL LETTER

Auckland University of Technology Ethics Committee (AUTEC)

Auckland University of Technology
D-88, Private Bag 92006, Auckland 1142, NZ
T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

14 June 2022

Denise Wilson
Faculty of Health and Environmental Sciences

Dear Denise

Re Ethics Application: **22/116 New Zealand Vietnam Veterans' intergenerational health**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 14 June 2025.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the Auckland University of Technology Code of Conduct for Research and as approved by AUTEC in this application.
2. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
3. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
4. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
5. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
6. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.
7. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard and that all the dates on the documents are updated.
8. AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

Please quote the application number and title on all future correspondence related to this project.

For any enquiries please contact ethics@aut.ac.nz. The forms mentioned above are available online through http://www.aut.ac.nz/research/researchethics

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat
Auckland University of Technology Ethics Committee

Cc: edphnock@gmail.com

APPENDIX 2: ADVERTISEMENT SHEET NZVVET

New Zealand Vietnam Veterans' Intergenerational Health

My name is Eddie Nock my Vietnam experience was with 161 Battery 1970/71. Currently one of my responsibilities is the research portfolio with the New Zealand Vietnam Veterans Association executive (NZVVAEx).

I like to invite you to complete a recruitment process aimed at selecting two families of New Zealand Vietnam Veterans (NZVVets) as research participants. Each family must consist of the NZVVet and their partners (Generation 1), one child (generation 2), and one grandchild (generation 3). Each research participant will be interviewed about the intergenerational effects on the health of families over three generations. The findings of this research will contribute to understanding the intergenerational health of NZVVets and families.

If you are a New Zealand Vietnam veteran and you, your wife/partner, child, and grandchild (over 16 years of age), and willing to take part in this research, and need more information **please email:**

(a) your mobile phone number, and

(b) the unit you served in South Vietnam

to Eddie at edwardwelfare@gmail.com (and email address for this research only).

Approved by the Auckland University of Technology Ethics Committee on *14 June 2022*, AUTEC Reference number *22/116*.

APPENDIX 3: PARTICIPANT INFORMATION SHEET

PARTICIPANT INFORMATION SHEET FOR NZVVETS

DATE INFORMATION SHEET PRODUCED:

14.June 2022

PROJECT TITLE

Working Title: New Zealand Vietnam Veterans' Intergenerational Health

An Invitation

The research question is: What experiences do New Zealand Vietnam Veterans, and families have that demonstrate the passage of intergenerational health?

My name is Eddie Nock my Vietnam experience was with 161 Battery 1970/71. Currently one of my responsibilities is the research portfolio with the New Zealand Vietnam Veterans Association executive (NZVVAEx) and I am completing this research for my Master of Health Practice in Violence and Trauma

I would like to invite you to participate in an interview with a total number of three New Zealand Vietnam Veterans (NZVVets) and their families. Only three families where all four family members representing three generations able and willing to participate in this research study can be excepted as participants. If you are interested, can participate in the research, have a consenting wife/partner, child, and grandchild all over the age of sixteen I would like to hear from you.

At a Zoom family information and informed consent meeting, the primary researcher will identify each potential participant in their family. During the family information meeting, you will be given the opportunity to ask questions about the research before deciding on participating in the research.

WHAT IS THE PURPOSE OF THIS RESEARCH?

It is likely New Zealand Vietnam Veterans cannot continue to support their family's health initiatives as they age. Therefore, other planned support to address this issue must be organised and employed. Two important developments have been mentioned below.

1. Strengthening the voice of the NZVVets through the New Zealand Vietnam Veterans Association by using adult children and grandchildren of NZVVets and co-opting other people with important skills.

2. Reaffirming NZVVets initiatives such as the memorandum of understanding for the 'Vietnam Veterans and Families Trust.' To the benefit of NZVVets and their families and to give coverage past the 31st of May 2037 deadline for returning the Trusts $7. million government endowment funds, so families of NZVVets including those born after 2037 are not left a legacy of unsupported ill health by their NZVVet parent.

The findings of this research may be used for academic publications and presentations.

HOW WAS I IDENTIFIED AND WHY AM I BEING INVITED TO PARTICIPATE IN THIS RESEARCH?

All potential participants will have responded to an advertisement in the NZVVA 'Contact' magazine. Which has invited NZVVets to participate in this research if they can answer yes to the following questions:

1. I am **a NZVVet** and willing to participate in the research ☐ Yes ☐ No
2. My **wife/partner** is willing to participate in the research ☐ Yes ☐ No
3. My **child over the age of 16 years** is willing to participate in the research ☐ Yes ☐ No
4. My **grandchild over the age of 16 years** is willing to participate in the research ☐ Yes ☐ No

HOW DO I AGREE TO PARTICIPATE IN THIS RESEARCH?

If you and your family members (wife/partner, child, and grandchild) are interested in taking part in this research, please email me at edwardwelfare@gmail.com In your email please provide a cell phone number that I can contact you on, and the unit within which you served in Vietnam.

Your participation in this research is voluntary (it is your choice) and whether you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

Once you have received information about the research and had any questions you may have answered, you will be asked to sign a consent form indicating your willingness to participate in this research.

WHAT WILL HAPPEN IN THIS RESEARCH?

You and your family members will be asked to participate in digitally recorded semi-structured interviews via ZOOM. You will be asked questions about the main causes of poor health, PTSD, Agent Orange, and psychological injury, and how these problems have affected your spouse/partner, child, and grandchild. Recorded data will be transcribed in readiness for analysis, and all identifying features removed. Your spouse/partner, child, and grandchild will be asked how the causes of poor health have affected them. The interviews will be transcribed, checked for accuracy, and returned to you if want to check the accuracy of your transcript.

WHAT ARE THE DISCOMFORTS AND RISKS?

You may find some research questions confronting and they may raise issues that you find uncomfortable or distressing. The questions are open-ended which means you can choose what you share, from your perspective. Meaning the researcher wants you to describe what happened through your eyes. Nobody else needs to know what you said because you will have the opportunity to approve your transcript and re-phrase any wording you use. . In the research findings an approved by you re-phase of something you might have said could be used. It would be not possible to identify the phase with you. If you do not want to answer the question, we can red flag the question, which means you do not need to answer that question or that part of the question.

HOW WILL THESE DISCOMFORTS AND RISKS BE ALLEVIATED?

In the unlikely event, you feel distressed and need someone to talk to assistance is available from service clubs such as the Returned Service Association (RSA) or the government's Veteran Affairs New Zealand (VANZ). In the first instance, these organisations should be approached because they provide support for NZVVets. The contact details are:

- RSA help line call 0800693348 – 24/7 confidential spanning both telephone and face to face support, OR
- Veteran affairs New Zealand VANZ call 08004838372 www.veteransaffairs.mil.nz

Alternatively, AUT Student Counselling and Mental Health is able to offer three free sessions of confidential counselling support for adult participants in an AUT research project. These sessions are only available for issues that have arisen directly as a result of participation in the research and are not for other general counselling needs. To access these services, you will need to:

- drop into our centre at WB203 City Campus, email counselling@aut.ac.nz or call 921 9998.
- let the receptionist know that you are a research participant and provide the title of my research and my name and contact details as given in this Information Sheet.

You can find out more information about AUT counsellors and counselling on https://www.aut.ac.nz/student-life/student-support/counselling-and-mental-health

WHAT ARE THE BENEFITS?

The information you share will contribute to assisting in providing a lasting umbrella of intergenerational health support for later generations of NZVVets families.

HOW WILL MY PRIVACY BE PROTECTED?

All identifying features (such as names, place names, organisation names) will be removed from transcripts to protect your privacy. The main security strategy is using a computer-generated identity tag instead of using names. Confidentiality will also be achievable by observing all the security measures, such as using electronic identity tags and pseudonyms to protect your privacy. All Zoom interviews will be copied to an external password-protected device and then deleted from the Zoom platform.

WHAT ARE THE COSTS OF PARTICIPATING IN THIS RESEARCH?

There will be no cost in monetary terms. However, I will be asking you to initially spend approximately 30 minutes in time in the family meeting; and then a 30–60-minute meeting with each family member.

WHAT OPPORTUNITY DO I HAVE TO CONSIDER THIS INVITATION?

A minimum of 4 weeks.

WILL I RECEIVE FEEDBACK ON THE RESULTS OF THIS RESEARCH?

NZVVets and participants will receive a summary of the findings via the email address provided.

WHAT DO I DO IF I HAVE CONCERNS ABOUT THIS RESEARCH?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Professor Denise Wilson, email address: denise.wilson@aut.ac.nz; phone: +64 9 921 9999 ext. 7392 or +64 27 407 0022.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, *ethics@aut.ac.nz* , (+649) 921 9999 ext. 6038.

WHOM DO I CONTACT FOR FURTHER INFORMATION ABOUT THIS RESEARCH?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

RESEARCHER CONTACT DETAILS:

Eddie Nock, phone +64 21 078 0130; email: edwardwelfare@gmail.com (email address solely for this research).

PROJECT SUPERVISOR CONTACT DETAILS:

Professor Denise Wilson, email address: denise.wilson@aut.ac.nz; phone: +64 9 921 9999 ext. 7392 or +64 27 407 0022

Approved by the Auckland University of Technology Ethics Committee on *14.June 2022*, AUTEC Reference number *22/116*.

APPENDIX 4: CONSENT FORM

CONSENT AND RELEASE FORM FOR NZVVETS

Project title: **New Zealand Vietnam Veterans' Intergenerational Health**

Project Supervisor: **Professor Denise Wilson**

Researcher: **Eddie Nock**

- ○ I have read and understood the information provided about this research project in the Information Sheet dated 08.06.2022.
- ○ I have had an opportunity to ask questions and to have them answered.
- ○ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ○ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ○ I permit the researcher | artist to use the photographs that are part of this project and/or any drawings from them and any other reproductions or adaptations from them, either complete or in part, alone or in conjunction with any wording and/or drawings solely and exclusively for (a) the researcher's | artist's portfolio; and (b) educational exhibition and examination purposes and related design works.
- ○ I understand that the photographs will be used for academic purposes only and will not be published in any form outside of this project without my written permission.
- ○ I understand that any copyright material created by the photographic sessions is deemed to be owned by the researcher and that I do not own copyright of any of the photographs.
- ○ I agree to take part in this research.

Participants Name : .....

Participants Signature : .....

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Date:

Approved by the Auckland University of Technology Ethics Committee on 14.June 2022 AUTEC Reference number type the AUTEC reference 22/116 *Note: The Participant should retain a copy of this form.*

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