The Application of Expressive Writing as an Intervention for Test Anxiety

Illustrated with the Toronto Police Exams

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Abstract

Test anxiety is a debilitating physical, cognitive, and behavioural reaction to a test. Most of the research has focused on its occurrence during a test, but there has been less attention on its effects during the preparation for a test. The present study explored expressive writing as an intervention for eight law enforcement bailiffs dealing with test anxiety while preparing for their Toronto Police Entrance Test. It is an important test for those with the aspiration of becoming a police constable in Toronto, Canada. The small-scale, mixed-methods study focused on whether expressive writing would help those candidates self-reflect on their test anxiety and manage it. The intervention took place a month before the candidates were due to take the test.

The candidates completed a Test Anxiety Inventory before they started the intervention to determine whether they had high or low test anxiety. They were then given an expressive writing journal and asked to write their thoughts about their test anxiety for 25 minutes during one supervised session uninterrupted. In addition to these written entries, the candidates were also asked to complete a Thought Record Questionnaire before and after their writing during that session. They were also encouraged to write in their journals unsupervised and beyond the session for a week should they wish to, and they were also asked to continue recording the intensity of their test anxiety indicated on the Thought Record for the next four days. A semi-structured interview was conducted after writing in their journal and Thought Record during the first session and again after one week.

Content analysis was used to analyse the data that emerged from those data collection tools. The results revealed that most participants benefitted from the intervention as it helped them reflect on their thoughts around test anxiety. Participants who wrote more offsetting statements than negative statements in their expressive writing journals were able to retain the alleviation in test anxiety for the next four days.

The participants who benefitted the most from the expressive writing intervention were the four candidates who adequately prepared for the test. They satisfied the condition of writing more offsetting statements than negative statements. As a result of the intervention, they felt more self-

confident and decided to apply to write the test. Four of the participants did not register for the police test as other types of stressors besides test anxiety interfered with their preparation. Out of those four, two partially benefitted from expressive writing since they were able to retain the alleviation in test anxiety for four days after expressive writing. The writing produced a cathartic effect as it offered them a way to self-reflect on the problems they were facing, but they wrote more negative statements than offsetting statements.

The study showed that expressive writing can be an effective self-managed resource for test anxiety; but for candidates with more complex needs, it requires a longer implementation or a combination with other supportive interventions. For a highly regulated and stressful career option, such as the police force, expressive writing can be introduced effectively as part of a wider mental health education programme.

Chapter 1: Introduction

The aim of the current research examines the possibility that test anxiety can exist during the preparation for a test as well as during the writing of the test. It explores the extent the participants from a Canadian law enforcement agency, the Toronto Police Service, would benefit from engaging in expressive writing while preparing for their professional exam to advance to the position of police constable. In this chapter, I introduce the setting and the history of the police force where I would be conducting my research. I then discuss perceived advantages and disadvantages of being a police officer. The police culture, qualifications for applying, and the Toronto Police Entrance Test are introduced before I explain my positionality in undertaking this study.

1.1 The Research Site

There are 209 police services in Canada that employ approximately 69,000 police officers. Approximately 60,000 of those officers are employed by 28 larger police forces, such as the federal agency: Royal Canadian Mounted Police (RCMP), the provincial agencies: Ontario Provincial Police, Surete du Quebec, Royal Newfoundland Constabulary, or the municipal agency: the Toronto Police Service. The number of police officers hired each year across Canada is between 2,000 and 2,500. Special events can cause the number of hires to increase. In 2010, the number of officers hired was around 2,800 due to the Olympics in Vancouver and the G20 in Toronto (Cline, 2011).

In 2019, when I began my research with the Toronto Police Service, the city approved a plan to hire 300 police constables. In 2018, 295 officers left the Toronto Police Service. Only 60 of those officers went to another police service. Saunders, the Chief of Police at that time, mentioned that the Toronto Police Service had to pay out an additional 22 million due to overtime to ensure the city's safety (Fox, 2019) and that the officers all felt burnout (Gillis, 2019). The following is the wider context that led to this situation.

Between 2010 and 2017, the Toronto Police Service lost nearly 500 officers due to budget cuts. There was a hiring freeze which started in 2017, and 400 officers were planned to be eliminated by 2019 to reduce the police force to 4,766 officers. The Toronto Police Association was worried about the effect these cuts would have on the public's safety since violence and gun crimes were on the rise. Job burnout increased, and 95 officers have resigned in 2017 (Toronto Police Association, 2017).

In 2017, 52 uniformed officers quit the Toronto Police Service to join another service. It was roughly as many as in the previous two years combined and the highest number of departures in the past decade. The union blames it on low morale (Hayes, 2018). In 2019, the number of police officers in Canada has fallen to its lowest level since 2009 (Flanagan, 2019).

1.1.1 Advantages of Being a Police Officer

According to Gaille (2018), candidates who succeed in working with a law enforcement agency are naturally ambitious. They want to help themselves, their families, and their community to the best of their ability. They make an extra effort to serve and help their community. They proved it by putting in the extra hours even when they are not on duty.

Other motives to apply range from an altruistic desire to help others (Elntib & Milincic, 2020), to prestige and job security (Chu, 2018), and the potential for early retirement (White, Cooper, Saunders, & Raganella, 2010). Public exposure, a sense of adventure, and power in the way they solve problems may also attract younger candidates to apply (Wu, 2014).

Employees within a law enforcement agency may also be motivated to apply. A bailiff with the Toronto Police Service, for example, may apply for the position of Police Constable. It would be an advancement in position, and the salary is higher. The ranking from top to bottom of the different positions at the Toronto Police Service in relation to a bailiff are as follows: Chief of Police, Deputy Chief of Police, Staff Superintendent, Superintendent, Staff Inspector, Inspector, Staff Sergeant, Sergeant, Constable, and Bailiff (Toronto Police Service and York Regional Police, n.d.).

Being a police officer is a very dynamic position. No two days are exactly the same. The officers will never know where dispatch will send them or what to expect when they get there (Gaille,

2018). An officer's day can include arresting suspects, issuing citations, responding to emergency calls, patrolling, or testifying in court (Slyter, 2020). They do not just deal with a crisis, but they also support fellow officers. Together they would work as a unit in dealing with a crisis. Officers are expected to maintain a healthy lifestyle in order to be effective in what they do. It includes being mentally active in addition to being physically active. Many officers are part of community teams or events such as playing softball or serving on the board of a charity (Gaille, 2018).

It is a career with growth potential, and they can retire early with a full pension (Gaille, 2018). It is possible to retire after 20 to 25 years of service. Most police force offer tuition assistance programs. They would be working towards a degree, and after retirement, they may start a second career (Slyter, 2020). There is a very strong bond between police officers. Having a very close bond with co-workers is not common with many jobs (Lombardo, 2015). The officers would stand by one another in good times and bad. The achievements are celebrated, and tragedies are mourned (Slyter, 2020).

Female and minority candidates are encouraged to apply. The province of Ottawa's police chief, for example, said that it is critical that the police service be more reflective of the diversity of the community. Before the community can trust the police, it needs to see itself reflected by the police force (Payne, 2018).

1.1.2 Disadvantages of Being a Police Officer

The lack of manpower can add to the stress that comes with the job. The shifts are long. Many police officers are frustrated with their job as they are asked to work harder and longer due to budget cuts. The work often leads to social isolation. They are always "a police officer" even when off duty. There is the risk of injury and death. Gaille (2018) reported that according to the International Journal of Emergency Mental Health, police officers are likely to experience sleep disturbances, anxiety, alcohol abuse, and Post Traumatic Stress Disorder (PTSD) at higher rates than the general population.

The Centre for Addiction and Mental Health (CAMH) (2018) found that police officers in small towns and rural settings in Canada experience significantly high levels of stress. Some of the

additional stressors faced by officers in these locations include isolation, extreme environmental conditions, long distances to travel, lack of back-up, lack of health and social services, communities with high rates of crime and victimization, communities with high rates of poverty, mental illness, substance misuse, and family disruption.

Recent research has also indicated that police officers are aware of the negative media coverage surrounding their occupation. There is the perception of civil liability and accountability issues related to police misconduct when interacting with the public. The awareness that they might be recorded may cause them to be unwilling to perform their work to avoid accusations of excessive force or racial profiling. Some officers believe this has brought deteriorating relations between the public and the police. Although the police are engaged in carrying out their duties, they are seen as if they are against the public (Fields, 2019).

Stress originating from police work negatively affected the spousal relationship. In order to preserve the marital relationship, police officers would often repress their emotions and avoid discussing work with their spouse. The strategy, however, further exacerbated the experience of stress (Gul & Delice, 2011).

1.1.3 Police Culture

Traditionally policing has been regarded as a male-dominated profession since its inception (Archbold & Schulz, 2012); and more specifically, a white-male dominated profession (Raganell & White, 2004). There are concerns about racism and misogynism among officers (Pazzano, 2018). To tackle the problem, the Chief of Police, Ramer, attempted to modify the culture of the Toronto Police Service in 2020.

Prior to 2017, the core values of the Toronto Police Service were honesty, integrity, fairness, respect, reliability, teamwork, and positive attitude. In 2017, the core value of freedom from bias was added to the list. It transcends all core values and is considered the bedrock on which all the organization's values are built. Ramer attempted to modify the means of recruitment. It would be based on the following expanded values derived from the new core values: uphold the rights and freedoms of all people, do the right thing by acting professionally and without prejudice even in the most challenging circumstances, treat all people with empathy, respect, equity, and dignity,

and seek and act on input and feedback from the communities. It would also be based on representing the diversity of the city of Toronto and less on physical strength (Ramer, 2020).

In April 2018, the Toronto Police Services Board also established an Anti-Racism Advisory Panel (ARAP). Over the next two years, ARAP was involved in a number of important issues, including assisting in the drafting of a new Race-Based Data Collection, Analysis and Public Reporting Policy for the Board. At its meeting of August 18, 2020, the Board approved 81 recommendations related to police reform that included building a new community safety response model, initiatives to address systemic racism, and concrete steps to improve trust with the communities (Toronto Police Services Board, 2021).

There is the argument that policies do not influence behaviour, culture does. Over the long term, the behaviour of the members become the cultural norms. The Toronto Police Service is an example of an organization that is deeply structured and strives to maintain organization equilibrium. The tendency to maintain equilibrium puts up a resistance to change. Deep organizational structure can be observed through the organization's routines and culture (Smith & Lewis, 2011). The police subculture is significant in establishing tradition and identifying what actions will be accepted (Karp & Stenmark, 2011). Most police forces inherited a masculine culture with an emphasis on toughness, masculinity, and masculine interests. Fielding (1994, p47) gives a stereotypical value of such masculinity: "aggressive, physical action, a strong sense of competitiveness, and preoccupation with the imagery of conflict".

In 2017, women accounted for 21 percent of all sworn officers at the Toronto Police Service. They represented 15 percent of senior officers. It was the highest proportion ever recorded—compared with 7 percent in 2007 and less than 1 percent in 1986 (Conor, 2017). But it still does not represent the percentage of women in Toronto's population. One of the main reasons is that many women have a harder time with the physical test than their male counterparts. The same physical routine in the hiring process applies to both male and female. The intensity of the physical test was not modified for females. There is a low ratio of female officers on the force compared to male officers because of the high failure rate at the physical level, not at the written level (Payne, 2018).

The Ontario Association of Chiefs of Police believes the testing reflected the physical demands of tasks that candidates must be able to do to apply. According to the director, it is based on the

actual job of being able to remove a person of a certain weight from a vehicle. If anyone is not able to do that, he or she does not meet the requirements. He did not want to slacken off on standards just to get the numbers up to satisfy some police forces that wanted to increase the number of female officers to reflect the community they serve (Payne, 2018).

According to Silvestri (2017), there is the consensus among male officers that the work of policing is too dangerous for women. The situations they may encounter are too physically demanding. The lack of physical strength in violent situations has remained a consistent justification offered by policemen for women's exclusion despite the emergence of community work, care for victims, and investigative skills. Hollis's (2014) study on minority police officers found that female officers were often sensitive to the perception from the male officers. Many of them felt they had to work harder and to prove themselves as good police officers before they can be accepted by the male-dominated organizational culture.

1.1.4 Qualifications

The key criteria for hiring are in areas such as education, volunteer work, good interpersonal skills, experience, and a good aptitude for dealing with the public (Cline, 2011). The minimum academic requirement at the Toronto Police Service for a career as a police constable is the completion of four years of secondary school education, and the candidate must be at least 18 years of age (Toronto Police Service, n.d.).

It was only recently that a degree from a university was the route to take if the candidate was serious about working as a police officer. Professionalism, education, and training became important as public demands greater accountability. Law enforcement agencies across Canada helped to shape the topics offered in the police training programme at Wilfred Laurier. The Honours Bachelor of Arts in Policing is designed for existing police officers while the Combined Honours BA in Criminology and Policing is designed for anyone interested in entering law enforcement (Wilfred Laurier University, 2022).

Having the proper credentials does not ensure that the candidate will be considered. Many candidates with excellent physical and academic aptitudes can still fail the Toronto Police Entrance Test. About one-third of the applicants usually fail it (Appleby, 2010).

1.2 The Nature of the Toronto Police Entrance Test

The process of joining the Toronto Police Service is demanding and multi-staged. Apart from physical fitness, the candidates also need to complete a written test, an interview, a psychological assessment, a personality inventory test, and a background interview (Toronto Police Service, n.d.). Both the written part of the test and the interview stage can trigger test anxiety. I will elaborate on the definition of test anxiety in Section 2.2. This study focuses mainly on the written test of the selection process. For candidates with mainly high school qualifications, the tests may prove to be difficult. It is unlike most of the entrance tests to a university.

The first part of the Toronto Police written test is the Written Communication Test (or WCT). It involves inductive reasoning. According to the Ontario Association of Chiefs of Police (2008), the candidate would gather the information from a fictional scene of an accident involving several vehicles. It represents a real-world problem. The data is disorganized. The applicants would then decide on which information is necessary to organize the information systematically and come up with a conclusion. According to Willingham (2007), the applicant is more likely to focus on the scenario and not the reasoning behind it.

The WCT question requires domain-specific knowledge and is close to real world context. According to Stark (2012), actual real-world context is required to build the skill to allow students to apply critical thinking. Applicants who only have domain general knowledge would have difficulty applying that knowledge in a specific context.

The next part of the Toronto Police Entrance Test is the Police Analytical Thinking Inventory (or PATI) test. It assesses the applicant's ability to apply analytical thinking. It consists of deductive reasoning, inductive reasoning, and quantitative reasoning (Toronto Police Service, n.d.). Quantitative reasoning is the ability to apply basic arithmetic operations like subtraction, addition, multiplication, division, and fractions. Police officers are required to use arithmetic processes in determining rate of travel, stopping distances, and other similar mathematical problems (Ontario Association of Chiefs of Police, 2008). Although the specific subject area of math taken in high school enables the domain general skills of math, it still poses a problem for the candidates taking the Toronto Police exam. One problem is that a lot of candidates have a weakness in mathematics in high school. Most applicants only have a high school education.

According to the Toronto Police Service (n.d.), only a high school diploma is required before one can apply to write the exam.

Another challenge is that the questions involving mathematical operations are applied within the context of law enforcement. It disadvantages candidates as it introduces mathematical skills in complex scenarios about domain specific knowledge. According to Ericsson and Charnes (1994), the more complicated the domain, the more domain-specific knowledge is important to solve such tasks. For example, "mapping" problems involve the time it takes to travel a city block in a police car, on a bike, or on foot. The candidates are given the distance of the different routes, the obstacles present such as a parade, road construction, traffic congestion, one-way streets, slowing down due to turns at intersections, et cetera. Such problems are domain-specific problems.

Deductive reasoning is the ability to take information provided by the environment and subsequently draw the appropriate conclusions from the data. Applications are given deductive logic exercises in the form of syllogisms where two premises are given and assumed to be true. A logical conclusion arrived at by deductive logic is based on the two premises. Inductive reasoning is the ability to find common characteristics or trends from a series of objects or from information that has been presented. It tests the candidates' ability to classify and complete sequence of order (Ontario Association of Chiefs of Police, 2008).

Pattern solving skills, matching skills, classification, and completing the sequence of order involve specialized forms of domain-specific knowledge. In pattern solving, for example, every pattern in every question is different, but the schematic needs to be learned. It is not taught in high school because it is not a skill. It is like learning to solve a chess problem. According to Tricot and Sweller (2014), thousands of schematics to such a problem are stored in long term memory. It is a domain-specific knowledge.

The failure rate of the written test is high as a result of the participants' background knowledge compared to the police force expectation of the level of literacy and numeracy skills. The high failure rate risks leaving the police force with a labour shortage of qualified staff. The study aims to explore whether associated anxiety related to the test can be managed through the use of an expressive writing intervention.

1.3 Background of the Researcher's Positionality

I am a trained psychologist who worked as a part-time instructor at colleges in Toronto, Canada. Over the years, two of my students mentioned to me that they became anxious when they had to write a test. I was aware of the extent of their knowledge by their ability to articulate what they knew during class participation and group work. They were already working in the industry. They helped other students who had trouble understand certain concepts. However, they repeatedly failed the tests I assigned. They would tell me that their thoughts would go blank. When an effort was made to recall certain information, they became more anxious; and that made it harder to retrieve the information. The effort made the anxiety more intense.

The only remedy suggested to them by the university administration was to write the test in seclusion, but they later told me that it did not make much difference. They still felt anxious. They did not want to see a counsellor. They did not think that they had a psychological problem. I was not in a position to determine whether their anxiety was due to a deficit in knowledge or to the inability to retrieve what they know due to interfering thoughts. I was hired as an instructor, and I was not in a position to offer therapy if required. However, I still attempted to find a way to address both those issues. (An explanation of these two models, the interference model and the deficit models, is given in Section 2.2.)

At that time, I moved from teaching to the police force and was employed as a bailiff by the Toronto Police Service. I also worked with the Critical Incidence Response Team which was a unit at the Toronto Police that attends to police officers who may be traumatized by a critical event. I would be on call once a week every month.

Colleagues who wanted to advance in rank from bailiff to police constable would need to take the Toronto Police Entrance Test. I observed that the potential candidates felt anxious about the test since the failure rate was known to be high. These candidates were different from my past college students preparing for their exams. Bailiffs tend to inherit some of the stress experienced by police officers and correctional officers. (I will elaborate on this observation in Section 2.4.3). I began to wonder if it may contribute to test anxiety. It prompted me to explore the literature to consider that possibility. As I mentioned in Section 1.1.2, one of the disadvantages of being a police officer is the stress that comes with the job. In section 2.4.3, I will mention that it could lead to post-traumatic stress disorder (PTSD).

I decided to revisit the idea of expressive writing as an approach to support potential candidates in self-managing their test anxiety and to explore whether such an intervention can assist their preparation for the test. My area of speciality is in developmental psychology. I began to consider the possibility that if test anxiety had occurred at an early age, other types of anxiety may interfere with the ability to reframe interfering thoughts which is common with test anxiety. It prompted me to explore the literature on the possibility that other types of anxieties from an early age may aggravate one's test anxiety (Section 2.4.2).

My training also encourages me to seek the cause of one's anxiety. I was disappointed when I learned that present clinical practice mainly addresses the physical symptoms of anxiety. Medication is often prescribed. I believe that it attends only to the biological side of the problem. The psychological, environmental, or social causes (such as stress from work) are often neglected. I became interested in the expressive writing theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) which suggested that it would be beneficial to determine the causes of test anxiety instead of just attending to the symptoms. Their theory is based on a problem-focus approach. Expressive writing allows for two types of knowledge: the knowledge of what causes test anxiety and how it fits in developing the anxiety and the knowledge of how to deal with the anxiety during the preparation for a test. (Refer to Section 2.10, Theoretical Framework, for more information.)

The symptom of test anxiety does not contribute to such knowledge. At that level of experience, it does not provide enough detailed information to promote understanding. I will elaborate on the specific symptom of interfering thoughts in Section 2.3.2. I will mention other symptoms in Section 2.3.1 and Section 2.3.3. I will explore the different symptoms because those are feelings the participants can recognize if there was any change after engaging in expressive writing. I want to know which category of symptoms mainly affects each participant. According to Lepore (1997), the interfering thoughts should have less of an impact after expressive writing. According to his theory, it was due to a reduction in emotional inhibition. In Section 2.9, I will explore his model as a guide as to how I will set up my study. His sample also included participants who were planning to write different professional entrance exams that involve multiple stages. My data collection will test the theory of Lepore (1997) and the theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016).

Since I am also a bailiff and not in a supervisory position, I believed that my involvement would not affect the participant's response. My peers are aware that I am also with the Critical Incident Response Team (CIRT) and that my intention was to help them advance to the rank of police constable. I am bounded by the ethics of the CIRT as well as the Toronto Police Service. Additionally, I was not assigned to "front line" responsibilities such as looking after inmates or providing public order (crowd control) because of my age, so I would not be in direct contact with any of my participants.

I set out to explore how a reduction in emotional inhibition and a problem-focused approach enabled by expressive writing can support further understanding of test anxiety by the individuals involved in the study. My positionality may have suggested a broader ranging case study that focuses on the Toronto Police Department, its culture, and an analysis of the Toronto Police test itself according to specific pedagogical criteria. However, there are ethical considerations from such an approach in terms of the participants involved, the length of the intervention, and the highly-regulated processes for research that the Department follows. I chose a narrower psychological study on certain psychological phenomena from my work environment in order to learn more about test anxiety inherited by this particular group and to make future recommendations for practice. Such an approach allowed me also to consider resources that can be utilized by individuals themselves in a proactive way.

My training and professional experience focused mainly on quantitative ways to explore a topic. However, as my thinking started to shift towards a problem-focused approach like expressive writing, I started thinking of the importance of capturing my participants' experiences individually in more detail. I realized that a qualitative approach would enrich my understanding of the possible impact the intervention would have on individual differences. Therefore, I decided to apply mixed methods to capture each of their experiences.

1.4 Chapter Summary and an Overview of the Following Chapters

The study aims to explore how test anxiety can be managed during the preparation of an important entry exam for the Toronto Police force by applying an intervention like expressive writing. There is a high failure rate for this test which impacts employment for the police workforce. In Chapter 2, I explore the literature on the topic of anxiety and differentiate between

trait anxiety (being anxious all the time) and state anxiety (being anxious only on certain occasions). The literature review also discusses short-term interventions employed for test anxiety and critically evaluates expressive writing as one of the popular interventions. In Chapter 3, the decisions around data collection and analysis are discussed with detailed information about the participants, the data collection tools, and the data analysis approach. In Chapter 4, I analyse the data from the interviews, expressive writing journals, and Thought Record inductively, deductively, and abductively by applying content analysis. In Chapter 5, I discuss the findings against the three research questions of the thesis. In Chapter 6, I offer contributions and recommendations to practice, identify the study limitations, and offer suggestions for future research on the topic.

Chapter 2: Literature Review

2.1 Introduction

The first part of this chapter provides a definition of test anxiety, its symptoms, and possible causes. In terms of how one feels, there are three kinds of symptoms: physical, cognitive, and behavioural as described in Section 2.3. However, there is more to the definition of test anxiety than just symptoms. There is the question of the duration of those symptoms and what causes them. The distinction between state anxiety and trait anxiety is given in Section 2.2. The duration of those symptoms varies depending on whether one has an anxious mood or when one is anxious in general. In Section 2.2, I also elaborate on the question whether test anxiety is due to a deficit in knowledge or to the inability to retrieve the required information due to interfering thoughts. I discuss the two models, the deficit model and the interference model, in that section and made arguments for relying more on the interference model in this study.

In Section 2.4, I examine the literature for causes of test anxiety. In Section 2.4.1, I discuss studies on students from other countries who intended to write an entrance exam. They give the entrance exam more importance compared to other exams. In Sections 2.4.2, I list some other types of anxieties as possible causes. I explore the possibility that if a more serious form of anxiety had occurred at an early age, it may increase one's test anxiety. In Section 2.4.3, I mention that stress can contribute to anxiety since the psychological response is the same.

I explore the different interventions for test anxiety in Section 2.5 and examine expressive writing as a possible option to assist individuals in self-managing it. I define expressive writing in Section 2.6. I elaborate on its benefits in Section 2.7 to trace how it has evolved since its development by Pennebaker and Beall (1986) and how it is adapted by researchers to address test anxiety. I include a critique of expressive writing in Section 2.8 to present some of its major challenges.

I introduce the expressive writing model of Lepore (1997) in Section 2.9 which I adopt in this study as a guide. His model is the closest match on how I intend to perform the study given the time constraint. The theoretical framework in Section 2.10 refers to two overarching theories

behind the study: the emotional inhibition theory and the problem-focus theory. In Section 2.11, I propose a possible solution that links the theories of Lepore (1997), Greenberger and Padesky (2016), and Pennebaker and Smyth (2016). In the gaps in the literature in Section 2.12, I mention the importance of capturing individual differences in the current study. I also emphasized that test anxiety can also exist during the preparation for a test as well as during the writing of the test. I conclude the chapter with a summary of key points in Section 2.13.

2.2 Definition of Test Anxiety

While the terms "test anxiety", "exam anxiety", or "exam stress" are referred to interchangeably in the literature, the present study adopts the term "test anxiety" for consistency. According to Huberty (2010), test anxiety is a state anxiety. It is different from a trait anxiety. A trait anxiety is a more enduring feature of anxiety. According to Yazici (2017), a state anxiety occurs only under certain circumstances. It is triggered by a certain event such as a test. It starts when the student becomes aware of the test and lasts until the completion of the test. For example, according to Sady (2010), there is a difference between generalized anxiety disorders (GAD) and test anxiety. GAD is characterized by trait anxiety. It is the result of experiencing high levels of stress across a wide range of situations. In contrast, people with test anxiety have state anxiety. It is the result of high levels of nervousness in a specific situation. According to Greenberger and Padesky (2016), it is temporary in duration according to one's mood in a given situation. According to Cox (2007), trait anxiety is related to a personality characteristic. Such a person becomes anxious because of a predisposition to be anxious. There is a tendency to feel anxious across a variety of situations.

The term "test anxiety" also has "a social dimension where the performance is judged by others" (Putwain, 2008, p1026). "Performance anxiety" refers to a performance before an audience (Gibson, 2014). The anxiety due to thoughts of the judgement of others compromises the quality of the performance (Pekrun, 2001). Having talent and previous accomplishments do not necessarily prevent the fear of failure in the face of such an evaluation (Dodgson & Wood, 1998).

Test anxiety falls into two primary classifications: the interference model and the deficit model. According to the interference model (Cassady & Johnson, 2002) test anxiety interferes with the

demands of the test. Exam participants do poorly due to competing thoughts or "internal dialogue" during the test. Zeidner and Mathews (2005) added that such interference is mainly the result of negative self-beliefs. Cognitive interference can be due to self-critical thinking, irrelevant thoughts, or worry. The interfering thoughts can arise during test preparation as well as during the test. According to the deficit model (Ahsan & Kumar, 2016; Numan & Hasan (2017), exam participants do poorly in a test due to a deficiency in knowledge of the material. They have ineffective study skills. They are aware that they are poorly prepared, and that leads to test anxiety and results in poor performance.

Although having a deficit in knowledge of a subject is a possible cause of test anxiety, I relied more on the interference model. The assumption is that if there was a deficit in knowledge of a subject during a test, it is still possible that it may be due to some causes of anxiety during the preparation for the test. According to Birenbaum and Pinku (1997), test anxiety can take place during the preparation of a test as well as during the test. During the preparation of the test, some causes of test anxiety can interfere with the retention of the course material.

The participants I intend to invite are already working with the Toronto Police Service as bailiffs. They have already written a shorter version of the Toronto Police written test for police constable. Since they are already employed as bailiffs, it implied that they passed the test for that position. They are familiar with the demands of the Toronto Police constable test which is made up of the following: deductive problems, inductive problems, math problems, syllogisms, mapping, and scenario questions. Their experience in writing such a test would place less emphasis on the argument that test anxiety is strictly due to a deficit in knowledge of the subject being tested.

2.3 Symptoms of Test Anxiety

To enable one to recognize the signs of test anxiety, I elaborated on some of its physical symptoms, cognitive symptoms, and behavioural symptoms. According to Piering (2018), test anxiety is often marked by its physical symptoms, cognitive symptoms, and behavioural symptoms.

2.3.1 Physical Symptoms

According to Bateson, Brilot, and Nettle (2011), anxiety prepares the body physically, cognitively, and behaviourally to detect and deal with threats. As a result, a person's body begins to hyperventilate to allow more oxygen to enter the bloodstream, divert blood to muscles, and sweat to cool the skin. Cassady (2009) mentioned the following physiological reactions that an individual may experience when subjected to test anxiety: galvanic skin response, elevated heart rate, dizziness, nausea, feeling of panic, and disruption to sleep. According to Piering (2018), it may also include heavy breathing, hyperventilating, and headaches. These symptoms can occur during the actual exam, while studying for the exam, or just thinking or talking about the exam. According to Bateson et al. (2011), other physical symptoms are increased heart rate, stress hormone secretion and perspiration, restlessness, vigilance, and fear of a potentially dangerous environment. According to Deffenbacher (1978), other physical symptoms can also include tension, stomach discomfort, and nausea.

2.3.2 Cognitive Symptoms

Borkovec, Robinson, Pruzinsky, and DePree (1983) defined worry as the cognitive characteristic of anxiety. It evolved from a chain of negative thoughts. The researchers tested 305 undergraduate students and found that their worry was primarily concerned with future events (46.97%) followed by present situations (29.5%) and past events (20.9%).

Although worry can be an emotion, it is not similar to an emotion like fear. Fear is an immediate response to present danger. The object of fear is real. Worry is the fear we manufacture in response to a possible danger. Fear is a signal for precaution. Worry is not a precaution. It is the opposite. It discourages constructive action (Baton Rough Behavioral Hospital, n.d.). Worry is also the common link between stress and anxiety. Worry can add anxiety on top of one’s stress. (Refer to Section 2.4.3 for more information about this link.)

Cognitive symptoms of test anxiety can be due to internal dialogue which includes making a comparison to peers, thinking about the consequences of failure, lacking confidence, worrying about evaluation, thoughts of being unprepared, and questioning one’s self-worth (Cassady & Johnson, 2002). The worry component of test anxiety includes making a comparison to other

learners, worrying about failing, reduced self-confidence, worrying about the testing event, a feeling of under-preparedness, losing self-worth or self-esteem, and engaging in avoidance thoughts (Cassady, 2009).

Cassady and Johnson (2002) mentioned that students also do poorly due to ruminations during the test. Tompkins (2013) elaborated that rumination involves focusing repetitively on the symptoms as well as the possible consequences. Intrusive thoughts may have a causal role in the maintenance of negative emotions during stress. According to Lepore (1997), negative emotions may arise when those thoughts interfere with individuals' established views. There is an incomplete assimilation. Not being able to reconcile with those thoughts is a form of emotional inhibition. According to Piering (2018), those with test anxiety often spend a lot of time thinking about the worst-case scenario. For example, a student might worry about doing poorly on a test, and it may lead to the thought of never getting into college and being unemployed for the rest of their lives. The thought may seem irrational, but for the test anxious individual, such thoughts arise freely and frequently.

2.3.3 Behavioural Symptoms

According to Piering (2018), the most important behavioural symptom of test anxiety is avoidance. Because of the fear and the physiological symptoms that surround exams, those with test anxiety frequently postpone their test dates, avoid thinking or talking about their upcoming exams, and try to escape studying. While these avoidance behaviours may provide short-term relief, in the long run they reinforce the anxiety. Fresco, Frankel, Mennin, Turk, and Heimberg (2002) pointed out that worrying can lead to avoidance. By avoiding the problem causing the worry, the fear of the cause does not dissipate. Avoidance prolongs the fear. According to Tompkins (2013) and Yerdelen, McCaffrey, and Klassen (2016), procrastination can also lead to avoidance. Avoidance anxiety is the act of avoiding the situation creating the anxiety and becoming less aware of the thoughts and physical feelings associated with the anxiety. The individual dwells on averting the threat instead of attempting to solve the problem or to correct any possible mistakes. Boyes (2018) differentiated between procrastination and avoidance. She mentioned that procrastination is about avoiding a specific task (such as studying for a test). Avoidance is a more general pattern. The candidate would avoid all aspects related to the test

such as registering, studying, and writing the test; the candidate would also avoid other types of performance related to the completion of the test such as attending an interview.

According to Seaman (1999) avoidance is comparable to fear. The student is not just avoiding the test, but everything related to the subject: homework and classes as well as tests. It is a precursor to a more intense form of anxiety: phobia. According to the American Psychiatric Association (2015), avoidance is not a behavioural disorder. Phobia, on the other hand, is a behavioural disorder. It is listed on the DSM-V. As mentioned in Section 2.4.2, it is a more severe form of anxiety.

2.3.4 Section Summary

The causes of some of the symptoms of test anxiety mentioned in this section were mainly subjective. For example, according to Cassady and Johnson (2002), the causes of worry included worrying about failing, reduced self-confidence, and a feeling of under-preparedness. Fresco, Frankel, Mennin, Turk, and Heimberg (2002) pointed out that worrying can lead to avoidance—or the act of avoiding the situation creating the anxiety.

The concept of worry is an important feature of test anxiety. According to Cassady and Johnson (2002), the emotional component of test anxiety remains benign if worry is under control. According to Stoeber and Joormann (2001), there is a substantial overlap between worry and anxiety. High worriers were slower to make decisions. They have elevated fear of failure and greater concern for personal evaluation. They are hesitant due to concerns associated with making mistakes. They chose to delay decisions as long as possible.

In the next section, I want to consider some other causes of test anxiety that contribute to worry. They can be objective as well subjective. The objective causes are objective in the sense that they exist apart from the participant and are not just the product of thoughts. They can include high workloads, tight time schedules, financial problems, a rigid learning environment, a competitive environment, attitude of the instructor, lack of jobs, family commitments, or childcare issues as mentioned in Section 2.4.3. There are also other types of subjective causes that are not related to the test as discussed in Section 2.4.2.

2.4 Causes of Test Anxiety

Greenberger and Padesky (2016) recommend itemizing the factors responsible for one's mood. It initiates an understanding of the problem. It is the starting point for the application of an intervention. The attempt to find the cause of test anxiety is the starting point of gaining knowledge about it. The researchers mentioned that other researchers using other methods can apply their interventions at this point.

The following sections elaborate on some causes responsible for aggravating the test anxiety or initiating the test anxiety. The candidate's cognitive disposition can be directly or indirectly related to the test (Section 2.4.1). It is also possible to have other types of cognitive anxieties (Section 2.4.2) other than test anxiety. It is possible for them to aggravate test anxiety if the test anxiety also occurs at an early age. In addition to the indirect causes which are internally generated (as mentioned in Sections 2.4.1 and 2.4.2), there can be indirect causes which are externally generated. Those external causes are related to stress. Stress can also aggravate test anxiety. The psychological response to stress is similar to anxiety (Section 2.4.3).

Section 2.4.3 is an important consideration in this study since test anxiety is being examined during the preparation of a test and not just during the writing of the test on the scheduled test date. The external causes of test anxiety are not just due to the test environment. Those causes are more extensive.

2.4.1 Direct and Indirect Cognitive Causes

The cognitive causes of test anxiety in Section 2.3.2 consist of direct and indirect causes. The direct cognitive causes of test anxiety are thoughts that are directly related to the test. It would include the following: thinking about the consequences of failure, lacking confidence (about writing the test), worrying about evaluation, and thoughts of being unprepared (Cassady & Johnson, 2002). Other direct causes can be due to reduced self-confidence, worrying about the testing event, and a feeling of under-preparedness (Cassady, 2009). The indirect cognitive causes of test anxiety are thoughts that are indirectly related to the test. It would include the following: internal dialogue which includes making a comparison to peers and questioning one's self-worth

(Cassady & Johnson, 2002). Other indirect cognitive causes include losing self-worth or self-esteem and engaging in avoidance thoughts (Cassady, 2009).

It seems that the fear of failure is the main direct cognitive cause of test anxiety in countries that place high emphasis on entrance exams. Kim and Dembo (2000) compared the test anxiety of students writing their university entrance exams in Egypt, Brazil, and the United States. They found that test anxiety was higher in Egypt compared to the United States. Approximately only 50% of the students writing the national exam in Egypt will be awarded a diploma for admission to a university, and only 50 % of this group will attend a university. They also found that test anxiety was higher in Brazil compared to the United States. The high school exit exam determines whether a student progresses to a university. Only 5% will attend a university. Kim and Dembo (2000) also found that fear of failure was given considerable importance by South Korean students as they prepare for their college entrance exams. The context in implementing those cognitive factors is that parental control is deemed to be acceptable by the students out of respect. Parental control is the parents' attempt to manipulate the student by the withdrawing of love and inducing guilt if the student disobeys. According to Honig (1992), the pressure for academic success generates tremendous stress on students who may not meet their parents' expectations.

Robinson (1994) found that higher education, employment, and promotion in the public and private sectors in South Korea depend on the entrance exam. With a college population of about one million, 500,000 students fail annually to gain college admission. Some students repeat the entrance exam continuously for 7 years. Lee and Larson (1999) found that Korean students reported one of the highest test anxiety levels. The teaching is directed to the 20% of students who are expected to pass. The lessons are on memorizing answers to multiple-choice questions and practicing solving the type of problems that may appear on the exam. The teachers and most of the students thought that it was a waste of time to ask questions not related to the examination. Lee and Larson (1999) also mentioned that the students were given weekly, monthly, mid-terms, and final exams—along with university entrance practice exams. The eighth and eleventh graders were occupied with schoolwork for 47% of their time comparable compared to 25% to 29% of the students' time for U.S. adolescents, 30% of the students' time for Italian adolescents, 34% of the students' time for eighth graders in India, and 34% of the students' time for Japanese

eleventh graders. Korean twelfth graders spent as much as 14 to 18 hours a day studying. They gave up sleep and leisure activities.

There are also external indirect causes. Those causes are related to stress. I will elaborate on those causes in Section 2.4.3.

2.4.2 Other Types of Anxieties

The following types of anxieties can also be regarded as indirect cognitive causes of test anxiety: general anxiety, panic disorder, phobias, obsessive-compulsive disorder, and post-traumatic stress disorder. Those anxieties are more pervasive than test anxiety and are deemed as "clinical anxiety" (American Psychiatric Association, 2015). If test anxiety started at an early age, it may be related to those other types of trait anxieties. They are a more general and serious form of anxiety not limited to testing situations or performance situations. Most of those candidates with test anxiety were found to spend their free time engaged in solitary activities, such as reading or watching television. There were early indications of difficulty relating to others (Beidel & Turner, 1988).

According to Huberty (2010), students may have tendencies toward trait anxiety if the onset of test anxiety was at an early age. Trait anxiety is a more enduring form of anxiety, and it is not situational such as the presence of a test. If a student shows high state anxiety, it is possible that he or she also has high trait anxiety. The trait anxiety aggravates the test anxiety. According to Cassady (2009), an individual's trait anxiety can predict the level of test anxiety when an evaluation is pending. The state anxiety would be amplified. There would likely be a negative emotional response.

2.4.3 Stress

In addition to the indirect cognitive causes of test anxiety mentioned in Sections 2.4.2, there are also indirect external causes. They are related to stress. The terms stress and anxiety are sometimes applied interchangeably, but there is a difference. Stress is a reaction to something experienced in the present. According to Clark (2019), stress refers to how we cope with stimuli externally generated such as a work deadline, meeting a friend's request, or dealing with heavy

traffic. Anxiety tends to be generated internally, and it is focused on the future. The physiological response in both instances is the same. According to Alvord & Halfond, 2019, anxiety, on the other hand, is defined by persistent and excessive worries that do not go away even in the absence of a stressor. It has a more enduring feature. According to Ross (2018), unlike stress, anxiety persists even after a concern has passed. Stress can lead to trauma. When the trauma gets worse, it can lead to post-traumatic stress disorder (PTSD). At that stage, the trauma would disrupt a person's ability to regulate his or her emotions (CAMH, n.d.).

Stress from Law Enforcement Work

The police culture upholds toughness. Officers with anxiety may not seek help for fear of ostracism (CAMH, 2018). Bailiffs tends to inherit the stress of both police officers and correctional officers. Bailiffs have the power of a policer officer in assigned jurisdictions. Bailiffs also perform tasks similar to correctional officers. They are responsible for supervising inmates assigned to their care during a trial. Most of the bailiffs at the location where I planned to post my invitation were expected to be in the family stage of their life cycle. They may also inherit financial and family related stress.

According to a survey given to municipal and provincial police by CAMH (2018), 52% of law enforcement officers reported moderate to severe stress, 88% reported moderate to severe anxiety, 87% reported moderate to severe depression, and 29% were in the clinical diagnostic range for Post-Traumatic Stress Disorder (PTSD). The lifetime prevalence rate of PTSD for all Canadians is about 9%. A survey by the Union of Canadian Correctional Officers (2016) showed that 78.6% of correctional officers have experienced a traumatic event during their careers. The number of traumatic events increased with seniority. Exposure to traumatic events is so common in federal correctional institutions that even correctional officers employed for less than a year experienced the following: 47.8% were exposed to 2 to 4 traumatic events, and 20% were previously exposed 5 times or more.

According to Mitchell and Everly (2001), it is normal when one is involved in a critical incident to display anxiety as one reacts normally to an abnormal situation. It is also normal for these symptoms to last days or weeks following a critical incident. If these symptoms last longer than 6 weeks, it is recommended that the client be referred to a counsellor.

Stress Experienced by Medical Students

Jafri et al. (2017) found that the stress levels of medical students were higher than those of non-medical professional students. They found that 54.6% of the medical students have stress levels in the high range compared to the 20.6% of the engineering students, 20.6% of the art students, and 32% of the commerce students. Most of the non-medical students were in the moderate stress levels range. Bartlett, Taylor, and Nelson (2016) found that nursing students incurred significantly more stress, anxiety, depression, sleep disturbances, and stress-related illnesses (e.g., sleep disturbances, upper respiratory tract infections, migraines) than the general student body.

According to Heinen, Bullinger, and Kocalevent (2017), study-related stressors experienced by medical students include high workloads, tight time schedules, dissection of corpses, contact with severely ill, suffering and dying patients, financial problems, language barriers, communication difficulties, and cultural differences—especially with respect to international students. Alqarni, Alzahrani, Alsofyani, and Almalki (2018) conducted a study to assess the relationship between sleep quality and academic performance of 299 medical students. Female students made up 56% of the sample, and they had better sleep quality than the males. The female students scored higher in their exams than the male students.

Zhang and Henderson (2019) identified four main types of stressors encountered by chiropractic students from greatest to least intensity of stress: the debt they incurred, the lack of control in their lives, the concern that they would not be able to master the knowledge, and the competition. The researchers observed that the student's perceived stress increased from the start of the program to six months into the program. However, test anxiety decreased over the same period. It suggested that students were developing coping skills.

According to Pfeiffer (2001), positive stress helps students achieve peak performance, but too much stress would affect the student's concentration, preparation, and performance. Some students strive to meet the demands of a career and family commitments. Some older students have childcare or caring for aging parent issues. Engaging in graduate studies may have an impact on marriage when the couples are forced to be apart. In long term relationships leading to marriage or parenthood, the couple may have to postpone the marriage or parenthood. There may

also be financial concerns such as the concern of repaying the loan for education. Engaging in graduate studies may also make planning for retirement a problem.

There is a link between stress and anxiety. Worry is that link. Stress is a response to a present situation. Worry can add anxiety on top of one's stress by worrying about the stressful situation. According to Anniko, Boersma, and Tillfors (2019), worry is a form of repetitive negative thinking in reference to future events. By worrying about an upcoming stressful event, cognitive and physiological responses are prolonged and intensified. Worry maintains the anxiety.

2.4.4 Section Summary

There are direct and indirect causes of test anxiety. The direct cognitive causes of test anxiety are thoughts that are directly related to the test. The indirect cognitive causes of test anxiety are thoughts that are indirectly related to the test. The indirect cognitive causes of test anxiety can also be due to other types of anxieties or to stress, and those indirect cognitive causes of test anxiety can add to test anxiety.

2.5 Types of Brief Interventions to Address Test Anxiety

There is an increasing number of brief interventions to address the challenges of test anxiety. As mentioned in my positionality in Chapter 1, I adopted a problem-focus approach in dealing with test anxiety. I like to know the cause of a problem before tackling it. According to Lees and Dietsche (2012), however, solution-focused is the preferred approach for college counsellors in Ontario, Canada. It attends to the symptom without seeking its cause. The intention is to give the students adequate treatment before the end of their program. According to Kok and Leskela (1996), it is also the preferred treatment method at hospitals. It tends to meet the increasing demands from insurance companies for cost-effective treatment and from the hospitals for a shortened hospital stay. According to Pennebaker and Smyth (2016), it does not confront the problem. Instead of being a passive recipient, the problem needs to be confronted before one can understand it.

2.5.1 Problem-Focus Interventions

Problem-focus coping is a coping response that starts with identifying the problem and then attempting to come to terms with it (Carver & Scheier, 1999). According to Pennebaker and Smyth (2016), by engaging in expressive writing, it alleviates anxiety to the extent that it becomes suspended. In that state, the improvement in cognitive ability allows the participant to come up with strategies to deal with the cause of anxiety. Once the cause is identified, Folkman and Moskowitz (2000) suggest reframing the stressful thoughts. The process involves viewing the thought in a different way to shift one's attention away from ruminating about the distress. Having positive emotions is important in coping with stress. A change in its interpretation can cause a positive feeling. The different forms of reframing are reappraising the symptom (Brady, Hard, & Gross, 2018), cognitive appraising (Krispenz, Gort, Schultke, & Dickhauser, 2019), cognitive reprocessing (Algristian, 2019), or taking on a different perspective (Pennebaker & Evans, 2014).

Greenberger and Padesky (2016) propose another way to approach the problem once it is identified. They suggest applying cognitive behaviour therapy (CBT). The premise is that one's mood would change when the participant's thoughts change. The participants would seek the cause of one's adverse moods and label them as adverse thoughts. The participants then attempt to offset them with alternative thoughts or alternative means to achieve their goals. They would then seek information as to which of them is more appropriate. Instead of asking the participants directly to identify the problem Pennebaker and Smyth (2016) hope that its identification would take place during expressive writing. Identifying and understanding the problem takes place at the same time once the participants gain insight into the problem.

2.5.2 Solution-Focus Interventions

In solution-focus coping, the participant does not have to search for the cause of test anxiety and does not have to explain it. The intervention depends on the empowerment theory (Gutierrez, 1994). It centres around the belief that individuals can discover the solution to their problems (Burwell & Chen, 2006). The emphasis is placed on the participant's strengths instead of on limitations. The intervention focuses on one's goal, and a plan is then constructed to achieve that goal. It does not focus on one's problem (Berg & Dolan, 2001).

Agbaria and Bdier's (2019) theory of self-talk to improve self-control is an example of a solution-focused intervention. The researchers found that there is a negative relationship between self-control and test anxiety. Students with high self-control tend to show less anxiety. They were able to think creatively to find alternative solutions to alter their predetermined ways of thinking. They applied self-talk and self-control to resist stressful situations. The adoption of self-control allowed reasoning to take place instead of constant worrying. Another example is Maghaminejad, Adib-Hajbaghery, Nematian and Armaki's (2020) theory on guided imagery. They proposed that it is possible to reduce test anxiety by listening to 30 minutes of guided imagery once daily for one week. It involves mental exercises to clear the mind of worries and negative thoughts. The participant would focus instead on their strengths and pleasant things such as future achievements.

2.5.3 Combined Interventions

Some interventions combine more than a single intervention. Because expressive writing or cognitive behaviour therapy (CBT) was part of the combination, it has features of problem-focus coping. Algristian (2019) presented a case study where expressive writing was combined with narrative inquiry in treating three of his patients with clinical symptoms. Being a listener helped the patients reorganize and restructure what they thought and felt. Reiss et al. (2017) combined cognitive and behavioural interventions (CBT) with imagery re-scripting (ImRs) as a viable treatment option for test anxiety. The researchers theorized that adverse experiences were responsible for internalized images, and ImRs may alter those experiences. It first identifies a current image to change. The researchers found that CBT and ImRs were effective in reducing test anxiety by changing the meaning of adverse thoughts. The procedure helped overcome individual fears. Ugwuanyi et al. (2020) explored the outcome of combining cognitive behavioural therapy (CBT) with music therapy to reduce test anxiety. Music is a non-verbal facilitation beyond the talking form of CBT and was applied as a delivery medium. It could provide motivation. The intervention program was for 12 weeks. The researchers found that it allows the participants to manage their test anxiety.

2.5.4 Section Summary

The reason for bringing up other interventions in this section is not to suggest that the participants of this study should consider combining any of them with expressive writing. Instead, it would be interesting to note if any of the participants applied other interventions on their own in addition to expressive writing to cope with test anxiety. According to Pennebaker and Smyth (2016), it is possible that expressive writing would enable some of the candidates to gain insight about anxiety. It encourages them to be creative in solving a problem.

2.6 Definition of Expressive Writing

The definition of expressive writing is broken down into the following components: what to write about, how to write it, its structure, expressive writing compared to journal writing, and expressive writing compared to talking. When applying expressive writing to write about test anxiety, one is writing about the deepest thoughts and feeling about what caused the test anxiety (Pennebaker & Beall, 1986). Pennebaker (2004) qualified that expressive writing is not just writing about what happened but how one feels about what happened or what is about to happen. The duration and frequency of the intervention is 15 to 20 minutes daily over 3 or 4 consecutive days (Pennebaker & Evans, 2014; Pennebaker & Smyth, 2016). Pennebaker and Smyth (2016) mentioned that expressive writing is different from other types of writing. The writer may not write about their secrets in other forms of writing. According to Moran (2013), it is different from talking. The speaker may pick up disapproval when the listener displays it subtly. The speaker would then hold back sensitive information.

2.6.1 What to Write About

Expressive writing has developed from its initial application to treat individuals experiencing traumatic incidences (Pennebaker & Beall, 1986) to its present application in dealing with test anxiety. According to Pennebaker and Smyth (2016), expressive writing invites participants to write about their deepest thoughts and feelings about what is bothering them the most. It needs to be about something that they constantly think about. If they do not keep thinking about it, then it is not a problem.

2.6.2 How to Write using Expressive Writing

Pennebaker (2004) qualified that expressive writing is not just writing about what happened but how one feels about what happened or what is about to happen. Pennebaker and Evans (2014) found that when they asked a group of 50 subjects in the expressive writing control group to write about an emotional topic, the group expressed that no one had asked them before to write about a significant emotional experience. They had to be given instructions before they could write in that manner. I adopted the instructions of Lepore (1997) who followed the protocol of Pennebaker. He mentioned that the participants should write about their very deepest thoughts and feelings about the exam. He also gave the option of writing about the thoughts and feelings regarding the exam itself, the effect of the exam in the present, its implications on future goals, and alternate plans they may have. According to Smyth and Pennebaker (1999), it is more appropriate to allow the participants to write about events of their choice rather than restricting them to a specific event. Expressive writing was more beneficial sometimes when the participants wrote about topics other than their particular physical illness or psychological problem. (Refer to Appendix C for the standard instructions for expressive writing).

According to Pennebaker and Evans (2014), they need to find their voice when they write. They would also try to put their experiences together with other experiences to arrive at a meaningful story with a coherent beginning, middle, and end. They need to write from a different perspective because the initial experience of the adverse thought is from their perspective. Individuals who benefited the most from expressive writing have been able to see it from other people's perspectives. Even writing it in the third person helps. They would try not to analyse the event too much. By continuously revisiting the problem, it may result in rumination.

2.6.3 Expressive Writing Structure

The application of expressive writing follows a certain structure. The duration and frequency of the intervention is 15 to 20 minutes daily over 3 or 4 consecutive days (Pennebaker & Evans, 2014; Pennebaker & Smyth, 2016). The original researchers could only reserve the rooms for a week late in the afternoon. Due to time restrictions, the participants were asked to write for a brief duration, and it became the norm (Pennebaker & Beall, 1986). It was found that writing for 1 hour (with two 10-min breaks) for 1 day is just as effective as the original sequence. The

benefits were still evident 9 months later (Chung & Pennebaker, 2008). However, recent studies have also emphasised that expressive writing had to be conducted more than once to allow the participants to reflect on themselves and the events they describe (Tonarelli et al., 2017). In some quarters, there is a belief that the more people write, the better their health. Again, expressive writing research does not support this idea. It is possible that a fixed number of writing sessions, perhaps only 3 to 5 sessions, is sufficient to optimize improvement. Too much writing may reflect the processes of rumination or obsession (Kacewicz, Slatcher, & Pennebaker, 2006).

2.6.4 Expressive Writing Compared to Journal Writing

Pennebaker and Smyth (2016) mentioned that expressive writing is not a form of journaling or diary writing. It is a brief writing technique to help people understand and deal with emotional upheavals. Journal writers may not write about their secrets. Ramirez and Beilock (2011) emphasised that although journal writing can also be a form of writing about one's feelings, expressive writing takes it a step further. Expressive writing is also an expression of what the student had done in preparation for the test. It is not a list of the steps involved in the actual preparation, but it is a description of how he or she feels mentally while acknowledging such preparations.

2.6.5 Expressive Writing Compared to Talking

The problem with talking is that the person doing the talking does not know how the other person is going to react. The listener's feedback can be negative. The speaker may also pick up disapproval when the listener displays it subtly. The speaker would then hold back sensitive information. Also, speaking is a process of putting together thoughts and words at a quicker rate. Writing is a slower process. It transcribes each topic. The writer attempts to give structure to the thoughts and words (Moran, 2013).

2.7 Benefits of Expressive Writing

The benefits of expressive writing recorded in the literature are widespread. The following findings show that the benefits range from improved physical and mental health as well as

lowering test anxiety: Improvement in physical health takes the form of enhancement in immune function (Koschwanez et al., 2013), reduction in resting blood pressure (McGuire, Greenberg, & Gevirtz, 2005), lower liver enzyme levels (Francis & Pennebaker, 1992). Improvement in mental health takes the form of increasing working memory to allow students to work on complicated issues (Klein & Boals, 2001; Beilock, 2008; Ramirez & Beilock, 2011), improvement in organizational skills (Cassady, 2004; Tobias, 1985), allowing one to open up to lead to the possibility of reaching out for social support (Harvard Health Publishing, 2011).

Pennebaker and Beall (1986) initially developed expressive writing to attend to people who had experienced traumatic events. Pennebaker and Evans (2014) found that having a traumatic experience was worse for those who kept the experience a secret. Not talking about the trauma placed them at a higher risk for illness compared to those who chose to speak about the trauma. The inability to find a language to express emotions is associated with certain chronic conditions. According to Lepore (1997), this theory also applies to anyone with test anxiety.

Expressive writing can help participants with different education levels and writing abilities. Pennebaker and Evans (2014) mentioned that in some cases, the participants' spelling and grammar were poor; but that did not make a difference. They could still tell compelling narratives. It was also reflected in another study by Tonarelli et al. (2017); they mentioned that 84% of the 66 health care professionals who took part in their study did not have previous writing experience. After the study, they found that expressive writing improved the development of relationships and the overall well-being and quality of life of those who took part in the study.

Expressive writing can also help individuals with performance anxiety as well as test anxiety. According to Beilock (2012), performance anxiety is the worry about performing one's best during an interview for a test or during a competition in sports when the stakes are high and when one is about to be evaluated. Similar to test anxiety, performance anxiety can interfere with the ability to plan or decide on a specific strategy. Tang and Ryan (2020) found that expressive writing reduced performance anxiety. The candidates in the experimental groups had a significant performance improvement. They had a reduction in performance errors. How much they wrote and the seriousness of the writing may affect the results; two students in the experimental group only wrote two sentences, and there were no changes in their performances.

The majority of the research on applying expressive writing to deal with test anxiety mainly focuses on lowering the anxiety during the actual test with the assumption that high test anxiety leads to poor performance (such as a lower grade point average) (Beilock, 2008; Dalton & Glenwick, 2009; Deutsch, 2012; Frattaroli, Thomas, & Lyubomirsky, 2011; Park, Ramirez, & Beilock, 2014; Ramirez & Beilock, 2011). The following studies examine the effects of test anxiety on preparation and study habits before a test. According to Cassady (2004), students with high test anxiety do not have the skills to encode, organize, and store information during preparation. An indication of the deficiency is the inability to employ effective study skills. Tobias (1985) suggested that if students were anxious when studying, the information is not encoded efficiently. That makes it difficult to retrieve during a stressful testing situation. Eysenck and Calvo (1992) mentioned that anxiety during the preparation of a test can affect learning and memory. Students with high test anxiety would expend a greater effort to learn. They would find that there is a limited capacity to store and process information. According to Cassady (2004), reading would be highly repetitive and less effective.

Lepore (1997) found that there is a strong association between intrusive thoughts one month before the exam and exam anxiety three days before the exam among participants in the control group but not in the expressive writing group. By dealing with intrusive thoughts before the exam, it is comparable to dealing with test anxiety during the exam. According to Cassady and Johnson (2002), emotionality remains benign if worry is under control.

Lepore (1997) found that it was possible to have just one writing session for 25 minutes, and the benefit derived would last for a month. The expressive writing group had a lower level of depressive symptoms as the exam date approached than the control group. Expressive writing reduced the depressive symptoms by allowing the participants to adapt to the intrusive thoughts rather than by reducing the number of intrusive thoughts. It seems to be able to promote adaption by blunting the impact of intrusive thoughts. There was a strong association between intrusive thoughts 1 month before the exam and depressive symptoms 3 days before the exam in the control group but not in the expressive writing group.

2.8 Challenges Around Employing Expressive Writing

According to Nicholls (2009), conventional expressive writing only describes an early phase in the process of writing. After gaining significant insight and understanding, the writer becomes ready to write objectively to express what is being experienced. It is not necessarily an explanation but rather an expression that needed to be put into words. An explanation may not be possible at the disclosure level. According to Pennebaker (1997), participants would write for 15 to 20 minutes daily over 3 or 4 consecutive days. Nicholls (2009) argued that they may only disclose their emotional inhibition at this stage. It would be incorrect to assume that expressive writing automatically allows the writer to gain insight during that period. Some people may achieve insight, but others may not in such a brief period.

According to some researchers, an improvement in test performance demonstrates the success of expressive writing in dealing with test anxiety, and it is mainly represented by Beilock and colleagues (Beilock, 2008; Beilock, 2012; Park et al., 2014; Ramirez & Beilock, 2011) and by a handful of other researchers (Dalton & Glenwick, 2009; Deutsch, 2012; and Doherty & Wenderoth, 2017). There are a few researchers, however, who did not find a relationship between expressive writing and an improvement in test performance (Blank-Spadoni, 2013; Spielberger, 2015). Allen (2017) found that expressive writing alleviated test anxiety before writing an exam, but there was no difference in test performance between the experimental and control group. Kim (2016) found no relationship between test anxiety and the past performance of medical students. Academic performance is a weak predictor of test anxiety.

Expressive writing may not be able to deal with multiple types of anxieties. According to Tompkins (2013), some participants may have test anxiety plus another more serious type of anxiety. They may not be able to deal with them simultaneously. They must seek specific treatment for each type of anxiety one at a time. For example, if you have both test anxiety and test avoidance, you might first receive treatment for avoidance anxiety followed by treatment for test anxiety. You must delay treatment for one anxiety until you have recovered from the other.

Pennebaker and Smyth (2016) mentioned that a possible challenge in expressive writing is when the candidate substitutes expressive writing for action. At some point after gaining an understanding of the causes of one's anxiety, the inhibition is alleviated to the point where it allows for the implementation of a coping strategy. The candidate cannot just write about the

strategy. He or she has to activate it to test if it works. Otherwise, the candidate may end up relying on an untested strategy which may not work.

Pennebaker's (1997) earlier version of expressive writing only refers to the inhibition theory. In later versions, Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) also included the problem-focus theory. The initial theory worked most of the time, but future researchers adopted the earlier writing paradigm. The theory was incomplete, and that may account for why the literature mentioned that expressive writing worked for some individuals but not others.

2.9 The Model Chosen for this Study as a Guide

I adopted Lepore's (1997) model instead of Pennebaker's (1997) model as a guide in addressing test anxiety. The theory of Lepore (1997) is more applicable in my study. Pennebaker's (1997) model mainly dealt with traumas that occurred in the past. Lepore's (1997) model addressed test anxiety that is expected to occur in the future. He is interested in the presence of test anxiety during the preparation of the test and not just during the test. His sample, similar to my sample, consists of participants who are interested in writing the entrance exam. To be eligible for Lepore's (1997) study, the participants had to be planning to take any of the following entrance exams: the Medical College Entrance Examination (MCAT), the Graduate Record Examination (GRE), Law School Admissions Test (LSAT), or the Graduate Management Admissions Test (GMAT). Most of the participants were first-time test takers (80%), and some were second-time test takers (20%). The participants in his study only wrote once. According to Lepore (1997), the high level of demands in his study precluded more writing sessions.

The difference in theory between Lepore (1997) and Pennebaker (1997) is that according to Pennebaker (1997), expressive writing diminishes the frequency of intrusive thoughts. Lepore (1997) found instead that expressive writing diminishes the impact of intrusive thoughts. He theorized that expressing stress-related thoughts allows the participant to adapt to the stressor by blunting its impact. Expressive writing lowers exam anxiety by lowering the emotional impact of intrusive thoughts rather than eliminating or reducing the number of intrusive thoughts. The adverse thoughts were still there; but it appears that being able to express stress-related thoughts and feelings, it allowed the participant to adapt to them.

The following study by DiMenichi, Lempert, Bejjani, and Tricomi (2018) seems to favour Lepore's (1997) theory over Pennebaker's (1997) theory. DiMenichi et al. (2018) conducted a study to find the effect of stress on test anxiety by having the participants write about failure in their expressive writing. If the writing alleviates the stress, then there should be a reduction of the endocrine system's response to the stress by reducing the level of cortisol. One hundred and two participants were swabbed to determine the level of cortisol prior to expressive writing to determine its baseline level. Then they were engaged in expressive writing and later subjected to a stressor in the laboratory. The researchers did not find a noticeable change in cortisol levels. The findings suggested that the adverse stressors were still there, but the participants managed to adapt to them. Lepore (1997) proposed a similar theory.

Lepore (1997) still followed the standard protocol established by Pennebaker (1997). The exception was that the participant would only engage in expressive writing once rather than over three or four days. They were given 25 minutes to write, and the benefit was found to last for a month. Lepore (1997) did not rely on an improvement in test performance to validate the success of expressive writing. Instead, he was interested if the participants were able to adapt to the impact of intrusive thoughts during the preparation of the test once expressive writing lowered their intensity.

2.10 Theoretical Framework

Two theories are found in this study: the emotional inhibition theory (Traue, Kessler, & Deighton, 2016; Lepore, 1997; Pennebaker, 1997) and the problem-focus theory (Carver & Scheier, 1999; Greenberger & Padesky (2016); Pennebaker & Evans (2014); Pennebaker & Smyth (2016). The emotional inhibition theory and the problem-focus theory are central to how and why expressive writing works.

Emotional Inhibition Theory

According to Pennebaker and Beall (1986), the emotional inhibition theory posited that not expressing a traumatic event is a form of inhibition. It is a long-term low-level stressor on the autonomic and central nervous system. According to Pennebaker and Smyth (2016), keeping a secret takes a lot of work. It means that we must restrain or exert effort not to think about it.

Restraining thoughts cause stress-related mental and physical problems. It disrupts the way we think. The disruptive thoughts are abstract. We do not translate it into a language. It prevents us from understanding the event. The lack of understanding contributes to the disruption and rumination. We then have fewer mental resources to deal with the problem at hand.

There would be a decrease in working memory. Working memory is a technical term for the ability to think about the complex task. It requires a limited amount of information relevant to the task at hand. It is like a mental scratch pad where one selects relevant information for the problem at hand (Beilock, 2008). Worrying about a test competes for the limited working memory available and disrupts performance (Beilock, 2008; Dalton & Glenwick, 2009; Deutsch, 2012; Doherty & Wenderoth, 2017; Park et al., 2014; Ramirez & Beilock, 2011).

Problem Focus Theory

According to Greenberger and Padesky (2016), the starting point of problem-focus coping is itemizing the situations suspected to contribute to test anxiety. It is possible to measure each of their intensity and establish a benchmark. By defining the problem, it allows one to deal with it. According to Lepore (1997), one's inhibition is alleviated by engaging in expressive writing once for 25 minutes. The alleviation in test anxiety should last for an extended period.

By suspending the anxiety, it is possible for the participant to acquire two types of knowledge: the knowledge of what causes test anxiety and the role it plays in developing the anxiety and the knowledge of how to deal with the anxiety during the preparation for a test.

According to Pennebaker and Smyth (2016), once the cause of test anxiety is identified, the participant may examine it further during expressive writing to gain knowledge about it. According to Pennebaker and Evans (2014), further knowledge of the cause of test anxiety is gained by writing about it (during the first day of writing) and trying to link it to any other possible causes (during the second day of writing). Causal reasoning helps to promote understanding of an event. A change in perspective is encouraged (during the third day of writing). The ability to see the cause or causes from different perspectives may be beneficial. Finally, the writer would then try to seek the positive side of negative experiences (during subsequent writing). Having a positive disposition would further suspend the anxiety to allow reasoning to take place.

According to Pennebaker and Smyth (2016), the alleviation of one's emotional inhibition allows for possible insight to develop to attend to the cause of test anxiety. The knowledge of how to deal with the problem is gained by trying different strategies to deal with the issue. Such knowledge is possible by continuing to engage in the act of seeking a solution. The knowledge does not precede the act. Expressive writing initiates the action to seek a solution.

2.11 Statement of a Possible Solution

According to Lepore (1997), negative emotions may arise when ruminating thoughts interfere with established views. There is an incomplete assimilation. Not being able to reconcile with it is a form of emotional inhibition. Expressive writing allows for emotional expression. It allows the participants to confront the problem and start releasing the inhibition.

According to Pennebaker and Smyth (2016), expressive writing promotes a broader understanding. The candidate who has anxiety does not understand it. It needs to be put into language before it can be understood. Expressive writing enhances the coping strategy by allowing one to gain insight into the anxiety and that further encourages its assimilation. According to Lepore (1997), the release of inhibition derived from the insight blunts the impact of test anxiety.

Knowledge of the anxiety allows one to "let go" of it. According to Smyth and Pennebaker (1999), it is comparable to hearing a strange noise in the middle of the night. We need to find out what it is. By understanding the anxiety, it puts us at ease. It becomes commonplace instead of foreign. It becomes easier to forget just as we tend to forget other occurrences that are commonplace.

According to Pennebaker and Smyth (2016), once the participants are in that state, it allows them to come up with strategies to deal with the problem. Genc (2017) found that coping strategies can take place by defining the problem first and then seeking alternative solutions. The process is referred to as problem-focused coping strategy. It is more effective than coping strategies that attempt to regulate emotions by maintaining hope and optimism. This process is referred to as emotion-focused coping strategy.

Pennebaker and Evans (2014) found that expressive writing fosters problem solving. It is the start of a problem-focused coping strategy. If the participants can write freely about a complicated problem, they can more readily find a solution. According to Pennebaker and Smyth (2016), writing is slower than thinking. Expressive writing forces the participants to sustain their attention on the problem longer than if they were thinking about it.

2.12 Gaps in the Literature, Aims of the Study, and Research Questions

Gaps in the Literature

Test anxiety can be debilitating and expressive writing has been heralded as a positive approach to address that anxiety. The literature has focused extensively on the benefits of expressive writing and on its application as an inexpensive and short-term intervention to address both trauma and anxiety. It has also identified areas for further research in its application which involves improvement in physical health as well as mental health (Koschwanez et al., 2013; McGuire et al., 2005; Francis & Pennebaker, 1992). There has been more emphasis on group response to expressive writing expressed quantitatively; and as a result, there is scope for a more qualitative lens to the application of expressive writing.

In studies since the original research proposed by Pennebaker and Beall (1986) on expressive writing, the intervention for test anxiety was applied to groups of students instead of individual students. It was traditionally an experimental design. There were control groups and experimental groups. As a result, the impact of expressive writing on individual symptoms was not documented. Any individual differences were lost in the total aggregate when calculating the mean. Capturing individual differences is relevant in the current study which focuses on expressive writing as an approach for candidates to self-regulate their test anxiety in preparation for their tests. If each candidate realises the cause or causes of test anxiety, it creates the possibility to address something definite instead of something abstract when conducting expressive writing.

Aims of the Study

The existing research on applying expressive writing to deal with test anxiety mainly focuses on lowering the anxiety during the actual test (Beilock, 2008; Dalton & Glenwick, 2009; Deutsch,

2012; Frattaroli et al., 2011; Park et al., 2014; Ramirez & Beilock, 2011). The overall aim of the current research examines the possibility that test anxiety can also exist during the preparation for a test, and it explores the extent a participant would benefit from engaging in expressive writing to deal with the anxiety while preparing for a professional exam. It does not investigate the participant's performance during the test. Instead, the main indicators relied on for the success of expressive writing was based on the theory of Lepore (1997): the ability to lower one's test anxiety after expressive writing and the ability to maintain the alleviation for an extended period. Therefore, the data needs to be determined qualitatively to take into account individual difference; and it also needs to be determined quantitatively to allow it to be measured. According to Wisdom and Creswell (2013), the qualitative data is tested by the quantitative data, and the quantitative data is explained by the qualitative data collected.

During the preparation, the candidates may inherit other types of stressors that may aggravate their test anxiety. As mentioned in Sections 1.5 and 2.4.3, there is a tendency for law enforcement officers working in the industry to inherit stress from the environment they are exposed to. As mentioned earlier in Sections 1.2 and 2.4.3, the option to self-manage their test anxiety is an important consideration. According to CAMH (2018), the police culture upholds toughness. Officers with anxiety may not seek help for fear of ostracism. If any of my colleagues incurred test anxiety while taking a law enforcement program at college, they may not receive the proper assistance if they feel anxious about their test. According to Lees and Dietsche (2012), the preferred approach for college counsellors in Ontario was solution-focused. The counsellors found that it was a very practical approach in a school setting with a 15 weeks semester. Cognitive Behavioural Therapy was the second most common approach. The Rogerian approach was the third most common.

Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) contended that we cannot just attend to the symptoms. The symptoms of test anxiety do not promote knowledge. The initial experience is abstract. It needs to be defined to promote understanding. According to Greenberger and Padesky (2016), listing the causes of anxiety is the starting point for patients to understand how they are related to their circumstances. According to Pennebaker and Smyth (2016), once they start to understand the problem of test anxiety, they may reinterpret the negative experience. It alleviates the anxiety sufficiently to enable them to develop coping skills.

Research Questions

The following research questions are designed to address the overall aim:

1. How effective was expressive writing after applying it to alleviate the participants' test anxiety during the preparation for a written test?
2. What are the causes of test anxiety during the preparation for a written test that expressive writing can address and why?
3. What are the causes of test anxiety during the preparation for a written test that expressive writing cannot address and why?

2.13 Chapter Summary

According to Lepore (1997), negative emotions may arise when adverse thoughts during the preparation of a test interfere with individuals' established views. Not being able to reconcile with them is a form of emotional inhibition. Expressive writing is a form of emotional expression. It allows them to confront the problem and start releasing the inhibition. Pennebaker and Smyth (2016) added that expressive writing would generate a broader understanding. The understanding would translate the disruptive thoughts into language and that encourages a coping response to deal with the actual problem.

Genc (2017) mentioned that a problem-focused coping strategy takes place by defining the problem first and then seeking alternative solutions. According to Greenberger and Padesky (2016), listing what produced one's anxiety is the first step in dealing with it. Anxious moods can be defined by first asking the individual to make a list of items that are responsible for their anxiety. By defining the problem, it allows one to deal with it.

There are common types of causes related to the test. Some internal cognitive stressors relating to the test can include: thinking about the consequences of failure, lacking confidence (about writing the test), worrying about evaluation, and thoughts of being unprepared (Cassady & Johnson, 2002). Other direct cognitive causes can be due to reduced self-confidence, worrying about the testing event, and a feeling of under-preparedness (Cassady, 2009). Some external study-related stressors can include high workloads, tight time schedules, becoming ill, financial

problems, language barriers, communication difficulties, and cultural differences—especially with respect to international students (Heinen, et al., 2017).

Pennebaker and Evans (2014) found that expressive writing fosters problem solving. It is the start of a problem-focused coping strategy. If the participants can write freely about a complicated problem, they can more readily find a solution. Writing is slower than thinking. Expressive writing forces the participants to sustain their attention to the problem longer than if they were thinking about it.

In the next chapter, I will discuss how the data is collected. The type of data that I expect to collect is influenced by the sample I chose. The data is related to the aims of the study and the theoretical framework mentioned in Section 2.10. The data needs to be determined qualitatively to consider individual difference; and it also needs to be determined quantitatively to allow it to be measured.

Chapter 3: Research Methodology

3.1 Introduction

I introduce the context of the study in terms of my decision to adopt a mixed-method design in Sections 3.2 before discussing the data collection tools and the data collection process. Section 3.3 discusses the data collection tools for the study and Section 3.4 the data collection approach. Sections 3.5.1 to 3.5.8 summarize the profile and status of Participants A to H. Section 3.6 discusses ways to ensure research quality, and Section 3.7 outlines the ethical considerations that underpin the study.

3.2 Study Design

My background and professional expertise lie in the field of psychology where the outcome of research relied more on quantitative methodologies. However, I appreciate that such an approach may not fully support the exploration of my topic. In this study, I adopted the model of Lepore (1997) as a guide. I also intend to test his emotional inhibition theory along with the problem-focus theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016).

By testing their theories, I am applying deductive analysis. According to Braun & Clarke (2006), in deductive analysis, the predefined theories determine the development of the analysis. While Braun & Clarke (2006) use the term “thematic analysis”, my study also included quantitative data; therefore, the term has been replaced with “content analysis”. According to Humble and Mozelius (2022), content analysis has a wider application and can be used for qualitative research and quantitative research. The term was chosen to emphasise the frequency of concepts in both the quantitative and qualitative data.

I am also interested in gaining an in-depth knowledge on the effect of expressive writing on individuals. By seeking knowledge about individuals, I am applying inductive analysis. A mixed-methods approach allows me to analyse the data inductively and deductively.

The present study falls into the category of both exploratory and explanatory design. In an exploratory design, the qualitative data collection and analysis are connected to the quantitative measurements from the intervention and is tested by the quantitative data collection and analysis, and it leads to an interpretation (Creswell & Clarke, 2018). In an explanatory design, the quantitative data collection and analysis phase is explained by the qualitative data collection and analysis phase, and it leads to inferences to be drawn (Creswell & Clarke, 2018).

3.2.1 Mixed Methods Research

I am interested in gaining an in-depth knowledge of the effect of expressive writing on individuals instead of groups. The knowledge needs to be determined quantitatively and qualitatively before I can answer the research questions. According to Hesse-Biber (2010), a mixed-methods approach would assist the researcher in this goal. By combining the use of both quantitative and qualitative tools, it supports the breadth and depth of the study. According to Creswell (2015), either quantitative or qualitative data alone can provide a full understanding of the problem. By integrating the two approaches to collecting data, it developed a more complete understanding of the problem. The quantitative data provided a broad generalization, and the qualitative data provided a detailed view of individuals. According to Wisdom and Creswell (2013), I can apply mixed methods to compare findings from qualitative and quantitative data sources. I can collect both types of data at roughly the same time. The two types of data provide validation for each other.

According to Onghena, Maes, and Heyvaert (2019), a mixed-methods study can quantitatively and qualitatively assess the effectiveness of an intervention and thereby answer the research questions. It is preferred over group research when unique conditions are involved. The research questions are shaped to narrow the interest in a specific topic, and they would include a “how” and a “why” question. The strategy is to identify new elements within the theory. According to Yin (2014), the outcome from a single case example can challenge the existing theory. The intention is not to reject the theory but to reconstruct it.

I did not choose an experimental design for the following reasons: the participants are limited and it would be difficult to replicate the study. The event and the situation are limited to a single occurrence. Most of the research on test anxiety followed an experimental design. The data

obtained represented what the group felt, but it may not necessarily represent what some individuals felt. As a result, interventions were focused on how individual perceptions fit within established features and levels of test anxiety of the group. Any individual differences were lost in the total aggregate when calculating the mean. The small standard deviation reflected the group and not the individual. To capture individual differences and to gain an in-depth understanding of each participant, I decided on a mixed-methods study.

By just relying on quantitative tools, I may partially answer the research questions. For example, I would answer "how" expressive writing is effective in dealing with test anxiety; but there would not be enough information to answer the question "why" it is effective. If I included qualitative data along with the quantitative data, it would answer the research questions more completely. The quantitative data would answer "how" effective expressive writing would be in dealing with test anxiety, and the qualitative data would answer "why" it is effective. More specifically, it would attempt to answer the question, why did the intervention work for that individual? According to Schoonenboom and Johnson (2017), a mixed-methods provides a more complete answer to the research question. It is not just a pursuit of abstract knowledge. According to Wisdom and Creswell (2013), the quantitative instrument results are explained in more detail by the qualitative data. The quantitative instrument collection phase can be explored further by conducting a qualitative data collection phase.

3.2.2 Disadvantages of Mixed Methods Research

There are disadvantages associated with mixed-methods research. Driscoll, Appiah-Yeboah, Salib, and Rupert (2007) mentioned that there is a loss of depth and flexibility when quantitative data are derived from qualitative data. Qualitative data provides insights into a host of interrelated conceptual themes. Quantitative data are fixed and one-dimensional. According to Harper (2022), if applying different methods produce the same results, it strengthens the research; but it may produce different results. The results may be conflicting.

However, I may rely on data from conflicting results to answer the third research question. According to Wisdom and Creswell (2013), mixed methods research is useful in understanding contradictions between quantitative results and qualitative findings. Although there are studies such as Blank-Spadoni (2013) and Spielberger (2015) that examined whether or not expressive

writing works, they did not adequately answer "why" expressive writing was not effective. Those studies equated the success of expressive writing with the student's performance during a test. It is possible, however, to experience test anxiety during the preparation of the test, and the student may need to alleviate the anxiety during the preparation of the test and not just during the test.

Another disadvantage is that mixed-methods research are complex to plan. It requires interdisciplinary knowledge in both quantitative and qualitative research (Wisdom & Creswell, 2013). As mentioned in Section 1.2, I have a background in quantitative research. I have conducted case studies in experimental research and psychological research.

According to Zainal (2007), researchers were becoming concerned about the limit of quantitative methods in providing in-depth explanations of the problem in question. By including both quantitative and qualitative data, a researcher can go beyond quantitative statistical results. According to Nicholls (2009), expressive writing was primarily an experimental paradigm. It was the product rather than the process of writing that is usually measured. The product was frequently assessed in quantitative terms such as the number of words produced. It may not enable one to understand the potential benefits of expressive writing. By engaging in qualitative research along with quantitative research, the outcome deals with those drawbacks encountered by just engaging in quantitative research to test hypotheses and prior theories.

3.3 Data Collection Tools

The instruments that I adopted in this study to collect data are a Test Anxiety Inventory assessment, a Thought Record questionnaire, an expressive writing journal, and a semi-structured interview. I chose those tools because Ebneyamini and Moghadam (2018) suggested that the viewpoints of the participants should be brought out by using multiple sources of data. Yin (2014) suggested that multiple sources of data offer the opportunity for triangulation. According to Wisdom and Creswell (2013), I can compare the findings from qualitative and quantitative data sources. I can collect both types of data at roughly the same time. The two types of data provide validation for each other.

3.3.1 Test Anxiety Inventory

I asked each participant to complete the Test Anxiety Inventory (TAI) before implementing the Thought Record and expressive writing journal. The expressive writing may trigger emotions that may be considered contradictory to their police profession. Those emotions may border on clinical anxiety. According to Herzer, Wendt, and Hamm (2014), the TAI can be applied as an assessment for clinical anxiety if the score for the TAI was 80 or more. If any participants scored 80 or more, I would have advised them to seek counselling support. All my participants had scores below 80. (Refer to Appendix B for the questions of the TAI and for the ranking of each question.)

The main purpose of the TAI is to provide an assessment of the participant's present test anxiety of an upcoming test. It consists of 20 questions for the participant to rank on a Likert scale. There are four response options: 1 = Almost Never, 2 = Sometimes, 3 = Often, 4 = Almost Always.

3.3.2 The Thought Record Questionnaire

The Thought Record Questionnaire represents Lepore's (1997) emotion inhibition theory. In the present study, I adopted Lapore's (1997) model where he applied expressive writing just once for 25 minutes, and the decrease in test anxiety was found to last for a month. The Thought Record may direct the participants toward a more quantified and positivist view of reality. It was applied as a stimulus to empower individuals to question what it is exactly that they were anxious about. It gave them an opportunity to explore their thoughts and feelings around exam preparations by means of expressive writing.

The Thought Record Questionnaire relies on the emotional inhibition theory. It gives the initial level of emotional inhibition after the participants list the cause of their test anxiety. It also gives subsequent levels of emotional inhibition after expressive writing. It answers the research question on how effective expressive writing is in relieving test anxiety.

The Thought Record Questionnaire measures the intensity level of the participant's anxiety in Columns 1 and 2 before engaging in expressive writing. Column 1 identified what constitutes test anxiety for each individual in the form of a list of "adverse thoughts". Those "adverse thoughts" are the more inclusive causes of their test anxiety. As mentioned in Section 2.4.5,

"adverse thoughts" would include stress, anxiety related to stress, as well as the typical anxiety related to the test. The participants would try to itemize them in Column 1. The participant would rank those negative influences in Column 2 by defining their intensity numerically.

After expressive writing, the participant would re-rank the itemized causes of test anxiety in Column 3 if there was a reduction in their impact. The participant would continue to re-rank them over the next 4 days in columns 4, 5, 6, and 7. The Thought Record provided both quantitative and qualitative information of the different contributors' test anxiety and the extent how they are able to adapt to them before and after expressive writing. (Refer to Appendix A for a sample Thought Record.)

I had the participants apply expressive writing just once for 25 minutes. Due to time constraints, instead of tracking the participants' itemized thoughts of test anxiety for a month, I had each participant keep track of it for 5 days. The Thought Record can be regarded as a relationship between two factors: the relationship between the alleviation of test anxiety and how long it lasts. According to Cook and Campbell (1979), the Thought Record represented a pre/post-intervention design. It was not a true experimental design. It did not involve a control group. The drawback of a pre-test post-test design is history and regression to the means. The drawback due to history refers to the problem that there could be something else in the interim to cause the individual to lower their pre-intervention data. The drawback due to regression to the means refers to the problem that anxiety was lowered due to spontaneous remission (lowered on its own accord). To attend to the problem of history, I acquired the participants' post-interventional data immediately after their expressive writing intervention. I attended to the problem of regression to the means in the same way. The post-intervention data which I acquired immediately after the expressive writing intervention in column 3 sets the tone as to how the participants would re-rank them in the next four days. The post-intervention data in column 3 serve as a benchmark and points of reference to determine if they feel better or worse over the next few days.

Greenberger and Padesky's (2016) also used the Thought Record to itemize different types of mood disorders to measure their impact after applying cognitive behaviour therapy (CBT). The premise of CBT is that one's mood would change when the participant's thoughts change after examining each adverse thought on the Thought Record. The researchers refer to the causes of the participant's mood as adverse thoughts. The participant would list evidence that supports the

adverse thoughts and evidence that does not support them. Then the participant would write a "balanced thought" which is the outcome of those two lines of thoughts. The success of CBT depends on how much the participant believed in the alternative thought. While I did not intend to apply CBT, the Thought Record helped to record each participant's present mood and gave them the opportunity to self-reflect on their feelings.

Frattaroli et al. (2011) collected information on their participants before and during their entrance exam. The researchers concluded that there was an increase in test performance after engaging in expressive writing eight weeks before the exam. It also reduced depressive symptoms before the exam, but it did not reduce test anxiety before or during the exam. They mentioned that perhaps one of the reasons for their findings of a lack of a correlation between test anxiety and expressive writing was that their measurement for test anxiety was designed to measure trait anxiety. A trait anxiety is an enduring feature of how one feels most of the time. They admitted that they did not test whether state test anxiety was affected by expressive writing. A state anxiety is how one feels only some of the time. It is situational. It is triggered by a situation such as thoughts of an upcoming test.

3.3.3 The Expressive Writing Journal

The expressive writing journal represents Pennebaker and Evans' (2014) and Pennebaker and Smyth's (2016) problem-focus theory. It is designed to initiate a change in the level of emotional inhibition by engaging in expressive writing. It further alleviates the emotional inhibition by increasing one's knowledge about what caused the anxiety. The initial knowledge was introduced by the Thought Record in the form of itemized causes of test anxiety. It is also possible to gain knowledge on dealing with some of the causes of test anxiety.

An indication of the alleviation of emotional inhibition would be in the form of offsetting statements in the writing. An offsetting statement is an alternative thought. The components of an offsetting statement include the following: positive statements, attributional statements based on a change in perspective, and strategic statements. An alternative thought offsets the negative statements in the journal, and it allows the participants to deal with the negative thoughts on the Thought Record. There should be more offsetting sentences than negative sentences before experiencing the full benefit of expressive writing.

I handed out instructions on how the participants should write. (Refer to appendix C.) It was based on Lepore's (1997) instructions which he gave to the participants in his study. They wrote in their journals their thoughts about the exam and how they felt about them. He followed closely the protocol of Pennebaker and Beall (1986) who originated expressive writing.

I chose the following instructions proposed by Lepore (1997) on how to engage in expressive writing:

> "During today's writing session, I want you to let go and write about your very deepest thoughts and feelings about the exam. In your essay, you may want to write about your thoughts and feelings regarding the exam itself, the effect of the exam on your life in the present, the exam's implications for your future goals, or alternate plans you may have. The important thing is that you dig down into your deepest emotions and explore them in your writing."

I adopted the above instructions to attend to the inconsistency in verifying the claims of expressive writing. Many of the studies with null findings instructed participants to write about a specific traumatic event they were selected for rather than resorting to the standard instructions above. According to Smyth and Pennebaker (1999), it is more appropriate to allow the participants to write about events of their choice rather than restricting them to a specific event. Expressive writing was more beneficial sometimes when the participants wrote about topics other than their particular physical illness or psychological problem.

A practical difference between Lepore's (1997) model and Pennebaker's (1997) model was that Lepore (1997) applied the expressive writing exercise just once instead of abiding by the standard writing frequency of 3 or 4 sessions. The participants would write once for 25 minutes. According to Cheung and Pennebaker (2008), there was no justification for performing the drills according to a sequence of 20 minutes over 4 days. The original researchers, Pennebaker and Beall (1986), could only reserve the rooms for a week late in the afternoon. Due to time restrictions, the participants were asked to write for a brief duration, and it became the norm. Cheung and Pennebaker (2008) found that writing for 1 hour (with two 10-min breaks) for 1 day is just as effective as the original sequence. The benefits were still evident 9 months later.

The participants would be invited to hand to me their journals at the end of the intervention. They were given a chance to edit their writing by removing anything they consider personal and

send to me the edited copy by email. I would analyse the journals for common content. The participants also have the choice of not showing me their journals.

3.3.4 Interviews

The interview is designed to pick up other causes of test anxiety not indicated on the Thought Record or expressive writing journal. For example, the causes listed on the Thought Record are related to a test. There may be other causes of anxiety not related to a test. An interview is also designed to pick up other benefits derived from expressive writing not indicated on the expressive writing journal. It can also explain certain benefits or lack of benefit mentioned on the journal. According to Cohen, Manion, and Morrison (2011), the data from an interview separates the data derived from the application of an instrument.

The interview allowed for individual differences. It complemented the data collected from the other instruments: the Thought Record and the expressive writing journal. A report on how the participants felt about the itemized causes of test anxiety on the Thought Record cannot be observed. The interview also allows the participants to elaborate on the data they gave in the other data collection instruments. According to Merriam and Tisdell (2016), the qualitative interview allows them to describe some of the symptoms more in-depth, and it also allows for a discussion of those symptoms in relation to the past. Therefore, the interview yields a richer understanding of the subject.

According to Smith (2014), the data from quantitative analysis alone lacked the contextual element of a story. An interview would allow dialogue to complement the quantitative data. The emotional motivations during an interview differ from the rational answers provided (from the Thought Record for example). Rather than this being problematic, an interview would provide clues about a person's emotional defences and anxieties.

The interview I decided on was a person-to-person interview. It was a semi-structured interview. A semi-structured interview is a type of interview where I asked only a few predetermined questions. The rest of the questions were not planned in advance. DeJonckheere and Vaughn (2019) mentioned that in a mixed-methods approach, a semi-structured interview can be used during the qualitative phase to explain results from a quantitative phase that tested a hypothesis.

It is an effective method to explore the thoughts and feelings on a particular topic. Newcomer, Hatry and Wholey (2015) mentioned that in mixed-methods research, a semi-structured interview can add depth to other approaches.

The predetermined questions were based on the participants' entries on the Thought Record, their expressive writing journals, and the Test Anxiety Inventory (TAI). A semi-structured interview offered the participants the opportunity to discuss their thoughts after they completed the Thought Record, the expressive writing journals, and the TAI. The structured portions of the interview were as follows:

- Whether the participants agreed with the TAI assessment. It is important that they agreed with the assessment. The TAI only assessed their test anxiety. It does not pick up other types of anxiety such as trait anxiety which is a more serious form of anxiety.
- Whether they were relaxed during the preparation of the test and the actual test, and whether any adverse interfering thoughts during the preparation of the test or during the actual test.
- If the alleviation of their causes of test on the Thought Record did not last for five days, I would be inclined to ask why that is the case.
- If they mentioned other types of anxieties on their expressive writing journals, I would like to know when they occurred.

3.3.5 Section Summary

The Thought Record determines the causes of test anxiety by asking the participants to list them. They become externalized. According to Greenberger and Padesky (2016), the externalization of the participants' subjective experiences helps them gain knowledge about their anxiety. The Thought Record also identifies their initial level of test anxiety prior to an intervention. The intensity level of each participant prior to expressive writing is given quantitatively in column 1. It also identifies their subsequent levels of test anxiety after expressive writing. The change in intensity is given quantitatively in columns 2, 3, 4, and 5 as a change in the participants' mood. The expressive writing journal collects qualitative information from the participants by asking them how they feel about writing the test and how it affects them. It collects quantitative information by seeking the number of offsetting statements and negative statements. The

interview picks up other causes of test anxiety not listed on the Thought Record and other benefits or lack of benefit from expressive writing not mentioned on the expressive writing journal. According to Merriam and Tisdell (2016), the qualitative interview allows the participants to describe some of the symptoms more in-depth, and it also allows for a discussion of those symptoms in relation to the past. According to Wisdom and Creswell (2013), the qualitative data provides verification to the quantitative data and vice versa.

3.4 Data Collection Procedure

During the first meeting with each participant, I shared the research aims and instructions about the expressive writing task. (Refer to Appendix C.) I made it clear that I am not offering treatment, counselling, or making an assessment of their writing skills. I discussed with each participant about confidentiality and inform consent. I handed out an information sheet and allowed enough time for each participant to read it over before signing the consent form. (Refer to Appendix E.)

I scheduled the interview for 1 hour for each participant. I explained and handed out the expressive writing instruction. I had each participant discuss their relationship with the immediate family, the family of origin, and the community at large to allow me to complete a profile. It took about 10 minutes. Each participant completed the Test Anxiety Inventory which took about 5 minutes. Then I had the participant complete the Thought Record up to column two. It took about 10 minutes. I allotted each participant 25 minutes to complete the expressive writing task. I did not have to be present during the writing task. Afterwards, I asked them to complete column three on the Thought Record. Then I conduced a face-to-face interview based on what they wrote in the Thought Record and expressive writing journal. Together. It took about 20 minutes.

I invited the participants for a follow-up interview after one week. They would give to me an updated Thought Record. The interview would be based on the updated Thought Record and on how they felt during the preparation of the test. It would take about 15 to 20 minutes.

A summary of the steps in the data collection process is as follows:

Step 1: The participants completed the Test Anxiety Inventory assessment for test anxiety.

Step 2 The participants itemized the cause of their test anxiety in column 1 of the Thought Record.

Step 3: The participants ranked the intensity of each of their itemized causes of anxiety as a percentage in column 2. Column 2 represented the present baseline of their mood (or state).

Step 4: I would hand out the instructions for the expressive writing task. (Refer to Appendix C for the wording of the instructions.)

Step 5: The participants wrote once for 25 minutes about the upcoming test according to the instructions provided. They have the option of handing in their expressive writing journal, or they can edit it first before returning it to me later.

Step 6: The participants re-ranked the intensity of their itemized test anxiety in column 3 after they finished writing.

Step 7: An interview was conducted based on what they wrote in the Thought Record and expressive writing journal.

Step 8: The participants would continue to re-rank their mood for the next 4 days in columns 4, 5, 6, and 7 of the Thought Record.

Step 9: A follow-up interview was conducted after one week, and they would hand in their updated Thought Record.

3.5 Sample

I chose a convenience sampling and invited individuals who intended to take the entrance test for law enforcement officers in the single work cluster I had access to. According to Mertler and Charles (2011), a convenience sampling is the selection of participants that happened to be available. For example, teachers may select samples from their classrooms when performing research. Samples selected in that manner do not represent the population. According to Merriam and Tisdell (2016), a convenience sample can be selected due to time restrictions and availability of respondents. The purpose was not to make generalizations but to discover what occurred and to gain insight and understanding.

The inclusion criteria should be related to the research question (Patino & Ferreira, 2018). I selected only bailiffs. Besides test anxiety, the participants may be subjected to job related stress due to the nature of their profession. They tend to inherit some of the stress experienced by police officers and correctional officers. Bailiffs have the power of a policer officer in assigned jurisdictions, and they are also responsible for supervising inmates assigned to their care during a trial. Also, the bailiffs are more mature at this location. Younger bailiffs are usually assigned to a different district. Most of my participants are expected to be in the family stage of their life cycle. According to Gerson (1995), their stress is different from the other stages of the life cycle. They may also be subjected to family related stress involving children.

I excluded bailiffs outside the Toronto Police Service. They may be assigned to different tasks. Being in a different region, they may miss scheduled appointments. I excluded staff from other departments of the Toronto Police Service which are not part of the bailiff section. They are not exposed to the same working conditions. They also wrote a different test for employment. Bailiffs wrote a test for employment similar to the test administered to police constables. Writing and passing a test for the profession of a bailiff meant that my participants understood written English at a functional level. Although the entrance test for a bailiff was not as intense as the entrance test for a police officer, it still involved writing, maths, and analytical thinking. If a bailiff experiences difficulty preparing for the Toronto Police Entrance Test, it would rule out dyslexia or a lack of understanding of the English language. I expected to have some participants who failed previous attempts to write the Toronto Police Entrance Test. The failure rate of the exam was high.

There were 100 bailiffs employed at Superior Court. I was hoping for a 10% participation from that group. I would have preferred to have had more participants, but my timeline may not have fitted with the deadline for the Toronto Police test. A small sample would also allow for a more in-depth analysis of the rich data that will be collected through the different methods. As a sole researcher with limited resources, I chose a sample size that could address the research aim and allow me to manage the data collection and analysis process.

I placed a poster at a central location: Superior Court. Superior Court employs the most bailiffs in Toronto, and some of them intend to take the next step to become police officers. I intended to invite participants from this group for my study. Potential applicants for the exam are usually in

their 30s in this location. All the participants were meeting the minimum entry requirements and only two of them had a university degree. I planned to meet with them well before the test. It would give them time to reflect on their mood at present prior to the test. We would meet at a location of their choice. In the following sections, I am sharing more information about all 8 participants.

3.5.1 Participant A's Profile and Status

Profile

Participant A is a 37 year old heterosexual, married male of European heritage. His parents immigrated to Toronto, Canada in their 20s. He has an older brother and sister. His wife is of the same European heritage. They have one daughter. He is very active in the community. He coaches soccer.

Date of first scheduled meeting:

June 27, 2019

Type of interview: face to face

Date of second scheduled meeting:

July 27, 2019

Type of interview: telephone

Status:

Participant	Gender	Intend to register for the test?	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety:	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test?
A	M	Yes	1	36	2	No

3.5.2 Participant B's Profile and Status

Profile

Participant B is a 34 year old heterosexual, married male. His father was born in Toronto and his mother was born in Europe. She immigrated to Toronto, Canada in the 1950s to escape the war in her country at that time. Participant B is the only child in the family. Participant B is married and does not have any children. His wife's parents were born in Canada. Participant B is very active in the community. He coaches football and takes night courses. His hobbies are fishing and working out.

Date of first meeting:

May 16, 2019

Type of interview: face to face

Date of second meeting:

Declined to have a second meeting.

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
B	M	No	0	Declined to take the test	6	N/A

3.5.3 Participant C's Profile and Status

Profile

Participant C is a 33 year old, heterosexual, single male. His parents were born in Canada. He has an older brother and a younger sister. He received a bachelor's degree. He realized that there were a lot of applicants and that a university or college education would set him apart from the rest. His involvement in the community at large indicated that he was serious about working for the Royal Canadian Mounted Police (RCMP). An important feature in the hiring process of the RCMP that differentiated it from other law enforcement agencies is the length of time it takes before one is hired. Participant C told me that he was aware of the lengthy process. He had increased his law enforcement experience while he waited. He had worked for a correctional institution, the military police, and the parks police.

Date of first meeting:

May 28, 2019

Type of interview: face to face

Date of second meeting:

June 11, 2019

Type of interview: telephone

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
C	M	Yes	0	54	5	No

3.5.4 Participant D's Profile and Status

Profile

Participant D is a 35 year old gay female of European origin. She is in a civil partnership and has adopted a daughter. Participant D expressed her intention to apply for the written part of the police entrance test. It was her first time writing the test. She mentioned that she probably has high test anxiety. She explained that she had a history of procrastination when it comes to writing tests. Mathematics was her weakest subject.

Date of first meeting:

June 17, 2019

Type of interview: face to face

Date of second meeting:

July 1, 2019

Type of interview: telephone interview.

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
D	F	No	1	64	4	N/A

3.5.5 Participant E's Profile and Status

Profile:

Participant E is a 34 year old heterosexual, married female of Eastern Asian origin. Her father emigrated from Malaysia and her mother emigrated from Singapore. She was not born in Canada but moved here when she was an infant. She has 2 children. She expressed her intention to apply for the written part of the police entrance test. It was her first time writing the test. She mentioned she had high test anxiety.

Date of first meeting:

June 26, 2019

Type of interview: face to face

Date of second meeting:

July 12, 2019

Type of interview: telephone interview.

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
E	F	No	0	74	1	N/A

3.5.6 Participant F's Profile and Status

Profile

Participant F is a 37 year old heterosexual, married female of Canadian origin. Her mother and father were born in Canada. Her mother passed away. She has 4 children. Participant F used to be active in the community and played team sports; but at the moment, taking her children to all their activities occupied her free time. She loved the outdoors and spent time at the family cottage, fishing, swimming, and boating.

Participant F expressed her intention to apply for the written portion of the Toronto Police Entrance Test. It would be her first time writing the test. Participant F's Test Anxiety Inventory (TAI) score was 40 and was considered to have mild test anxiety.

Date of first meeting:

July 15, 2019

Type of interview: face to face

Date of second meeting:

July 29, 2019

Type of interview: telephone interview.

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
F	F	No	0	40	2	N/A

3.5.7 Participant G's Profile and Status

Profile

Participant G is a 35 year old heterosexual, single male, born in Toronto, Canada. His parents emigrated from Guyana. His parents are separated, and he lives with his disabled father. Participant G participates in volunteer work with the local police. He teaches boxing to youths who are "at risk". The youths are "at risk" in the sense that they are from low income families where one of their parents committed a crime or one or more of their siblings committed a crime. They resided in an area where there is a high crime rate.

Date of first meeting:

July 17, 2019

Type of interview: face to face

Date of second meeting:

July 30, 2019

Type of interview: telephone interview.

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
G	M	Yes	3	33	1	No

3.5.8 Participant H's Profile and Status

Profile

Participant H is a 31 year old heterosexual, married male of Asian descent. His nationality is Tibetan, and he immigrated with his parents to Toronto in 2002 from Nepal. He has three older siblings. Participant H has one son. He received a bachelor's degree in Social Justice. He passed the written test and was preparing for the next phase of the hiring process: the interview. The stages of the application for the Toronto Police Service are as follows: physical test, written test, interview, scenario test, mental assessment, background interview. He mentioned that he had attempted the written test three times before but failed.

Date of first meeting:

July 23, 2019

Type of interview: face to face

Date of second meeting:

Aug 6, 2019

Type of interview: telephone interview.

Status

Participant	Gender	Intend to register for the test	Number of previous attempts taking the test:	TAI Score	Number of items on the Thought Record attributed to test anxiety	Reoccurrence of adverse thoughts on the Thought Record during the preparation or test
H	M	Yes	3	44	6	No

3.6 Research Quality

Triangulation countered the concern that there was a reliance just on a single method. It ensures trustworthiness in qualitative research (Patton, 2015). The study did not just depend on one data collection method. Instead, it triangulates multiple methods and multiple sources of data. The data from the Thought Record triangulated with the rich data from the expressive writing journal and from the interview.

A study's creditability hinges on seeking data that supported alternative explanations (Patton, 2015). I was also looking for alternative explanations to answer the research questions. Compared to collecting data to find out why there were favourable responses to expressive writing, I spend just as much time collecting data to find out why there were unfavourable responses.

To improve internal validity, I had to ensure that the proper assessment tool was selected for a pre-test post-test design. I selected the Thought Record because it measured the participants' present mood rather than their expected mood in the future. I wanted to assess how they specifically feel at the moment during the preparation of the test instead of how they generally feel in the future during the writing of a test. According to Greenberger and Padesky (2016), the Thought Record applied a more temporal lens to evaluate an individual's state or present mood.

A trait assessment tool was not specific enough for a pre-test post-test design. It does not reflect each participant's present mood. In a trait assessment tool such as the Trait Anxiety Inventory (TAI), the participants were forced to select from a list of predetermined questions to describe their present mood. It may restrict them from describing how they actually felt. Also, the ranking scale was spaced too far apart. After expressive writing, the participants may experience a small change in mood, and it may not be picked up by a trait assessment tool. Although their moods may only change slightly, expressive writing may still lower their test anxiety. According to Reiss (1997), the itemized content of a trait scale should be narrowly focused on anxiety symptoms, yet the items were broadly focused on symptoms of anxiety, fear, depression, shyness, and lack of self-confidence. Frattaroli et al. (2011) recognized that the above arguments represented a possible drawback in their study on test anxiety. Applying a trait assessment may not pick up on individual differences. It may not capture one's state or mood at a specific point in time. Instead, it assessed one's trait anxiety on a test in the future.

3.7 Ethical Considerations

The study gained approval from the Toronto Police Service's Chief of Police and the ethics committee. (Refer to Appendix I.) All the participants who volunteered for my study had to be approved by the Manager of Human Resources to verify that they are employed by the Toronto Police Service. The study also gained the approval from University of Liverpool's ethics committee. (Refer to Appendix J.)

I mentioned to the participants that their identities would remain anonymous. I reminded them that they had the right to withdraw from the study at any time without the need to give a reason. The data that they supplied would be returned to them. It was not recorded in the literature that expressive writing could cause a participant to become more worried. Test anxiety was not severe enough to be considered clinical. It was not listed on the DSMV (The *Diagnostic and Statistical Manual of Mental Disorders* defines and classifies mental disorders). I assessed the participants for clinical anxiety before engaging in expressive writing by having them complete a trait anxiety assessment: the test anxiety inventory (TAI).

The originator of expressive writing applied it to thousands of people, and he found that there was no negative effect if expressive writing does not work (Pennebaker & Evans, 2014). However, I cannot underestimate the emotional impact that writing a personal piece may have on the specific participants. I still made a contingency plan. If it became obvious from the Thought Record or their expressive writing pieces that the intervention caused additional stress, they would be invited to withdraw. There were also counsellors available at the institution if a participant becomes upset during the intervention. I informed the participants of the availability of this support at the start of the intervention.

All participants were informed on the poster that I was not offering treatment, counselling, or making an assessment. I was not a clinician. My role was a researcher. Prior to the intervention, I reminded my participants that they had the right to withdraw if the writing made them uncomfortable, and I also reminded them of the focus of the study and the importance of exam revision. They were informed that the study does not claim that expressive writing on its own can guarantee success in passing the test. I was not in a supervisory or teaching role in relation to the participants and my relationship with them did not have a direct impact on their work or

study. I provided information on confidentiality and acquire informed consent according to my interview protocol. (Refer to Appendix D).

I did not plan to set up a control group because my study was not based on an experimental design. Furthermore, there can be ethical concerns with establishing a control group. If I did not supply the control group with the means to adapt to test anxiety and if some participants became anxious and failed the test, they may attribute their failure to the study.

3.8 Chapter Summary

The research on the application of expressive writing in dealing with test anxiety mainly followed an experimental design. They were explanatory in nature with the intention of providing verification to a proposed hypothesis. The present study is exploratory and explanatory in nature with the intention of answering the research questions.

I abided by Lepore's (1997) model for guidance. He applied expressive writing just once for 25 minutes. He found that the benefit would last for a month prior to the writing of a test. I intended to explore the extent of such a claim. The Thought Record allowed the participants to itemize the cause of test anxiety and report the anxiety level of each item. The quantitative data from the Thought Record is based on Lepore's (1997) cognitive inhibition theory. The expressive writing journal allowed the participants to express what they were anxious about. The quantitative data derived from it was based on Pennebaker and Evans' (2014) and Pennebaker and Smyth's (2016) problem-focus theory. In the next chapter, the analysis of the data will reveal how the qualitative data from the interview transcripts complemented the quantitative data collected from the Thought Records and expressive writing journals.

Chapter 4: Data Analysis

4.1 Introduction

To analyse the data, I apply content analysis. There are several types of content analysis. I adopt the conceptual analysis of Busch et al. (2005). Conceptual analysis seeks to establish the frequency of concepts represented by words or phrases. It is different from thematic analysis. According to Braun and Clarke (2006), thematic analysis seeks for relationships among the different concepts identified. It is not interested in how often each of those concepts is repeated. I follow Braun and Clarke's approach but adopt the term "content analysis" as discussed in Section 3.2.

The following are the steps on how I analyse the data by means of content analysis:

1. To apply content analysis, I initially decide on the level of analysis. I first analyse the qualitative data from the expressive writing journals and from the interviews for explicit concepts. According to Busch et al. (2005), the concepts can be implicit or explicit. Explicit terms are easy to identify. Implicit terms have different levels of interpretation. Bengtsson (2016) explains the difference as a choice between manifest analysis or a latent analysis. In a manifest analysis, the information is referred very closely to the text. In contrast, the information from latent analysis seeks for the underlying meaning of the text. Graneheima, Lindgrena, and Lundman (2017), further define closeness to the text to mean more concrete descriptions and interpretations while the underlying meaning of the text refers to more abstract descriptions and interpretations.

2. I code the phrases, sentence, or groups of sentences according to the first impression I got. According to Braun & Clarke (2006), a code is a brief description of something interesting that someone said. I abide with Braun and Clarke's (2006) suggestion on what to keep and what to discard. The key thoughts and concepts should have some relevance to the research questions. Although Braun and Clarke (2006) apply thematic analysis which is comparable to what Bengtsson (2016) refers to as latent analysis, Humble and Mozelius (2022) mention that content and thematic analysis involves a similar process for coding the data.

3. I rely on the frequency of a concept as opposed to seeking for its existence. According to Busch et al. (2022), if I code for frequency, then I would count for the number of times that concept appears. If I code for existence, then that concept would be counted only once regardless of the number of times it appears. I gave the frequency of the concept more importance.

The concepts in this study reside within certain individuals. Some concepts identify their capability. For example, some participants were able to gain clarification, some were able to modify their goals, and some were able to alleviate their anxiety for an extended period. Some concepts also identify certain attributes. For example, some participants have low test anxiety, some have high test anxiety from an early onset, and some have high test anxiety from a late onset.

The number of times a code takes place corresponds to the number of participants adopting that concept. For example, the number of times the concept "gain clarification" is identified corresponds to the number of participants who were able to gain clarification: Participants B, E, and F. The number of times the concept "with low test anxiety" is identified corresponds to the number of participants having low test anxiety: Participants A, G, and H. The number of participants having those features is more important than the features themselves. It may help identify causative factors behind the problem of test anxiety for my group of participants.

4. When I search the expressive writing journals and the interviews for explicit concepts, I first analyse the data inductively. According to Graneheima, Lindgrena and Lundman (2017), an inductive analysis generates information without referring to a preconceived theory. It creates categories from the data instead of approaching the data with pre-defined categories.

5. Next, I identify the codes that have a common concept, and I arrange them into categories. The description of the codes defines the categories. The following are the explicit categories I came up with by applying inductive analysis: categories 1 to 8 and category 13.

6. I read over the expressive writing journals again for explicit concepts, but I analyse the data deductively. According to Graneheima, Lindgrena and Lundman (2017), deductive analysis approaches the data with a pre-defined theory. The intention is to extend the theory or prior research. I apply the theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) which states that the eventual goal of expressive writing is for the participant to produce more

offsetting statements than negative statements before the participant can benefit the most from expressive writing. I resort to that theory to define the category.

7. I identify the common codes in the expressive writing journals that have a common concept, and I slotted them into the prearranged categories. The description of the categories defines the codes. For example, category 11 has the heading: Participants with More Offsetting Statements. I then slotted all the participants into that category that fits the description. The following are the explicit categories I came up with by applying deductive analysis: categories 11 and 12.

8. I examine the expressive writing journals again to quantify the codes in the categories. I deductively quantify the number of offsetting statements and the number of negative statements of each participant. This is different from steps 6 and 7 where I identify the participants having those qualitative features. Instead, I compile the total offsetting statements and negative statement numerically for each individual in Appendix G. According to Vaismoradi, Turunen, and Bondas (2013), by applying content analysis, it is possible to analyse the data qualitatively and at the same time quantify the data. Hsieh and Shannon (2005) call this approach summative content analysis. The selected words are quantified to better understand the contextual use of the words.

9. I also examine the quantitative data from the Thought Records to quantify some of the codes. I analyse the data deductively. I quantify the intensity of test anxiety in relation to the number of days for each participant. I have found common codes in terms of participants who were able to alleviate their test anxiety and maintain the alleviation for five days. Those participants are categorized in Category 9. I have also found common codes in terms of participants who were not able to alleviate their test anxiety and maintain the alleviation for five days. Those participations are categorized in Category 10.

10. I then apply an abductive approach. According to Graneheima, Lindgrena, and Lundman (2017), an abductive approach allows for a more complete understanding and implies a movement back and forth between inductive and deductive approaches. I compare the categories I analyse deductively (Categories 9, 10, 11, and 12) to the categories I analyse inductively (Categories 1, 2, 3, 4, 5, 6, 7, 8, and 13). My findings are given in Section 4.3 Chapter Summary.

4.2 Emerging Categories

4.2.1 Category 1: Participants with Low Test Anxiety

There were several participants with low test anxiety. I found that it was necessary that they confirmed that they had low test anxiety. Some participants did not agree with the ranking of their test anxiety assessment.

The participants with low anxiety were Participants A, G, and H. Participant A's Test Anxiety Inventory (TAI) score was 36. It was classified as low-test anxiety. Participant G's TAI score was 33. He was considered to have no test anxiety, but it bordered on having low test anxiety. He mentioned that he may be a bit nervous during the test, but it would dissipate as he got more involved in the test. Participant H's TAI score was 45. It was classified as low-test anxiety. He agreed that he may have low test anxiety during a test and during the preparation for a test.

Participant A

During my interview with Participant A, he agreed that he had low test anxiety. The following segment was extracted from the interview transcript:

Did you ever experience test anxiety during the writing of a test?

No. I wrote the test before in the past and I failed. I do not think that it was due to test anxiety.

Your TAI score is 36. It is considered mild.

That is about right. I may feel a little tension; but once I start writing, I should be fine.

Participant G

During my interview with Participant G, he agreed that he may have a bit of test anxiety. He mentioned that he may be a bit nervous during a test. The following segment was extracted from the interview:

Interviewer: When you filled out the Thought Record, you mentioned that you did not have any test anxiety.

Participant G: I may feel a bit nervous during the test but that's it.

Interviewer: Is this the first time you wrote the TPS test.

Participant G: I wrote it 3 times before. I failed each time.

Interviewer: Did you think it was due to test anxiety?

Participant G: I don't think so. I was very confident.

Interviewer: Do you have any interfering thoughts such as thoughts of failure during the test?

Participant G: No.

Interviewer: What about before the test?

Participant G: Not that I am aware of.

Participant H

During my interview with Participant H, he agreed that he did not have test anxiety. The following segment was extracted from the interview:

Interviewer: I understand that you passed the written test and are not at the interview stage?

Participant H: Yes. Because I passed, I feel more confident.

Interviewer: Are you more anxious about a written test or an interview?

Participant H: I would say written test.

Interviewer: Was the interview for your present job (as a bailiff) less tense compared to the written test?

Participant H: Absolutely.

Interviewer: What about preparing for the interview, do you think that is more stressful than the actual interview? Or is it the other way around? Or are they equally stressful?

Participant H: I think the actual interview is more stressful. Preparing for it is not so stressful.

Interviewer: Your assessment for test anxiety ranks you as having low test anxiety. You agree with that?

Participant H: In reference to the interview, I think that is accurate.

4.2.2 Category 2: Participants with High Test Anxiety from an Early Onset

There were two participants with high test anxiety from an early onset. The participants exhibiting this scenario were Participants D and E. They were different from the other two participants with high test anxiety from a later onset. The following excerpts illustrate those observations.

Participant D

Participant D mentioned that she had high test anxiety from an early age. She made reference to it during the interview:

Interviewer: How long did you have the problem?

Participant D: Ever since grade school. My father had the same problem. If I have a test on Monday, I would worry about it all weekend instead of studying for it. I would not open my book until the last minute. I remember the fights I got into with my mom.

She also made reference to it in her expressive writing journal:

I haven't passed a math test since the 5th time I took grade 10 math. Even after the 5th time, I finished with a 50% and I think that was just because the teacher did me a favour. I think there's a word in the dictionary to describe someone who can't be taught. I used to know it. Yes, yes, I've had tutors. I felt sorry for them. I remember how dense I was.

Participant E

Participant E also mentioned that she had high test anxiety from an early age. She made reference to it during the interview:

Interviewer: The assessment test indicates your test anxiety is high.

Participant E: I had high test anxiety since the early grade. I had difficulty grasping certain concepts. It took a long time before I could understand them. I was also not good at math. I think that is why I had difficulty preparing for the Toronto Police Test.

Interviewer: Do you have other types of anxieties?

Participant E: When I was 14, I was responsible for taking care of my grandmother. I did that for years until she moved to a nursing home. My psychologist told me that the incident may

contribute to my present condition of being anxious in general because I was forced to give up a lot of things.

According to Huberty (2010), children who are test anxious tends to have high levels of general anxiety. Some children have a biological predisposition to high levels of general anxiety. If they continue to be anxious during a test, they may become more vulnerable to general anxiety. According to Beidel and Turner (1988), if test anxiety started at an early age, it may be related to general anxiety which is a more serious form of anxiety.

4.2.3 Category 3: Participants with High Test Anxiety from a Late Onset

There were two participants with high test anxiety from a late onset. The participants exhibiting this scenario were Participants C and F. They were different from the other two participants with high test anxiety from an early onset. The following excerpts illustrate those observations.

Participant C

Although the TAI classified Participant C's test anxiety as moderate, he did not agree with the assessment. He felt that he had high test anxiety. He mentioned that he had high test anxiety from a later age. He made reference to it during the interview:

Interviewer: Do you feel a bit anxious before a test?

Participant C: Yes, I do. I would say that my emotion is currently higher than average as I typically over dwelling on certain things. The compulsive thoughts of failing, releasing from the military police only for a job I don't have yet, and potential being unemployed are certainly suppressed by behaviours/actions like running 10 kilometres 3 times a week to suppress the compulsive thoughts.

Interviewer: In the past, do you think your emotion is higher during the actual test or weeks before the test or interview?

Participant C: I would say that I am fine during the test. It is high leading up to the test and interview though.

Interviewer: Is it higher preparing for a test or preparing for an interview?

Participant C: I would say preparing for an interview.

Interviewer: But in either case, it is higher during the preparation.

Participant C: Yes.

Interviewer: Your TAI score was 54. It assesses you to have moderate test anxiety. But you feel your anxiety is higher?

Participant: Yes. The questions were about the test that's weeks away. It is different from how I feel now.

Interviewer: The Thought Record is about how you feel now. I wonder if there is something there that makes you feel this way. You ranked "apprehension" the highest. What boost your apprehension?

Participant C: Maybe all that other stuff I listed like fear and anxiety.

Interviewer: Anything else?

Participant C: Maybe it's my OCD,

Interviewer: Have you ever been treated or diagnosed for OCD?

Participant C: Yes, I think that is part of the reason why I changed my major to psychology in university.

Interviewer: How long did you have it?

Participant C: Since my first year at university.

Participant F

Although the TAI classified Participant F's test anxiety as moderate, she did not agree with the assessment. She felt that she had high test anxiety. She mentioned that she had high test anxiety from a later age. She made reference to it during the interview:

Interviewer: But according to the assessment, your test anxiety is ranked as being mild.

Participant F: I don't know about that. I always had the thought that I may end up panicking in the middle of a test.

Interviewer: Did you experience that before in a test?

Participant F: No, not in a test. It occurred sometime when I'm driving. My heart would be racing, and I would be short of breath.

Interviewer: Is that the only time it occurs?

Participant F: I also have this issue about getting to work on time. I would worry about road closures. If I had to take a detour, I would worry about getting lost. If I was taking the subway, I would worry about subway cancellations.

Interviewer: When did you first experienced the panic?

Participant F: It seems to occur after my husband committed suicide. I was left with 4 kids. It was stressful.

4.2.4 Category 4: Participants with Other Types of Anxieties in Addition to Test Anxiety

Participant C, D, E, F were assessed in the past with other types of anxieties. Participant C had obsessive compulsive behaviour (OCD). Participant D had avoidance anxiety and low self-esteem. Participant E had general anxiety. Participant F had panic disorder. According to the DSM-V, the manual that lists the different types of behavioural disorders, those forms of anxieties are classified as trait anxieties which are a more enduring form of anxieties compared to test anxiety. Test anxiety is a state anxiety. It is a situational anxiety that occurs only during a specific situation in the future such as a pending test (American Psychiatric Association, 2015). According to Huberty (2010), they still have a disposition towards their trait anxiety which in turn can aggravate their test anxieties. The situational anxiety from a test can trigger the recurrence of their trait anxiety. The overall anxiety would be amplified.

Participant C

Participant C talked about his OCD in the following passage of the first interview:

Interviewer: Your TAI score was 54. It assesses you to have moderate test anxiety. But you feel your anxiety is higher?

Participant: Yes. The questions were about the test that's weeks away. It is different from how I feel now.

Interviewer: The Thought Record is about how you feel now. I wonder if there is something there that makes you feel this way. You ranked "apprehension" the highest. What boost your apprehension?

Participant C: Maybe all that other stuff I listed like fear and anxiety.

Interviewer: Anything else?

Participant C: Maybe it's my OCD.

Interviewer: Have you ever been treated or diagnosed for OCD?

Participant C: Yes, I think that is part of the reason I took psychology in university.

Interviewer: How long did you have it?

Participant C: Since my first year at university.

Participant D

Participant D talked about her avoidance anxiety and low self-esteem in the following passage of the first interview:

Interviewer: I see in your journal you wrote about fear and avoidance. Where did you learn about the term "avoidance"?

Participant D: I read about it online. It described me perfectly. I would not open the book to study until the last minute.

Interviewer: Have you seen anyone for help?

Participant D: I saw a psychologist for anxiety and lack of self-esteem.

Interviewer: How long did you have the problem?

Participant D: Ever since grade school. My father had the same problem. If I have a test on Monday, I would worry about it all weekend instead of studying for it. I would not open my book until the last minute…

Participant D also talked about her avoidance anxiety in the following passage from the first entry in her expressive writing journal:

I haven't passed a math test since the 5th time I took grade 10 math. Even after the 5th time, I finished with a 50% and I think that was just because the teacher did me a favour. I think there's a word in the dictionary to describe someone who can't be taught. I used to know it. Yes, yes, I've had tutors. I felt sorry for them. I remember how dense I was.

Participant D also talked about her avoidance anxiety in the following passage from the first entry in her expressive writing journal:

I've never been particularly good at testing. Avoid and procrastinate no matter what's at stake. I hate that about myself.

Participant D also mentioned about her avoidance anxiety in the follow passage from the second entry in her expressive writing journal:

Avoidance is kicking in. (I feel) less motivated. I feel better about staying in my current position at work even though I know I'll regret it. I feel like I am running out of time to book the exam and study to get into shape for it. I am taking comfort in my current role.

Participant E

Participant E talked about her general anxiety in the following passage from the interview:

Interviewer: Do you have other types of anxieties?

Participant E: When I was 14, I was responsible for taking care of my grandmother. I did that for years until she moved to a nursing home. My psychologist told me that the incident may contributed to my present condition of being anxious in general because I was forced to give up a lot of things.

Participant F

Participant F talked about her panic disorder in the following passage from the interview:

Interviewer: When did you first experienced the panic?

Participant F: It seems to occur after my husband committed suicide. I was left with 4 kids. It was stressful.

Interviewer: Did anyone help you during that period?

Participant F: Yes, my parents, friends, and neighbour. It was my neighbour who help me get this job. He mentioned that there was an opening at the Toronto Police. I did not think I qualified, but I applied anyway. It was around that time that I met my high school friend. He later became my husband.

Participant F also talked about her panic anxiety in the following passage from her expressive writing journal:

The days leading up to the test day my uncertainty and general level of anxiety grow. The night before the test, I will barely sleep. My fears consume me. I worry that I will sleep through my alarm, I will be late for the test time, I will get lost and not be able to find the location. The morning of the actual test, once I have showered and I am getting into my car, my stress/anxiety level has decreased a little because the fear of sleeping through my alarm has already been conquered. While driving in, and noticing that I will have plenty of time to get there, my fears again subside. Once I am at the location and seated awaiting the test, my heart races and I have a nervous tummy feeling.

4.2.5 Category 5: Participants Experiencing Stress in Addition to any Test Anxiety

Participants B and G were subjected to other types of stress in addition to test anxiety. Participant B incurred a fair amount of stress due to a recent critical incident. Participant G experienced family and relationship stress.

Participant B

I was not aware that Participant B experienced a critical incident. It affected the police constable test that he planned to write. He was not supposed to talk about the incident. Therefore, he was careful about what he wrote in his expressive writing journal and what he said during the interview. He did not write or talk about the incident but around the incident. The following excerpt from the interview indicates the stress he was subjected to.

Interviewer: I'm sorry, I do not understand. Then why did you volunteer to take part in expressive writing?

Participant B: I am being investigated for something by the SIU (Special Investigations Unit). I felt so stressful. I did not know what else to do.

Interviewer: I see. Nothing serious I hope.

Participant B: It is still in the investigation stage. I could not talk about it or write about it—although that was what I actually wanted to do.

Interviewer: I see. So you wrote around it instead. You dwell on how you felt.
Participant B: Yes.

Interviewer: And you think that the investigation is going to affect your application for police constable, so you decide to withdraw?

Participant B: That is correct. It is on my record.

Interviewer: You just said earlier that if you got on, it would prove that you are right. What did you mean by that?

Participant B: I thought that it would prove that I am the type of person that is fit to be a police officer—not someone they described me to be.

Interviewer: Let's go back to the item "uncertainty" on the Thought Record. What were you uncertain about?

Participant B: I think I was referring to the outcome of the investigation.

Participant G

Participant G talked about some areas of stress that he may be experiencing in the following excerpt from the first interview:

Interviewer: How is your relation with your family and friends?

Participant G: My parents are divorced. My father is living with me. I am taking care of him. He has a disability, and he has not worked in years. I feel like I am at the turning point of my life. I plan to move. I was living at my present location with my father for a long time. I still want him to live with me after moving to the new apartment. There are other people in my life that prefers he becomes more independent.

Interviewer: Your girlfriend?

Participant G: Yeah, but I do not want to become totally independent. I am still very close to my parents. I see and talk to my mom all the time. I still want to maintain a balance between my family and my own freedom. But my partner may not see things my way.

Interviewer: I see that you have a lot of other things to take care of besides your test.

Participant G: Yeah, life is like that.

4.2.6 Category 6: Participants Experiencing Previous Failures

From my interview with Participants A, D, G, and H, they mentioned that they failed the Toronto Police Entrance Test before. Participants A and D failed it once before. Participants G and H failed it 3 times in the past.

Participant A

Participant A talked about his previous failure in the following excerpt from the first interview:

Interviewer: Did you ever experience test anxiety during the writing of a test?

Participant A: No. I wrote the test before in the past and I failed. I do not think that it was due to test anxiety.

Participant D

Participant D talked about her previous failure in the following excerpt from the first entry in her expressive writing journal:

I've failed this damn money grab that is the ATS (the agency that conducts the Toronto Police Testing) once before a few years ago. I thought I had given myself a fair shot at passing it. I haven't passed a math test since the 5th time I took grade 10 math. Even after the 5th time, I finished with a 50% and I think that was just because the teacher did me a favour.

Participant G

Participant G talked about his previous failures in the following excerpt from the first interview:

Participant G: I may feel a bit nervous during the test but that's it.

Interviewer: You wrote the TPS test before?

Participant G: I wrote it 3 times before. I failed each time.

Participant H

Participant H talked about his previous failures in the following excerpt from the first interview:

Interviewer: You mentioned in your journal that you previously attempted to write the Toronto Police Test.

Participant H: I failed 3 times before. I did not seek support until after the third failure.

Me: Why did you wait until the third time?

Participant H: By then, I realized that I was not getting it. Rather than keep slugging away at it, I decided to seek tutoring.

Participant H talked about his previous failures in the following excerpt from the first entry in her expressive writing journal:

This is my fourth time doing my ATS test and was unsuccessful on my other attempts. What is different now and the other tests is that I invested in tutoring classes for both the PATI and WCT.

4.2.7 Category 7: Participants Who Were Able to Gain Clarification

Some participants admitted during the interview that they had illogical or erroneous thoughts. They were Participants B, E, and F. They were able to recognize them after expressive writing. Some of them were able to modify their goal (of writing the test). The following are examples of the illogical thought of Participant B and the erroneous thoughts of Participants E and F.

Participant B

Participant B mentioned that he was being investigated by the Toronto Police's Special Investigation Unit for complaints made against him by a member of the public. Regardless of the outcome, it would have an impact on Participant B's intention to write the Toronto Police Entrance Test; but initially, he still wanted to apply to prove to his superiors that he was worthy if he got accepted. Participant B talked about realizing his illogical thought in the following excerpt from the first interview.

Interviewer: The intensity of all the items on the Thought Record remained the same after expressive writing except for one: “uncertainty”.

Participant B: It is not just in relation to test anxiety. It is also about something else besides that, but it affects the test as well.

Then I later asked Participant B:

Interviewer: What about the other items on the Thought Record? Are they related to something else or are they just in reference to the test?

Participant B: They are just about the test. But I may not write the Toronto Police test. Maybe that is why they remained the same.

Interviewer: What changed your mind?

Participant B: I was going to write it, but then I realized that I want to write it for the wrong reason. I thought that if I got on, it would prove that I was right.

Then I later asked Participant B:

Interviewer: You just said earlier that if you got on, it would prove that you are right. What did you mean by that?

Participant B: I thought that it would prove that I am the type of person that is fit to be a police officer—not someone they described me to be.

The following excerpt from the interview indicated that the expressive writing helped him to think clearer and to express how much he despised his present position even if he could not write about the specifics. The alleviation of stress was beneficial to help him realize that he should apply for a different position—not necessarily in policing. He thought of making a lateral move instead of applying for the position of police constable.

Interviewer: When did you decide not to write the test?

Participant B: Probably when I realized that I was applying for the wrong reason. It would be difficult to convince the interviewer as to what really happened.

Interviewer: And when did you realize that?

Participant B: A few days after I met with you.

Interviewer: Do you think the expressive writing helped you think clearer?

Participant B: It seems that way.

Interviewer: You plan to apply for anything?

Participant B: I would probably make a lateral move.

Interviewer: You mean work at a division (precinct)?

Participant B: Yes, just to get away from here. I would rather associate with police officers. They are more professional. They do not micromanage. They would leave me alone and let me perform my work.

Interviewer: How do you feel now?

Participant B: A bit better.

Participant E

Participant E also gave reasons why she changed her mind about writing the test from the following interview excerpt. She had erroneous thoughts which she did not previously examine during the last attempt to write the test. She also withdrew from writing the previous test at the last minute. The following excerpt from the interview is an example of her erroneous thoughts and what she intended to do about it in the interim.

Participant E: Yes. I do not think I am going to write the test.

Interviewer: Why?

Participant E: I realized that just like the last time, I was following the decision of my other peers who were applying, and they asked me to apply. I realized that it was a prestige thing. It was not the correct reason to apply.

Interviewer: You also did not apply the last time?

Participant E: No, I didn't.

Interviewer: Was it due to the reason you just mentioned?

Participant E: I just realized that now. Probably before I realized it subconsciously. But I would still like to follow through just to show that I can do it if I put in the effort—despite my size, race, and being a female.

Interviewer: I understand.

Participant E: I also realized that it was mainly a male profession. I asked myself if I could handle it. I can picture my partner saying that he is not here to babysit me. He cannot perform his job and look after me at the same time.

Interviewer: Are those the main reasons why you changed your mind.

Participant E: There is also the problem associated with death. I was single back then. Now I have two children. My first child became sick when she was a year old. It lasted for a month and a half. She deteriorated a lot. She was close to death.

Interviewer: It's good that you thought things over. What do you plan to do now?

Participant E: I just deal with it one day at a time.

Participant F

Participant F also gave reasons why she changed her mind about writing the test from the following interview excerpt. She had erroneous thoughts which she did not previously examine. She had a fear of writing the test because she thought she would panic during the test as illustrated in the following excerpt.

Interviewer: But according to the assessment, your test anxiety is ranked as being mild.

Participant F: I don't know about that. I always had the thought that I may end up panicking in the middle of a test.

Interviewer: Did you experience that before in a test?

Participant F: No, not in a test. It occurred sometime when I'm driving. My heart would be racing, and I would be short of breath.

Interviewer: Is that the only time it occurs?

Participant F: I also have this issue about getting to work on time. I would worry about road closures. If I had to take a detour, I would worry about getting lost. If I was taking the subway, I would worry about subway cancellations.

She realized the erroneous thought in the following interview excerpt.

Interviewer: In the Thought Record, one of the items of test anxiety was “uncertainty”. It made up a large part of the cause of your anxiety. Was it in reference to the possibility that you may have a panic attack while writing the test?

Participant F: That made up a good part of it.

Interviewer: Do you still feel that way now?

Participant F: As I wrote more in my journal, I found that my fears are not about the test but about everything around the test—getting there on time, knowing how to get there, etc.

Interviewer: So it may not be as bad as you think.

Participant F: It looks that way.

4.2.8 Category 8 Participants Who Were Able to Modify Their Goals

The following participants came up with strategies to modify their goal of writing the test: Participants B and F. According to category 7, they were able to recognize illogical or erroneous thoughts after expressive writing. Armed with that knowledge, they decided to modify their goal.

The following is an excerpt from the interview of how Participant B planned to do modify his goal in the interim.

Interviewer: Do you think the expressive writing helped you think clearer?

Participant B: It seems that way.

Interviewer: You plan to apply for anything?

Participant B: I would probably make a lateral move.

Interviewer: You mean work at a division (precinct)?

Participant B: Yes, just to get away from here. I would rather associate with police officers. They are more professional. They do not micromanage. They would leave me alone and let me perform my work.

The following is an excerpt from the interview of how Participant F planned to modify her goal in the interim.

Participant F: Maybe I would consider a role that offers more flexibility?

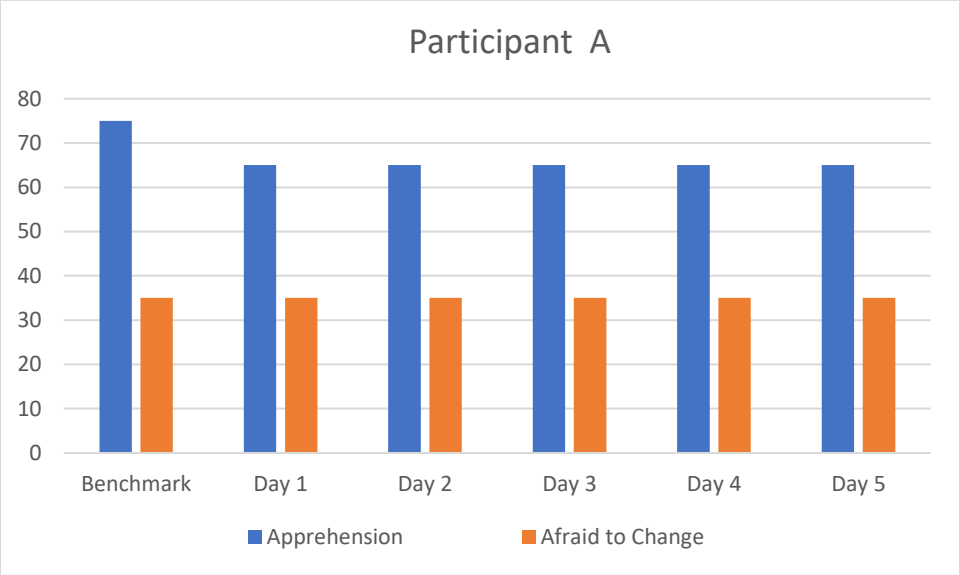
Interviewer: Within the Toronto Police Service?

Participant F: Yes.

Interviewer: It's something to consider.

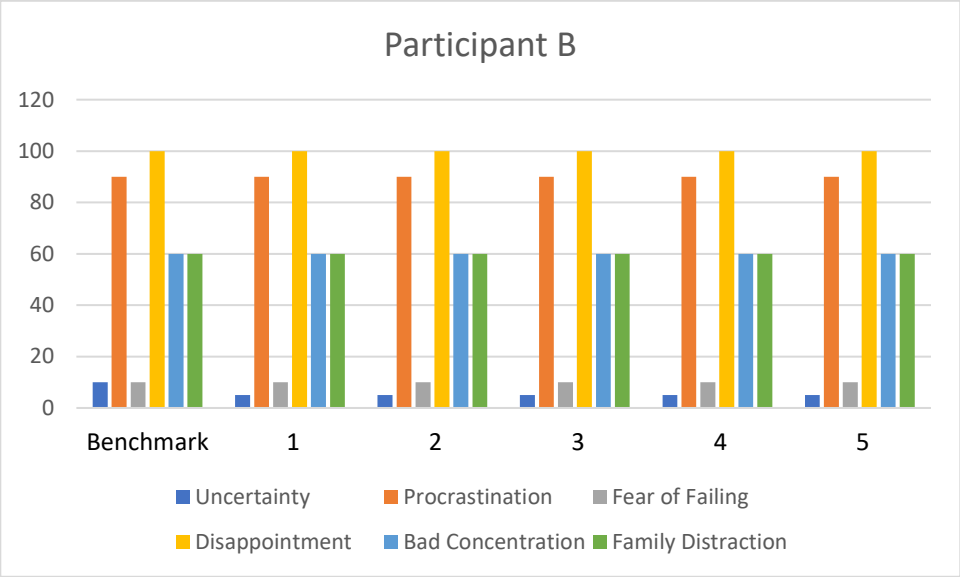
4.2.9 Category 9: Alleviation in Test Anxiety that Lasted for Five Days

The Thought Records indicated that the following participants were able to maintain the alleviation in their itemized test anxieties for five days after expressive writing: Participants A, B, C, F, G, and H.



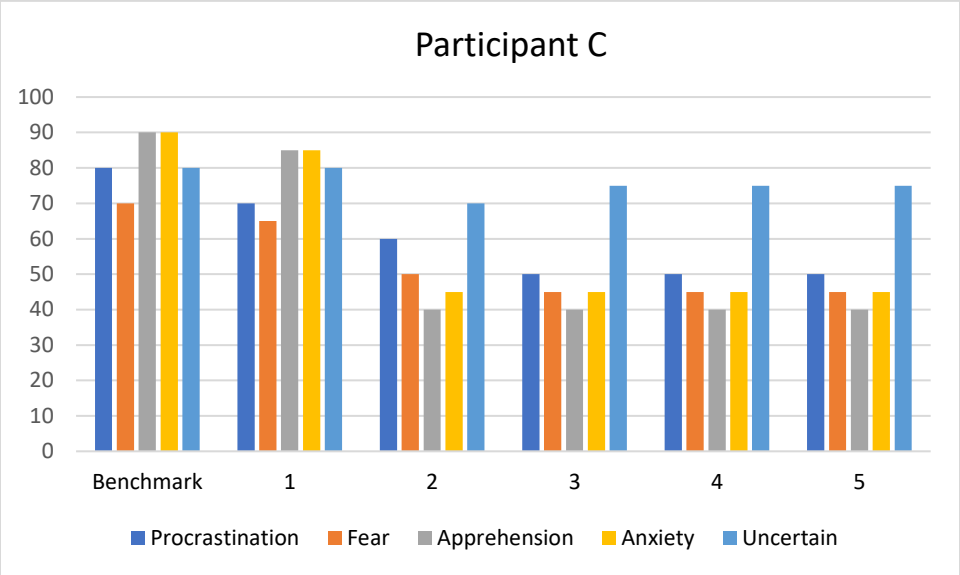
The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant A. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. The chart of Participant A displayed a negative relationship in one item: apprehension; a decrease in this itemized test anxiety level resulted in his ability to retain the alleviation in test anxiety for 5 days.

Participant A was able to lower his itemized test anxiety of "apprehension" on Day 1 from 75% to 65% after expressive writing. He was able to maintain the alleviation up to Day 5. The itemized anxiety "afraid to change" remained at 35%. Refer to Appendix F for the Thought Record of Participant A for more information.



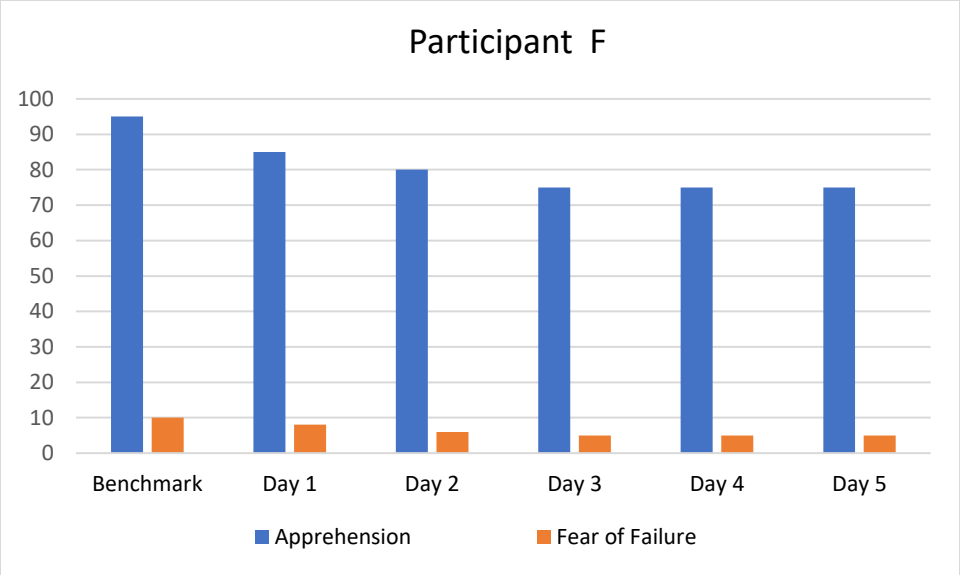
The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant B. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. The chart of Participant B displayed a negative relationship in one item: uncertainty; a decrease in this itemized test anxiety level resulted in his ability to retain the alleviation in test anxiety for 5 days.

Participant B was able to lower his itemized test anxiety of "uncertainty" in Day 1 from 10% to 5% after expressive writing. He was able to maintain the alleviation up to Day 5. The other itemized causes remained unchanged. Refer to Appendix F for the Thought Record of Participant A for more information.



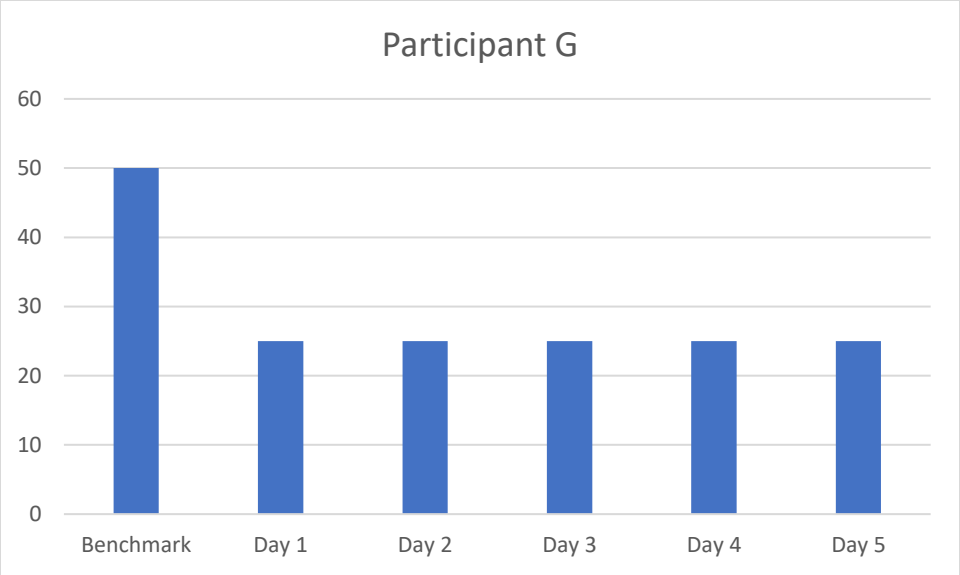
The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant C. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. The chart of Participant C displayed a negative relationship; a decrease in all of his itemized test anxiety levels resulted in an increase in his ability to retain the alleviation in test anxiety for 5 days.

After expressive writing during Day 1, the intensity of his itemized test anxieties "procrastination" was lowered from 80% to 70%, "fear" was lowered from 70% to 65%, "apprehension" was lowered from 90% to 85%, and "anxiety" was lowered from 90% to 85%. On Day 2, "procrastination" was further lowered to 60%, "fear" was further lowered to 50%, apprehension" was further lowered to 40%, "anxiety" was further lowered to 45%, and "uncertainty" was lowered to 70%. By Day 3, "procrastination" was further lowered to 50% and "fear" was further lowered to 45%. He was able to maintain the lowered anxiety level up to Day 5. Refer to Appendix F for the Thought Record of Participant C for more information.



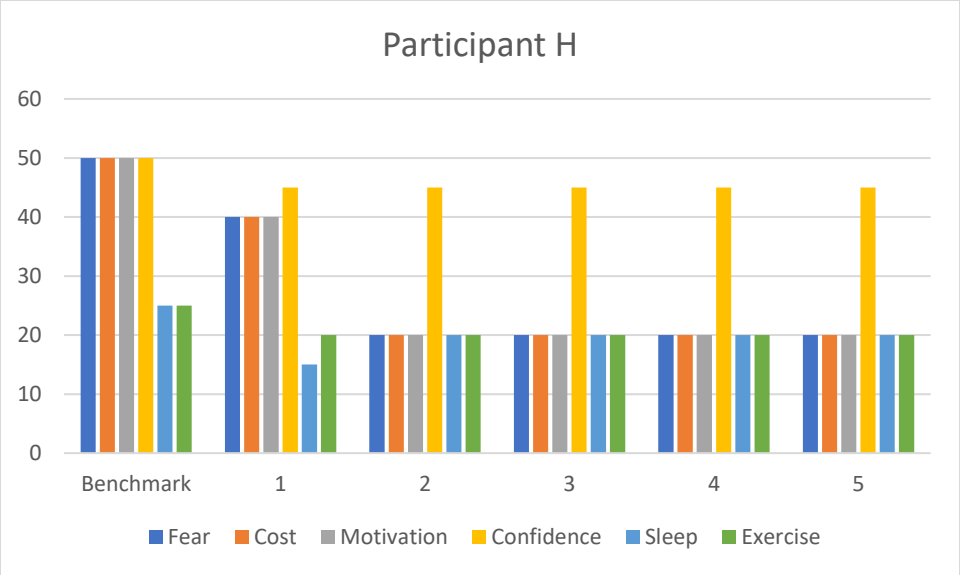
The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant F. The data was derived from her Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. The chart of Participant F displayed a negative relationship; a decrease in all of her itemized test anxiety levels resulted in an increase in her ability to retain the alleviation in test anxiety for 5 days.

After expressive writing during Day 1, the intensity of her itemized test anxieties "apprehension" was lowered from 95% to 85% and "fear of failure" was lowered from 10% to 8%. On Day 2, "apprehension" was further lowered to 80% and "fear of failure" was further lowered to 6%. By Day 3, "apprehension" was further lowered to 75% and "fear of failure" was further lowered to 5%. She was able to maintain the lowered anxiety level up to Day 5. Refer to Appendix F for the Thought Record of Participant F for more information.



The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant G. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. The chart of Participant G displayed a negative relationship; a decrease in his anxiety level due to "uncertainty" resulted in an increase in his ability to retain the alleviation in anxiety for 5 days.

Participant G was able to lower his itemized anxiety of "uncertainty" on Day 1 from 50% to 25% after expressive writing. He was able to maintain the alleviation up to Day 5. Refer to Appendix F for the Thought Record of Participant G for more information.

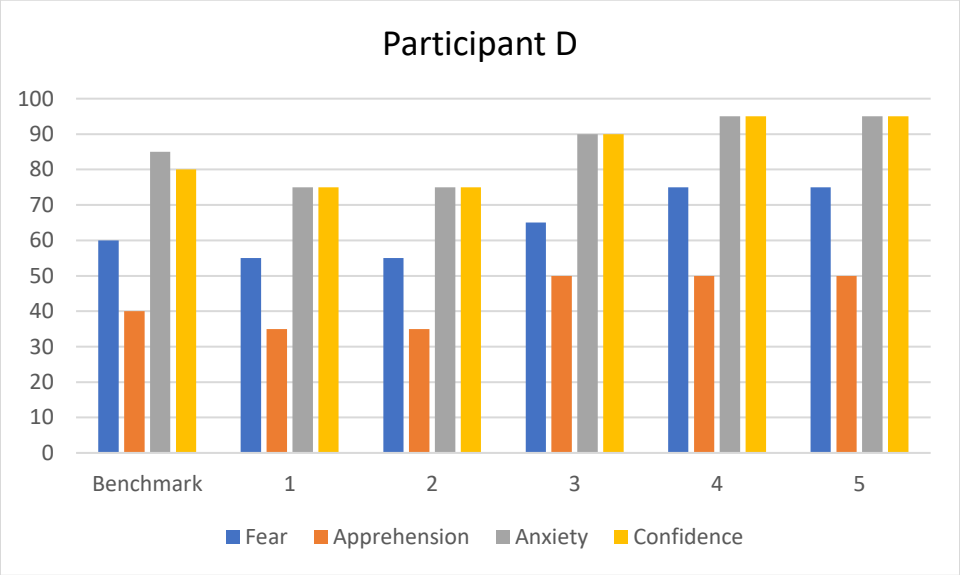


The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant H. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. The chart of Participant H displayed a negative relationship; a decrease in most of his itemized test anxiety levels resulted in an increase in his ability to retain the alleviation in test anxiety for 5 days.

After expressive writing during Day 1, the intensity of his itemized test anxieties “fear”, “cost”, and “lack of motivation” were lowered to 40%. “Confidence” was lowered to 45%. “Lack of sleep” was lowered to 15%. Lack of exercise” was lowered to 20%. By Day 2, the intensity of his mood in reference to “fear” was further lowered to 20%, “cost” was further lowered to 20%, and “lack of motivation” was further lowered to 20%. Lack of sleep went up a bit to 20%, but it was still lower than its benchmark value. He was able to maintain the lowered anxiety level up to Day 5. Refer to Appendix F for the Thought Record of Participant H for more information.

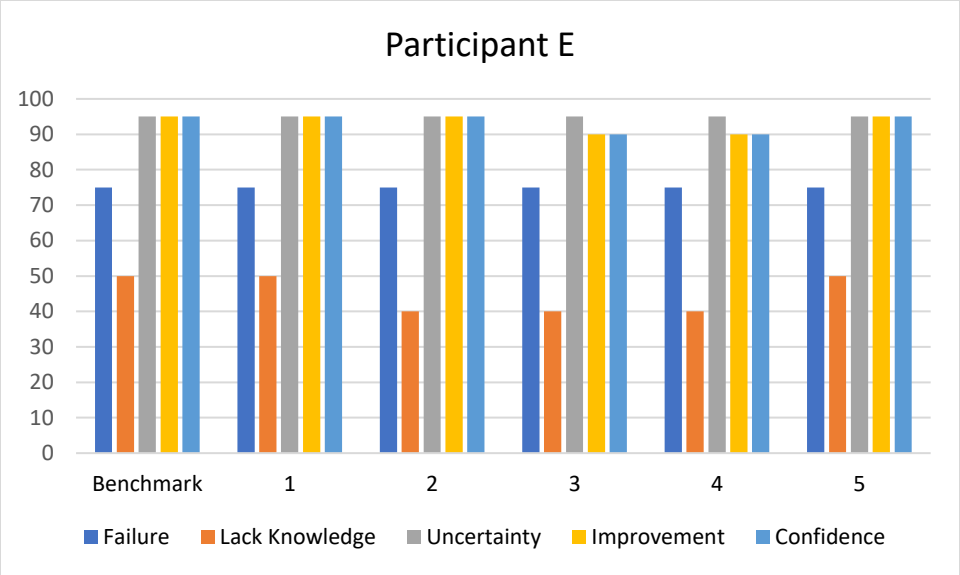
4.2.10 Category 10: Alleviation in Test Anxiety that Did Not Last for Five Days

The Thought Records indicate that the following participants were not able to maintain the alleviation of their itemized test anxieties for five days after expressive writing: Participant D and Participant E.



The relationship between the alleviation of test anxiety and the duration of the alleviation is shown in the above bar chart for Participant D. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. Participant D displayed a negative relationship; an increase in all of her itemized test anxiety levels on Day 3 resulted in a decrease in her ability to retain the alleviation in anxiety. She was not able to retain the alleviation until 5 days.

After expressive writing during Day 1, there was a reduction in the itemized cause of her test. She maintained the reduction on Day 2. But she had a relapse on Days 3, 4, and 5. There was a spike in all her itemized test anxieties. She immediately lost her ability to retain her alleviation in anxiety in any of her itemized test anxieties. The intensity levels of her test anxiety by Day 5 were higher than the levels prior to expressive writing.

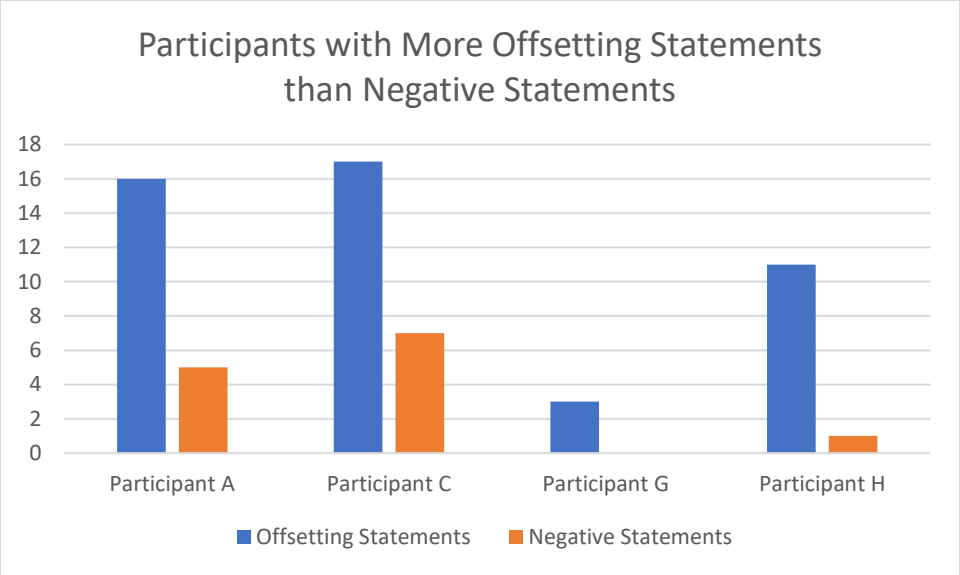


The relationship between the alleviation of test anxiety and the duration of the alleviation is give in the above bar chart for Participant E. The data was derived from his Thought Record. The Y axis represents the intensity level of each itemized cause of anxiety, and the X axis represents the duration. Participant E displayed a negative relationship; an increase in 3 out of 5 of her itemized anxiety levels on Day 5 resulted in a decrease in her ability to retain the alleviation in anxiety. She was not able to retain the alleviation.

After expressive writing during day 1, the participant had to wait until Day 2 before there was a reduction in one item of test anxiety: “lack of knowledge”. There was a reduction in another 2 items of test anxiety by Day 3: “the need to improve” and “lack of confidence”. The reduction in the intensity of those 3 items was maintained on Day 4. But on Day 5, those items relapsed back to the same intensity level as in the benchmark column prior to expressive writing. She immediately lost her ability to retain her alleviation of anxiety.

4.2.11 Category 11: Participants with More Offsetting Statements

After expressive writing, there were participants with more offsetting statements compared to negative statements in their expressive writing journals. The participants exhibiting this scenario were Participants A, C, G, and H.



The above bar chart was based on the coding from the expressive writing journal for Participants A, C, G, and H. It indicates that they had more offsetting statements than negative statements in their expressive writing journals. Offsetting statements are not just positive statements. They are composed of: positive statements, positive attribution, realizing where one needs to improve, realizing one's strength, and strategy statements.

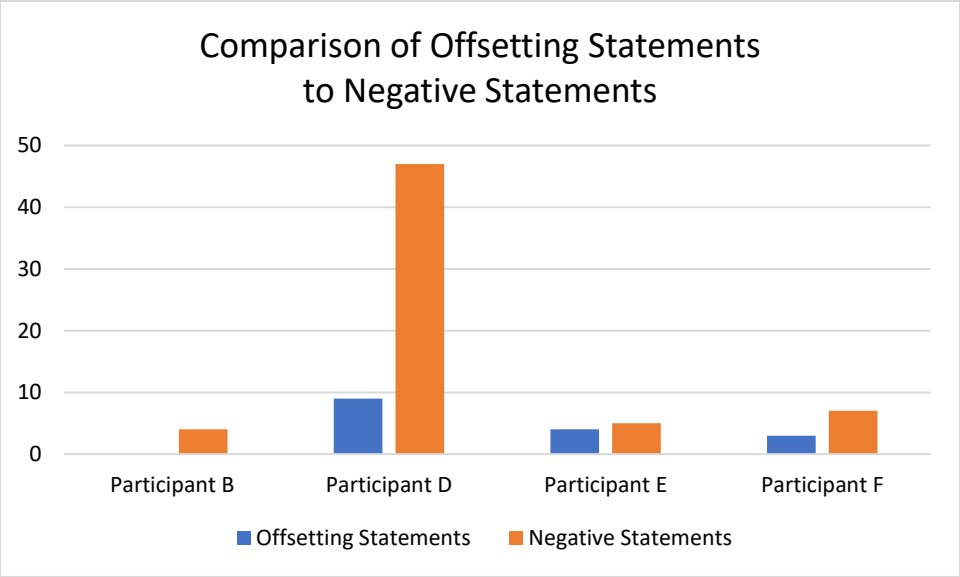
Participant A wrote 16 offsetting statements and 5 negative statements. His offsetting statements consisted of the following: 5 positive statements, 8 positive attribution statements, 2 statements realizing where one needs to improve, and 1 statement realizing one's strength.

Participant C wrote He wrote 17 offsetting statements and 7 negative statements. His offsetting statements consisted of the following: 9 positive statements, 5 strategy statements, and 3 positive attributions.

Participant G wrote 3 offsetting statements and 0 negative statements. His offsetting statements consisted of 3 positive statements. Participant H wrote 11 offsetting statements and 1 negative statement. His offsetting statements consisted of 6 positive statements, 2 statements realizing where one needs to improve, 2 statements realizing one's strength, and 1 strategic statement.

4.2.12 Category 12: Participants with More Negative Statements

After expressive writing, there were participants with more negative statements compared to positive statements in their expressive writing journals. The participants exhibiting this scenario were Participants B, D, E, and F.



The above bar chart was based on the coding from the expressive writing journal for Participants B, D, E, and F. It indicates that they had more negative statements than offsetting statements in their expressive writing journals. Offsetting statements are not just positive statements. They are composed of: positive statements, positive attribution, realizing where one needs to improve, realizing one's strength, and strategy statements.

Participant B wrote no offsetting statements and 4 negative statements. Participant D wrote 9 offsetting statements and 47 negative statements. Her offsetting statements consisted of the following: 9 positive statements, 5 strategy statements, and 3 positive attributions.

4.2.13 Category 13: Participants Who Were Relaxed and Had No Ruminating Thoughts

From my interview with Participants A, C, G, and H who wrote the test, they mentioned that they felt relaxed during the preparation of the test and during the test. They also mentioned that they did not have thoughts on any of the itemized causes of test anxiety which they disclosed on the Thought Record during the preparation of the test or during the test. The following excerpts illustrate those observations.

Participant A

Participant A made reference to how he felt during the preparation of the test and during the test when he answered my predetermined questions during the interview.

Interviewer: Were you relaxed when you were writing the test?

Participant A: I was relaxed. And confident.

Interviewer: The same with the preparation for the test? You were relaxed?

Participant A: Yeah.

Interviewer: Did the adverse thoughts you mentioned on the Thought Record interfere during the test or during the preparation for the test?

Participant A: No. They did not bother me.

Participant C

Participant C made reference to how he felt during the preparation of the test and during the test when he answered my predetermined questions during the interview.

Interviewer: That helped you to relax during the days leading up to the interview?

Participant C: Yes, but I was still a bit anxious the day before the interview.

Interviewer: Did the adverse thoughts you listed interfere with your preparation for the interview?

Participant C: No, none of them emerge.

Interviewer: What about during the interview?

Participant C: I was still a bit nervous. Even the polygrapher could tell I was nervous. He told me to relax and that everything was fine.

Participant G

Participant G made reference to how he felt during the preparation of the test and during the test when he answered my predetermined questions during the interview.

Interviewer: Do you find expressive writing helpful?

Participant G: I thought of giving up. It motivated me to try again. It helped me to continue seek an answer instead of giving up."

Interviewer: Were you relaxed during the interview?

Participant G: Yes.

Interviewer: Did the adverse thought "uncertainty" interfere during the preparation for the interview?

Participant G: No, not at all.

Participant H

Participant H made reference to how he felt during the preparation of the test and during the test when he answered my predetermined questions during the interview.

Participant H: I got some good news. I passed the interview.

Interviewer: That is exceptional good news. Congrats. And thanks for updating the Thought Record. I see that your anxiety level was consistent. Were you relaxed during the preparation of the test?

Participant H: Yes, I thought that my anxiety level may go up in the days before the test, but it did not.

Interviewer: And you were relaxed during the interview?

Participant H: Yes. As the interview progressed, I became more relaxed.

Interviewer: Did the adverse thoughts you listed on the Thought Record interfere during the preparation.

Participant H: No, I did not think about them.

Interviewer: What about during the interview?

Participant H: No, none of them appeared.

4.2.14 Section Summary

The following categories were presented as quantitative data: Category 1, Category 9, Category 10, Category 11, and Category 12. Those categories were derived from the following sources: Category 1 was based on the Test Anxiety scores. Category 9 and Category 10 were based on the numerical data from the Thought Records. Category 11 and Category 12 were based on the numerical data from the expressive writing journals. Those numerical data were compiled for each participant as Total Offsetting Statements and Negative Statements. (Refer to Appendix G.)

The following categories were presented as qualitative data: Category 2, Category 3, Category 4, Category 5, Category 6, Category 7, Category 8, and Category 13. Those categories were derived from the following sources: Category 2, Category 4, and Category 6, were based on the text from the interview transcripts and expressive writing journals. Category 3, Category 5, Category 7, Category 8, Category 13, were based on the text from the interview transcripts.

The categories based on the qualitative data seem to explain the categories based on the quantitative data. According to Wisdom and Creswell (2013), the quantitative instrument results are explained in more detail by the qualitative data.

4.3 Chapter Summary

After I compared the categories I analysed deductively (Categories 9, 10, 11, and 12) to the categories I analysed inductively (Categories 1, 2, 3, 4, 5, 6, 7, 8, and 13), I found that the common concepts making up Category 9 and Category 11 which I analysed deductively can explain *how* some participants benefitted from expressive writing and *how* some participants dealt with the causes of their test anxiety. The common concepts making up Category 10 and Category 12 which I analysed deductively can explain *how* some participants failed to benefit

from expressive writing and *how* some participants failed to deal with the causes of their test anxiety.

I also found that the common concepts making up Categories 1, 3, and 13 which I analysed inductively can explain *why* some participants benefitted from expressive writing. The common concepts making up Categories 1, 3, 7, 8, and 13 which I analysed inductively can explain *why* some participants can address the causes of their test anxiety. The common concepts making up Categories 2 and 4 which I analysed inductively can explain *why* some participants failed to address the causes of their test anxiety.

The participants would only engage in the expressive writing task once. If they are receptive to expressive writing, their test anxiety would be lowered as indicated in Category 9. I found that it can be indicated on the Thought Record in the following manner: It can be lowered on the first day after expressive writing, and the participants would maintain it for the next four days (as indicated by Participants A, B, and G); or it can be lowered on the first day and in subsequent days for the next four days (as indicated by Participants C, F, and H).

In the exploratory stage according to Creswell and Clarke (2018), the qualitative data collection and analysis are connected to the quantitative measurements from the intervention and is tested by the quantitative data collection. In the explanatory stage, the quantitative data collection and analysis phase is explained by the qualitative data collection and analysis phase.

I wrote up the above findings in Chapter 5. The categories that I analysed deductively were able to adequately answer the question *how* in reference to the research questions. The categories that I analysed inductively were able to adequately answer the question *why* in reference to the research questions.

Chapter 5: Conclusions from the Findings

5.1 Introduction

The discussion in this chapter is organized around the research questions of this study. In the context of the participants managing their potential test anxiety, the overall aim of the current research is to explore the extent a participant would benefit from engaging in expressive writing while preparing for an exam. The main indicators I rely on for the success of expressive writing were derived from the alleviation of inhibition theory of Lepore (1997) (as indicated in Category 9) and from the problem-focus theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) (as indicated in Category 11).

The study focused on the following research questions:

1. How effective was expressive writing during the preparation for a written test after applying it to alleviate the participants' test anxiety?
2. What are the causes of test anxiety during the preparation for a written test that expressive writing can address and why?
3. What are the causes of test anxiety during the preparation for a written test that expressive writing cannot address and why?

I refer to the analysis of the quantitative data and qualitative data in chapter 4 to answer the above research questions. I then compared those answers to the literature.

5.2 Reflection on the First Research Question: The Effectiveness of Expressive Writing in Alleviating the Participants' Test Anxiety

The question of the effectiveness of expressive writing in addressing the problem of test anxiety would only apply to participants who registered and showed up for the test. The group is made up of participants A, C, G, and H. Reference to other participants outside this group would not apply because they did not write the test. The causes of anxiety of those who did not intend to write the test were due to other types of stressors in addition to test anxiety.

To further determine the effectiveness of expressive writing, it was applied to participants with different degrees of anxiety. In the group that wrote the test, according to Category 1, participants A, G, and H had mild test anxiety; and according to Category 3, participant C had high test anxiety. I will examine the effectiveness of expressive writing on those participants.

Effectiveness of Expressive Writing on Participants A, G, and H with Low Test Anxiety

According to Category 1, participants with low test anxiety were Participants A, G, and H. They registered and wrote the test. The effectiveness of expressive writing can be regarded in terms of the extent expressive writing can reduce test anxiety. The following are some possible quantitative factors to explain *how* expressive writing managed to reduce Participants A, G, and H's test anxiety:

- According to Category 9, they were able to retain the alleviation of their itemized test anxiety for an extended period after expressive writing.
- According to Category 11, they wrote more offsetting statements than negative statements in their expressive writing journals.

The quantitative data from Category 9 represents Lepore's (1997) alleviation of emotional inhibition model where it was possible to engage in expressive writing just once for 25 minutes, and the benefit derived would last for an extended period. The causes of their test anxiety were reduced to the extent that they were able to maintain the alleviation for five days. The quantitative data from Category 11 represents Pennebaker and Evans' (2014) and Pennebaker and Smyth's (2016) problem-focus model where a positive attitude, a change in perspective, and persistence to seek a coping strategy during the preparation of a test contribute to a decrease in adverse thoughts. Although they were not instructed to implement the problem-focus theory, Participants A, G, and H wrote more offsetting statements than negative statements in their expressive writing journals. Their offsetting statements offset their negative statements.

The following are some possible quantitative factors to explain *why* expressive writing managed to reduce their test anxiety:

- According to Category 1, they only had low test anxiety.

- According to Category 13, they felt relaxed during the preparation of the test and during the test. They did not have thoughts on any of the itemized causes of test anxiety during the preparation of the test or during the test.

In reference to Category 1, it conformed with Tompkins (2013) who suggested that individuals with low test anxiety can be motivational. He mentioned that some feelings of anxiety can motivate the student to prepare for an impending test in the future. Students with low and moderate levels of test anxiety can plan which course to study first, think about what questions may be on the test, or call friends. Agbaria and Bdier (2019) also had a similar view that medium-level anxiety is beneficial in maintaining the proper performance of successful candidates.

In reference to Category 13, the participants did not experience any of the behavioural symptoms listed in the literature. They did not experience the behavioural symptom of avoidance described by Piering (2018) and Fresco et al. (2002). Piering (2018) mentioned that because of the fear and the physiological symptoms that surround exams, those with test anxiety frequently postpone their test dates, avoid thinking or talking about their upcoming exams, and try to escape studying. Fresco et al. (2002) mentioned that worrying can lead to avoidance. By avoiding the problem causing the worry, the fear of the cause does not dissipate.

They also did not experience the cognitive symptoms described by Tobias (1985), Eysenck and Calvo (1992), and Cassady (2009). Tobias (1985) mentioned that if students were anxious when studying, the information is not encoded efficiently. That makes it difficult to retrieve during a stressful testing situation. Eysenck and Calvo (1992) mentioned that anxiety during the preparation of a test can affect learning and memory. Students with high test anxiety would expend a greater effort to learn. They would find that there is a limited capacity to store and process information. According to Cassady (2009), worry is the major component of test anxiety. It is more directly related to performance deficit than emotionality.

The participants did not feel any of the following common physical symptoms of test anxiety described by Bateson et al. (2011): increased heart rate, stress hormone secretion and perspiration, restlessness, vigilance, and fear of a potentially dangerous environment. They also did not feel any of the following physical symptoms described by Cassady (2009): galvanic skin

response, elevated heart rate, dizziness, nausea, feeling of panic, and disruption to sleep; or described by Deffenbacher (1978): tension, stomach discomfort, and nausea.

It does not imply that expressive writing was not necessary if one has low test anxiety. According to Pennebaker and Evans (2014), the participants still need to solicit more positive emotions in their expressive writing. People with more positive emotions benefit more. People who see the positive sides of negative experiences cope better. According to Coffey and Warren (2020), there is a positive relationship between having a positive disposition and self-esteem. The relationship is not linear over time, but a positive effect is associated with building better coping, greater school engagement, seeking social support, and future aspirations; those are the links that mediates higher self-esteem in the future. According to Bayani (2016), self-esteem plays an important role in allowing one to seek social support when experiencing test anxiety. According to Higbee and Dwinell (1996), academic anxiety is often related to a lack of confidence in one's ability. Students may fail because of their low self-esteem, not their abilities.

In some instances, it may be misleading to rely strictly on an assessment test. There were some participants assessed by the Trait Anxiety Inventory (TAI) as having moderate test anxiety, but according to Category 4, they felt they had high test anxiety. They were participants C, D, and F. Participant D mentioned that she had "very high" test anxiety during the preparation of the test. She pointed out, "I wrote so many tests that I know the outcome. I know I would fail. It does not cause me to worry anymore. I may not have any anxiety during the test."

Effectiveness of Expressive Writing on Participant C with High Test Anxiety

According to Category 3, Participant C had high test anxiety. He intended to proceed with the test. He was at the interview stage of the test. The effectiveness of expressive writing can be regarded in terms of the extent expressive writing can reduce his test anxiety. The following are some possible quantitative factors to explain *how* expressive writing managed to reduce his test anxiety:

- He was able to retain the alleviation of his itemized test anxiety for an extended period after expressive writing.
- He wrote more offsetting statements than negative statements in his expressive writing journals. He wrote 9 positive statements, 3 positive attributional statements, and 5 strategy statements.

Participant C benefitted from expressive writing to the same extent as the participants with low test anxiety. He was able to retain the alleviation of his itemized test anxiety for an extended period after expressive writing. Although he was not instructed to implement the problem-focus theory, he wrote more offsetting statements than negative statements in his expressive writing journal. He was the only participant, other than Participant H, who decided to include strategic statements in his offsetting sentences to overcome certain physical symptoms. He wrote 5 strategy statements. Participant H only wrote 1. Participant H had low test anxiety. Participant C had high test anxiety.

It seems that the participants with low test anxiety did not need to plan any strategies. According to Pfeiffer (2001), the positive stress from low test anxiety can help students achieve peak performance. Tompkins (2013) pointed out that when the worry becomes too much and too long, it interrupts the ability to plan. According to Zhang and Henderson (2019), developing coping skills enables a decrease in anxiety over time. Participant C needed to continue to come up with specific strategies. He was concerned about the level of his physical symptoms. In the following excerpt from the interview, he mentioned the following physical and behavioural symptoms:

Interviewer: What are some of the physical symptoms in relation to test anxiety?

Participant C: I used to sweat a lot. Sometimes hand shaking.

Interviewer: But you do not feel that way during a test?

Participant C: No. It was always during the period leading up to it.

Interviewer: You said you said that you run a lot to supress some unwanted thoughts. Was it to suppress those symptoms as well?

Participant C: Yes, I used to run 10 kilometres 3 times a week just to control them.

Interviewer: You mentioned other items responsible for your test anxiety: procrastination, and apprehension. How do they affect your preparation?

Participant C: I avoided preparation until the last minute. I do not get the desired results because I avoided studying as well.

Participant C's physical symptom of sweating a lot is consistent with Bateson, Brilot, and Nettle's (2011) description of how someone with anxiety prepares the body physically,

cognitively, and behaviourally to detect and deal with threats. As a result, a person's body begins to hyperventilate to allow more oxygen to enter the bloodstream, divert blood to muscles, and sweat to cool the skin. His behavioural symptom of avoidance is consistent with what Piering (2018) refers to as the most important behavioural symptom of test anxiety. Because of the fear and the physiological symptoms that surround exams, those with test anxiety frequently postpone their test dates, avoid thinking or talking about their upcoming exams, and try to escape studying.

Those symptoms would occur during the preparation of a test. If Participant C did not implement a plan to deal with those symptoms, there is the risk of experiencing what Gilavand (2018) describes as a negative effect on study habits. Students with high test anxiety spend a lot of time studying without improving their reading skills. Learning does not mean just reading a textbook; it also means digesting the material. Cassady (2004) pointed out that students with high test anxiety study as much or more than their low-anxiety peers. Students with high test anxiety do not have the skills to encode, organize, and store information during preparation. An indication of the deficiency is the inability to employ effective study skills. Their method of study tends to be highly repetitive and less effective. According to Agbaria and Bdier (2019), a high level of anxiety can threaten mental and physical health and educational performance.

The following are some possible quantitative factors to explain *why* expressive writing managed to reduce Participant C's test anxiety:

- According to Category 3, his high test anxiety was from a late onset.
- According to Category 13, he felt relaxed during the preparation of the test and during test. He did not have thoughts on any of the itemized causes of test anxiety which he disclosed on the Thought Record during the preparation of the test or during the test.

Beidel and Turner (1988) mentioned that individuals with high test anxiety from an early onset may also have other forms of anxiety. If test anxiety started at an early age, it may be related to general anxiety which is a more serious form of anxiety. It may also be related to more fears and worries not limited to testing situations or performance situations. The concept would be discussed further in Section 5.4, the reflection on the third research question.

5.3 Reflection on the Second Research Question: The Causes of Test Anxiety That Expressive Writing Can Address

To answer the second research question, I first separated the participants into two groups: those who registered for the test and those who did not. According to the literature, the assumption was that the candidates were going to write the test (Beilock, 2008; Dalton & Glenwick, 2009; Deutsch, 2012; Frattaroli et al., 2011; Park et al., 2014; Ramirez & Beilock, 2011). One cannot assume that the participants in this study would register for the Toronto Police Entrance Test. If the preparation for the test proved to be too difficult, a participant may not apply for it. The cost of the test is close to 300 Canadian dollars, and that is another factor to consider. According to Appleby (2010), the failure rate of the Toronto Police Test is high. About 30 percent of the candidates may fail.

The participants who registered for the test were Participants A, C, G, and H while Participants B, D, E, and F did not register for the test. I found that the causes of anxiety of the former group were about the test while the causes of anxiety of the latter group were about other types of stressors as well as the test. Although Participants B and F did not register for the test, the reduction in their anxiety seems to benefit them in other ways compared to those who registered for the test.

Participants Who Registered for the Test: Participants A, C, G, and H

Their Causes of Test Anxiety Were Consistent with the Literature

Participants A, C, G, and H registered for the test. Their causes of anxiety were about the test. They did not experience other types of anxieties apart from test anxiety. All the participants identified a wide range of thoughts they attributed to test anxiety on the Thought Record before engaging in expressive writing. These included issues such as procrastination, avoidance, fear, anxiety, apprehension, confidence issues, fear of change, failure, lack of financial resources, sleep, and exercise.

Family and relationship concerns were key points in their thoughts as a distraction. There were fears of disappointing them or being apart from one's spouse or children. These causes were indicative of mature applicants. For example, Participant A was reluctant to leave his family to attend training at the police college if he got hired. He mentioned during the interview that he would miss his daughter, but he realized that he had "to provide for her to the best of my ability".

Participant G's parents were divorced, and his father is living with him. He had to take care of him. He has a disability and could not work. Participant G's female partner, however, was hoping that he became more independent.

Their causes of test anxiety were consistent with the causes identified in the literature: According to Pfeiffer (2001), some graduate students strive to meet the demands of a career and family commitments. Some older students have concerns with childcare or issues with aging parents. Engaging in graduate studies may have an impact on marriage when the couples are forced to be apart. There may also be financial concerns such as the concern of repaying the loan for education. Zhang and Henderson (2019) identified types of stressors encountered by chiropractic students: the debt they incurred, the lack of control in their lives, the concern that they will not be able to master the knowledge, and the competition. According to Cassady and Johnson (2002), internal dialogues can include making a comparison to peers, thinking about the consequences of failure, not having confidence in performance, worrying about evaluation, thoughts of being unprepared, and questioning one's self-worth. Alqarni et al. (2018) conducted a study to assess the relationship between sleep quality and the academic performance of medical students. They found a negative correlation between sleep quality and academic performance. It is not the poor sleepers who perform worse during exams. Instead, students who perform worse on their exams seem to be more stressed. It is the stress that produces poor sleep quality.

How Expressive Writing Managed to Address the Causes of Their Test Anxiety

The following are some possible quantitative factors to explain *how* expressive writing managed to address the causes of Participants A, C, G, and H's test anxiety:

- According to Category 9, they were able to retain the alleviation of their itemized test anxiety for an extended period after expressive writing.
- According to Category 11, they wrote more offsetting statements than negative statements in their expressive writing journals.

As mentioned in Section 5.2, the quantitative data from Category 9 represents Lepore's (1997) alleviation of emotional inhibition theory. The quantitative data from Category 11 represents Pennebaker and Evans' (2014) and Pennebaker and Smyth's (2016) problem-focus theory. The alleviation of emotional inhibition theory of Lepore (1997) synchronized with the problem-focused theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016).

Why was it Possible for Expressive Writing to Address the Causes of Their Test Anxiety?

The following are some possible qualitative factors to explain *why* it was possible for expressive writing to address the causes of test anxiety:

- According to Category 1, Participants A, G, and H only had low test anxiety.
- According to Category 3, Participant C's high test anxiety was from a late onset.
- According to Category 13, they all felt relaxed during the preparation of the test and during the test. They did not have thoughts on any of the itemized causes of test anxiety during the preparation of the test or during the test.

As mentioned in Section 5.2, having low test anxiety can be motivational. Some feelings of anxiety can motivate the individual to prepare for an impending test in the future. The participants did not experience the behavioural symptom of avoidance. They did not experience the cognitive symptoms of worry, and they did not feel any of the common physical symptoms of test anxiety.

As mentioned in Section 5.2, Participant C maintained his decrease in high test anxiety by constantly implementing strategies to overcome the physical symptoms of test anxiety. He wrote 5 strategy statements while most of the other participants with low test anxiety did not need to write any strategy statements. According to Zhang and Henderson (2019), developing coping skills enables a decrease in anxiety over time.

Participants Who Did Not Register for the Test but Still Benefitted from Expressive Writing: Participants B and F

Due to Ambivalence

Participants B and F did not register for the test. According to Category 3, Participant F experienced other types of anxiety in addition to test anxiety; and according to Category 5, Participant B was subjected to critical incident stress in addition to test anxiety. Their decision to write the test had changed due to ambivalence. According to Cheng, Tang, and Cheng (2015), their ambivalence can take on different meanings. It could be regarding one's suitability for the goal or to redefine one's interest in the goal. Participant B is an example of someone who is questioning his suitability for the position of police constable. He may have to abandon his goal. Participant F is an example of someone whose goal has changed slightly. She did not want to

abandon the goal but was wondering if it could be modified. She is still interested in law enforcement but in a different capacity.

In either case, ambivalence interfered with their goal to write the test. According to Smith and Smith (2002), preparing for an important test increases one's motivation, but it also increased one's test anxiety to moderate one's motivation. According to Khalaila (2015), there is a significant positive relationship between test anxiety and amotivation. If a stressor increases a student's test anxiety, it may decrease his or her motivation to prepare for the test.

Expressive Writing Extended the Causes Listed on Their Thought Records

Their decision to engage in expressive writing despite their ambivalence was beneficial. It allowed them to deal with the problem that was actually bothering them. The list of causes of their anxiety on the Thought Record was incomplete. Expressive writing allowed them to explore deeper causes. According to Kelly, Mansell, and Wood (2011), ambivalence towards a goal can be distressing because the subject is not aware of the reason for the ambivalence. If the reason was made known, it would be less distressing. Tompkins (2013) emphasised that it is beneficial to focus just on a single problem. If participants have more than one type of anxiety, they must deal with each of them one at a time. They cannot deal with all of them at once.

Participant B was subjected to a critical job-related incident. It affected the police constable test that he planned to write. He was not supposed to talk about the incident. He did not write or talk about the incident but around the incident. He wrote 7 itemized causes on the Thought Record which he attributed to test anxiety, but only 1 of the items changed after expressive writing: anxiety. The other items did not change. He realized that the item which changed was the stressor that he was more concerned about instead of the test. He said that expressive writing helped him to write about how much he despised his present position even if he could not write about the specifics. The alleviation of stress was beneficial when he decides to apply for a different position—not necessarily in policing.

Participant F mentioned that she was unsure about writing the test because she was afraid that she may experience panic anxiety when subjected to the conditions of the test. During the interview, she mentioned that despite the fear of a panic attack, she still accepted the challenge involved in preparing and writing the test. She mentioned that expressive writing helped her realize that her fears were not directly related to the test but to driving, getting to places on time,

knowing how to get there, feeling trapped, and being stuck in traffic. The realization of incorrect or erroneous thoughts dispelled some of the fear related to writing a test. Although she missed the application deadline, she was able to think more clearly about the type of job she wanted. She also had family issues. She had to look after four children. She had depended on other people to help her. But she realized that she cannot constantly depend on them for help. She did not plan to apply for the position of a police constable in the future. Instead, she was seeking something that had a more flexible work schedule to allow her to be closer to her children and to pick them up from the day care.

The Extended Causes of Their Anxiety Were Consistent with the Literature

The other stressors besides the causes of test anxiety listed on Participant B's Thought Record were consistent with the literature. Bailiffs have the power of a police officer in assigned jurisdictions, and they assume the role of correctional officers when they are assigned to supervise inmates during a trial. There is the possibility that they may inherit other types of stressors in those areas in addition to the causes of their test anxiety. According to a survey of municipal and provincial police by CAMH (2018), 29% of law enforcement officers were in the clinical diagnostic range for Post-Traumatic Stress Disorder (PTSD). A survey by the Union of Canadian Correctional Officers (2016) showed that 78.6% of correctional officers have experienced a traumatic event during their careers. The number of traumatic events increased with seniority. Exposure to traumatic events is so common in federal correctional institutions that even correctional officers employed for less than a year, 47.8% were exposed to 2 to 4 traumatic events, and 20% were previously exposed 5 times or more.

The other more serious type of anxiety besides the causes of test anxiety listed on Participant F's Thought Record is also consistent with the literature. According to Huberty (2010), it is possible to incur any other more serious types of anxieties apart from test anxiety, and the more serious trait anxiety can aggravate the test anxiety. According to Gerson (1995). She was in the family stage of her life cycle. She would likely be subjected to family-related stress involving children.

How Expressive Writing Managed to Address the Causes of Their Anxiety

The following is a possible quantitative factor to explain *how* expressive writing managed to address the causes of Participants B's stress and Participant F's anxiety:

- According to Category 9, they were able to retain the alleviation of their itemized causes of test anxiety for an extended period after expressive writing.

Participants B and F satisfied the conditions of Category 9 which represents Lepore's (1997) alleviation of emotional inhibition theory, but they fall short of satisfying the conditions of Category 11 which represents Pennebaker and Evan's (2014) and Pennebaker and Smyth's (2016) problem-focus theory. Although they wrote more negative statements compared to offsetting statements, they were still able to retain the alleviation of their itemized causes of test anxiety for an extended period after expressive writing. It did not totally negate the benefit of expressive writing.

Why was it Possible for Expressive Writing to Address the Causes of Their Test Anxiety?

The following are some possible qualitative factors to explain *why* it was possible for expressive writing to address the causes of Participant B's stress and Participant F's anxiety:

- According to Category 7, they managed to gain clarification by recognizing their illogical or erroneous thoughts.
- According to Category 8, they were able to modify their goal.

According to Category 7, expressive writing allowed Participants B and F to gain clarification. Participant B realized his illogical thoughts, and Participant F realized her erroneous thoughts. Those cognitive processes are features of cognitive behavioural therapy (CBT), and Participants B and F applied it on their own which Pennebaker and Seagal (1999) proposed that it was possible. According to Pennebaker and Seagal (1999), cognitive changes can take place when adverse thoughts are reorganized. By making sense of the confusion, the adverse thoughts are easier to manage. Expressive writing assists in acquiring meaning by the eventual construction of a meaningful story.

As mentioned in the description of the Thought Record in the data collection tools, CBT was originally intended to provide clarification by examining each adverse thought and then coming up with alternative strategies. The Thought Record was not implemented in this study for the purpose of CBT. Participants B and F applied CBT on their own. Rodebaugh, Holaway, and Heimberg (2004) and Wells and Papageorgiou (2001) found CBT to be an effective treatment for phobic disorders. Reiss et al. (2017) found that CBT can dealing with test anxiety when CBT

was combined with relaxation techniques. Suliman and Halabi (2007) found a negative correlation between critical thinking and state anxiety. They defined critical thinking as being open-minded, considering alternatives, and taking appropriate actions.

The theory of Lepore (1997) plus CBT may be effective in relieving Participants B and F's emotional inhibition; but according to Boyes (2018), there still needs to be another step. Although they realized that their anxieties were related to other stressors besides test anxiety, they still need to cope with them. Boyes (2018) maintains that just recognizing the problem of their anxiety does not lead to a behavioural change. The process should be as follows: recognizing the thinking error, designing changes, and that leads to behavioural changes. The missing step is designing the changes. Pennebaker and Smyth (2016) also suggested that the proposed change should be put into action. It should be tested to find out if it works. If it does not work, they suggest designing another strategy.

Although Participants B and F did not provide any strategic statements in the expressive writing journals, they did express strategic plans verbally during the interview. According to Category 8, they proposed to modify their goal to become a police constable. In that sense, expressive writing may have been partially successful. However, they did not benefit from it to the extent of Participant C (who also had high test anxiety). Participant C wrote about how he was going to carry out his proposed strategies. He had the intention to active them. According to Pennebaker and Evans (2014), a solution can be implemented more readily by writing about it. Expressive writing would force them to sustain their attention on the problem for a longer period. The plan needs to be tested to find out if it works.

Participants C, B, and F had other types of stressors on top of their test anxiety, and they found expressive writing helpful in addressing them. Their other types of anxieties were from a late onset. It contrasted with participants with high anxiety from an early onset. The concept would be discussed in Section 5.4, the reflection on the third research question.

5.4 Reflection on the Third Research Question: The Causes of Test Anxiety That Expressive Writing Cannot Address

To answer the third research question on the causes of test anxiety expressive writing cannot address, I first determined the participants who were able to maintain the alleviation in their itemized test anxiety for five days after expressive writing and those who could not meet the criteria. I adopted the above criteria because according to the answer to the second research question, on the causes of test anxiety that expressive writing can address, the participants would have to at least satisfy Category 9—the ability to retain the alleviation of their itemized causes of test anxiety for an extended period after expressive writing.

Participant D and Participant E were not able to maintain the alleviation in their itemized test anxiety for five days. The following are some possible quantitative factors to explain *how* expressive writing failed to address the causes of Participants D and E's test anxiety:

- According to Category 10, they were not able to maintain the alleviation of her itemized test anxiety for an extended period after expressive writing.
- According to Category 12, they wrote more negative statements than offsetting statements in their expressive writing journals.

The following are some possible quantitative factors to explain *why* expressive writing failed to address the causes of Participants D and E's test anxiety:

- According to Category 2, they had high test anxiety from an early age.
- According to Category 4, they recognized that they had other types of anxieties but did not come up with a plan of action on how to deal with them.

Some of the causes of their test anxiety overlapped some of the causes of test anxiety of the other participants who managed to maintain the alleviation in their itemized test anxiety for five days: fear of failure, anxiety, apprehension, confidence, and uncertainty. Why did expressive writing help other participants deal with those adverse thoughts but not Participants D and E?

The above causes were typical of anxieties related to the test. Participants D and E incurred other causes of anxiety apart from the test. Participants B and F also had incurred other stressors not related to the test, but expressive writing managed to deal with those causes. Expressive writing,

however, was not able to deal with the following causes of test anxiety incurred by Participants D and E: high test anxiety from an early onset, avoidance anxiety, and physical pain.

High Test Anxiety from an Early Onset

Participants D and E had test anxiety from an early age. According to Category 4, besides test anxiety, Participant D mentioned that she also sought treatment for avoidance anxiety and low self-esteem; and Participant E was assessed with general anxiety. Those other types of behaviours comorbid with test anxiety from an early onset were consistent with the literature.

Beidel and Turner (1988) mentioned that individuals with high test anxiety from an early onset may also have other forms of anxiety. If test anxiety started at an early age, it may be related to general anxiety which is a more serious form of anxiety. It may also be related to more fears and worries not limited to testing situations or performance situations. Trzesniewski et al. (2006) found that adolescents with low self-esteem grew up to have more mental health problems during adulthood than adolescents with high self-esteem. Adolescents with low self-esteem were 1.60 times more likely to develop an anxiety disorder. Huberty (2010) mentioned that if one has a predisposition to trait anxiety and if that type of anxiety existed since grade school it can aggravate the state anxiety. Trait anxiety is a more enduring form of anxiety, and it is not situational such as the presence of a test.

Avoidance Anxiety

According to Category 4, Participant D also displayed signs of avoidance anxiety. According to the literature, it is a more serious form of test anxiety. Tompkins (2013) and Yerdelen et al. (2016) defined avoidance anxiety as the act of avoiding the situation creating the anxiety and becoming less aware of the thoughts and physical feelings associated with the anxiety. The student dwells on averting the threat instead of attempting to solve the problem. According to Seaman (1999) avoidance is comparable to fear. The student is not just avoiding the test, but everything related to the subject: homework and classes as well as tests. According to Perry (2006), fear is not conducive to learning. The student would have trouble acquiring new cognitive information or retrieving stored information. The focus of their behaviour is on the threat.

The Physical Symptom of Intense Pain

Some common physical symptoms during a test are increased heart rate, stress hormone secretion, restlessness, vigilance, and fear of a potentially dangerous environment (Bateson et al., 2011). Other physical symptoms are headache, nausea, diarrhoea, excessive sweating, shortness of breath, and rapid heartbeat. Test anxiety may also lead to a panic attack which is the onset of intense fear (Anxiety and Depression Association of America, n.d.).

A symptom that was not reflected in the literature on test anxiety was the physical pain experienced during the preparation of the test. Participant D experienced physical pain before a test and not just during a test as proposed by the literature. It was not the common physical emotion; instead, she often experienced the symptom of intense physical pain during the preparation for the Toronto Police Test. Her doctor mentioned that she did not have any pathology responsible for the pain. In the following excerpt from the interview, her symptom was so severe that it distracted her from clarifying certain thoughts or coming up with a plan to initiate change.

Participant D: I was supposed to meet with a friend to study, but I never got around to it. I tried to study by myself, but I have not look inside the book yet.

Interviewer: When you tried, you felt the same as in high school?

Participant D: I think it's worse. I used to get aches and pain before a test in school. Now the pain is worse.

Interviewer: Are there any other symptoms?

Participant D: No, mainly the pain. I also have pain when I play sports. I used to play soccer with my co-workers. But now I am so sore after each game that I stopped playing sports altogether.

Interviewer: Do you still try to remain active?

Participant D: I still do a light workout with a friend once a week. I don't know why I have it. I am still very fit. My doctor could not find anything physically wrong. He mentioned it could be psychosomatic.

Interviewer: Do you think that trying to prepare for the Toronto Police test may have triggered it.

Participant D: It's possible.

Coping Skills

Participants D and E did not adequately deal with their problems. Although they recognized that they had other types of anxieties besides their test anxiety, they did not attempt to deal with them. According to Boyes (2018), recognizing the problem of their anxiety does not lead to a behavioural change. There needs to be another step. The process should be as follows: recognizing the thinking error, designing changes, and that leads to behavioural changes. The missing step is designing the changes.

5.5 Summary of the Findings

Answer to the First Research Question

The answer to the first research question on the effectiveness of expressive writing applied to the participants who wrote the test. Three of them had mild test anxiety, and one participant had high test anxiety. How they benefitted from expressive writing and why it worked for them can be summarized according to the following categories:

The following are some possible quantitative factors to explain *how* expressive writing managed to reduce Participant A, C, G, and H's test anxiety:

- According to Category 9, they were able to retain the alleviation of their itemized test anxiety for an extended period.
- According to Category 11, they wrote more offsetting statements than negative statements in their expressive writing journals.

Category 9 represents Lepore's (1997) theory of lowering one's anxious mood after expressive writing and maintaining it for an extended period on the Thought Record. Category 11 represents Pennebaker and Evan's (2014) and Pennebaker and Smyth's (2016) theory of lowering one's anxious mood sufficiently to allow one to write more offsetting statements than negative statements in the expressive writing journal. They represent the theories central to this study: the inhibition theory and the problem-focused theory. Participants A, C, G, and H satisfied the alleviation of emotional inhibition theory of Lepore (1997) and the problem-focused theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016).

The following are some possible quantitative factors to explain *why* expressive writing managed to reduce Participant A, C, G, and H's test anxiety:

- According to Category 1, Participants A, G, and H only had low test anxiety.
- According to Category 3, Participant C's high test anxiety was from a late onset.
- According to Category 13, they were relaxed during the preparation of the test or during the test. There were no interfering thoughts, such as those they listed on their Thought Records, during the preparation of the test or during the test.

Participants A, C, G, and H did not experience the behavioural anxiety of avoidance described by Piering (2018) and Fresco et al. (2002). They did not experience cognitive symptoms such as worry which can affect how they prepare for a test as described by Tobias (1985), Eysenck and Calvo (1992), and Cassady (2009). They did not experience any of the physical symptoms described by Bateson et al. (2011), Cassady (2009), and Deffenbacher (1978).

Answer to the Second Research Question

To answer the second research question on the causes of test anxiety that expressive writing can address, I had to isolate the different groups of participants into those who wrote the test (Participants A, C, G, and H) and those who did not write the test (Participants B, D, E, and F). I found that the causes of anxiety of those who wrote the test would be about the test while the causes of anxiety of those who did not write the test would be about other types of stressors as well as to the test.

Participants Who Wrote the Test

The following are some possible quantitative factors to explain *how* expressive writing managed to address the causes of Participants A, C, G, and H's test anxiety:

- According to Category 9, they were able to retain the alleviation of their itemized test anxiety for an extended period after expressive writing.
- According to Category 11, they wrote more offsetting statements than negative statements in their expressive writing journals.

The quantitative data from Category 9 represents Lepore's (1997) alleviation of emotional inhibition theory. The quantitative data from Category 11 represents Pennebaker and Evans'

(2014) and Pennebaker and Smyth's (2016) problem-focus theory. Participants A, C, G, and H satisfied both those theories.

The following are some possible qualitative factors to explain *why* it was possible for expressive writing to address the causes of their test anxiety:

- According to Category 1, Participants A, G, and H only had low test anxiety.
- According to Category 3, Participant C's high test anxiety was from a late onset.
- According to Category 13, they felt relaxed during the preparation of the test and during the test. They did not have thoughts on any of the itemized causes of test anxiety which they disclosed on their Thought Records during the preparation of the test or during the test.

The causes of test anxiety from Participants A, C, G, and H who wrote the test were consistent with the causes identified in the literature. According to Pfeiffer (2001), some mature students strive to meet the demands of a career and family commitments and the distress of being separated from family members while pursuing their studies. According to Zhang and Henderson (2019), there are the concerns about the debt incurred and the fear that the students will not master the required knowledge. According to Cassady and Johnson (2002), there are thoughts of being unprepared and the consequence of failure. According to Alqarni et al. (2018), stress can produce poor sleep quality.

Participants Who Did Not Write the Test, Participants B and F

Participants B and F changed their decision to write the test. It was due to other types of stressors besides test anxiety that interfered with their preparation. I found that they still partially benefitted from expressive writing.

The following is a possible quantitative factor to explain *how* expressive writing managed to address the causes of Participant B's stress and Participant F's anxiety:

- According to Category 9, they were able to retain the alleviation of their itemized causes of test anxiety for an extended period after expressive writing.

Participants B and F satisfied the alleviation of emotional inhibition theory of Lepore (1997) but they fell short of satisfying the problem-focus theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016). Although they wrote more negative statements compared to

offsetting statements in their expressive writing journals, they were still able to retain the alleviation of their itemized causes of test anxiety for an extended period after expressive writing. Their test anxiety did not completely negate the benefit from expressive writing.

The following are some possible qualitative factors to explain *why* it was possible for expressive writing to address the causes of Participant B's stress and Participant F's anxiety:

- According to Category 7, they managed to gain clarification by recognizing their illogical or erroneous thoughts.
- According to Category 8, they were able to modify their goal.

The causes of Participants B and F's anxiety were consistent with the causes identified in the literature. Test anxiety may also lead to a panic attack which is the onset of intense fear (Anxiety and Depression Association of America, n.d.). In Participant F's case, however, she was anxious in that manner during the preparation of the test. According to Huberty (2010), her more serious trait anxiety, which happens to be panic anxiety, can aggravate the test anxiety. In Participant B's case, he experienced a critical job-related incident. According to CAMH (2018), 29% of law enforcement officers were in the clinical diagnostic range for Post-Traumatic Stress Disorder (PTSD). A survey by the Union of Canadian Correctional Officers (2016) showed that 78.6% of correctional officers have experienced a traumatic event during their careers.

Answer to the Third Research Question

To answer the third research question on the causes of test anxiety expressive writing cannot address, I first determined the participants who were able to maintain the alleviation in their itemized test anxiety for five days after expressive writing and those who could not meet the criteria. I adopted the above criteria because according to the answer to the second research question, on the causes of test anxiety that expressive writing can address, the participants would have to at least satisfy Category 9—the ability to retain the alleviation of their itemized causes of test anxiety for an extended period after expressive writing.

The following are some possible quantitative factors to explain *how* expressive writing failed to address the causes of Participants D and E's test anxiety:

- According to Category 10, they were not able to maintain the alleviation of her itemized test anxiety for an extended period after expressive writing.

- According to Category 12, they wrote more negative statements than offsetting statements in their expressive writing journals.

The following are some possible quantitative factors to explain *why* expressive writing failed to address the causes of Participants D and E's test anxiety:

- According to Category 2, they had high test anxiety from an early age.
- According to Category 4, they recognized that they had other types of anxieties but did not come up with a plan of action on how to deal with them.

Some of the causes of test anxiety of the participants who managed to maintain the alleviation in their itemized test anxiety overlapped those who could not maintain the alleviation. It was not the causes of test anxiety they listed on the Thought Record that expressive writing cannot address. Rather it was about causes that some of the participants with high anxiety did not list on the Thought Record: high test anxiety from an early onset, avoidance, and psychosomatic pain. Those findings were consistent with the literature except for psychosomatic pain. Participant D experienced physical pain to the extent that it exceeded the physical duress mentioned in the literature.

In the next chapter, I will discuss how these findings relate to my contribution to knowledge and practice. I will also include my recommendation for practice.

Chapter 6: Discussion

6.1 Introduction

This study explores the role of expressive writing as a resource to support candidates preparing for a high-stake entrance exam for the position of police constable and to self-manage their test anxiety. This chapter offers a discussion on the findings. Section 6.2 highlights the contributions to professional knowledge. I found that for expressive writing to be effective, the alleviation of emotional inhibition theory of Lepore (1997) needs to be combined with the problem-focus theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016). Section 6.3 discusses the contribution to practice. I elaborate on the possibility of adopting expressive writing as a tool to self-regulate test anxiety in a law-enforcement environment. Section 6.4 proposes recommendations for practice. I emphasise the importance of mental health education during the training of new recruits along with a preventative approach and a self-intervention approach to deal with stress. In Section 6.5, some limitations to the study are noted. Section 6.6 offers concluding comments.

6.2 Contributions to Knowledge

In this study I adopted Lepore's alleviation of emotional inhibition theory (1997) along with the problem-focus theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) as guides to explore whether they could address test anxiety of candidates preparing to undertake the Toronto Police Entrance Test. This was the first mixed-methods study that combined these theories together. This study was also the first research project that explored test anxiety in prospective police officers.

I found that for expressive writing to be effective, the alleviation of emotional inhibition theory of Lepore (1997) needs to be combined with the problem-focus theory of Pennebaker and Evans (2014) and Pennebaker and Smyth (2016). Participants A, C, G, and H who undertook the entrance test satisfied both coping strategies. They seemed to benefit more from expressive

writing compared to Participants B and F who did not write the test and who just satisfied one of the coping theories: the alleviation of emotional inhibition. To further differentiate the above participants, Participant A, G, and H had low test anxiety, and Participants C, B, and F had high test anxiety.

Participants A, G, and H with low anxiety did not actively seek a solution to any problems that may still have bothered them after expressive writing. The bulk of their problems were related to emotional inhibition. By alleviating their emotional inhibition, it was sufficient to alleviate their test anxiety for an extended period. However, I found that they still displayed more positive emotions in their expressive writing. It was indicated by their offsetting statements which totalled more than their negative statements, notably more positive statements, positive attribution, realizing where one needs to improve, realizing one's strength, and seeing the positive side of possible negative experiences. (Refer to Appendix G.)

This indicator of writing more offsetting statements than negative statements was also evident in the journal of a participant with high test anxiety, Participant C. He was also able to reduce his test anxiety after expressive writing for an extended period. Alongside positive statements, he also wrote strategic statements and attempted to seek a solution to the problem that he was still concerned with. For candidates like him with high test anxiety, a problem-focused approach seems to be effective. (Refer to Appendix G.)

Participants B and F who had high test anxiety and decided not to write the test did not benefit fully from expressive writing. They attended to the alleviation of their inhibition through the writing, but perhaps they still needed to reconcile with the causes of their anxiety by coming up with a problem-focused coping strategy. The anxious mood of these participants was lowered after expressive writing, and they maintained it for an extended period; but they did not reflect what Tompkins (2013) referred to as an assimilation of their adverse thoughts in their expressive writing journals. Perhaps the understanding of those thoughts was still incomplete since they only started to think more clearly. A positive attitude was still lacking; they wrote more negative statements than offsetting statements. (Refer to Appendix G.) As mentioned in Section 5.3, it is the designing and planning of strategies that lead to a behavioural change; but positive emotions seem to be a prerequisite. It reaffirmed Pennebaker and Evans (2014) finding that they still need

to continue to engage in expressive writing to sustain their attention on the problem for a longer period. Writing is slower than thinking about it.

6.3 Contributions to Practice

In this section I discuss in more detail the contributions to practice. The findings from this small-scale mixed methods study showed that it is possible to adopt expressive writing as a tool to self-manage test anxiety during the preparation of a test and not just as a means of alleviating test anxiety during the actual writing of the test on the scheduled date. Findings also showed that the benefits of expressive writing can address stress—including traumatic stress.

6.3.1 Dealing with Typical Causes of Test Anxiety

In Chapter 1, I discussed the importance of self-managing one's test anxiety in preparation for a test. I found that expressive writing is an effective tool to self-regulate one's test anxiety during the preparation period in a law enforcement environment. Expressive writing successfully helped some of the participants (Participants A, C, G, and H) deal with their typical causes of their test anxiety while they were preparing for their test. These included cognitive issues that were internally generated, and they were directly and indirectly related to the test. These included issues such as procrastination, avoidance, fear, anxiety, apprehension, confidence issues, fear of change, failure, lack of financial resources, sleep, exercise.

6.3.2 Dealing with Stress in Addition to Test Anxiety

Expressive writing was also effective in dealing with other causes that were externally generated during the preparation of the test. These issues were not related to the test. Most participants expressed their stress in their journal writing, and some of their stressors were identified as "topics of concern" in the coding of their journals in Appendix H. I found that expressive writing can be applied to self-regulate the following typical kinds of stress encountered during the preparing for an exam as listed in Section 2.4.3: high workloads, tight time schedules, financial problems, a rigid learning environment, a competitive environment, attitude of the instructor, lack of jobs, family commitments, or childcare issues. While such stimuli are externally

generated, they add to the stimuli of anxieties that are internally generated as mentioned in section 2.4.1 since the psychological response is the same.

6.3.3 Dealing with Stress when it Becomes Traumatic

Expressive writing can be applied to address a traumatic incident. It is possible for stress to become traumatic. The cathartic effect from expressive writing may play a similar role as talking to a counsellor before the trauma becomes worse. As mentioned in Section 2.4.3, if the trauma becomes worse, it can lead to post-traumatic stress disorder (PTSD). For the participant who had to deal with trauma, Participant B, expressive writing made him aware of his worrying thoughts and gave him a chance to take on a different perspective and reflect on alternative thoughts. He was able to think clearer and address erroneous thoughts. Expressive writing was only partially successful because he still had to think of ways to modify his goal. It became apparent that for expressive writing to be successful in such situations and profiles, engaging in it more extensively would be beneficial.

6.4 Recommendations for Practice

The following recommendations can be adopted by policy makers to teach new recruits at the police college: implementing a preparatory approach to manage stress, implementing expressive writing to manage stress, and implementing mental health education in proactive and positive ways. It would be a start in changing the attitude of officers towards mental health. The knowledge can eventually trickle down to modify the culture and work environment when the new recruits become senior officers. They can reinforce the knowledge when it becomes their turn to teach new recruits during on-the-job training.

6.4.1 Implementing a Preparatory Approach to Manage Stress

A preparatory approach acknowledges that the police force is a stressful work environment. New officers need to be told during training that they are likely to experience stress from working in such an environment instead of experiencing it unprepared. It can lead to adopting a proactive attitude towards emotional support rather than a reactive approach towards it.

6.4.2 Implementing Expressive Writing to Manage Stress

Expressive writing can be introduced as a self-management tool to alleviate not only test anxiety but also stress. Expressive writing can help deal with stress at an early stage. Law enforcement is considered a high-risk workplace where officers need to deal with complex and emotionally demanding tasks. Strategies to deal with stress could include a preparatory approach and a self-intervention approach to allow the officer deal with it at an early stage.

Relaxation is important to combat stress. It can be combined with expressive writing. Many mental health professionals suggest we take at least ten minutes a day to relax. Just as we push our bodies past certain limits, we also tend to push our minds. When we relax, it restores our thoughts (Life Lines, 2012). Expressive writing can extend its benefit by reframing stressful thoughts in more positive way. Having positive emotions is important in coping with stress. The writing could shift one's attention away from ruminating on the perceived distress to create a positive change in mood and becoming aware of triggers that produce repetitive negative thinking.

6.4.3 Implementing Mental Health Education in Proactive and Positive Ways

The rigid nature of law enforcement training and the attempt to standardize it through accreditation limit the officer's ability to deviate from expected actions (Darroh & Mazerolle, 2013). During training, the new recruits are mostly trained in firearms and self-defence. Only a few hours after they are hired, they are trained on community policies, cultural-diversity, and human relations. They spend their days among individuals at their worse. Police officers are frequently exposed to traumatic events. The organizational culture places emphasis on the physical and crime fighting model of policing (Brooks20).

There should be a change in attitude towards wellness. Mental Health Education should be implemented to new officers during training at the police college. That approach will include training to become aware and self-managing anxiety before it becomes traumatic. The training program should include teaching the signs of stress and how to treat them. Mental health education can support them to recognize signs of critical stress and make it easy to seek support for themselves as well as others. Officers should be encouraged to make an annual mental health check

with a therapist of their choice. For officers who are off on mental health leave, there should be a return to work counselling protocol at certain intervals. There should be trained police officers and psychologists involved in a back to work plan. Such a proactive approach can eventually trickle down to modify the culture and work environment when those recruits become senior officers. They would contribute those ideas to other new recruits during on-the-job training.

6.4.4 Demonstrating Its Benefits

From my professional practice, I found that officers who were ordered to attend wellness classes at the Toronto Police College were reluctant to listen to the lectures. The contention is that the proposed benefits were subjective. The lecturers cannot specifically demonstrate that the intervention actually works; therefore, it may not be necessary. It is possible that officers exposed to a stressful incident would eventually feel better on their own accord.

The practical aspects of expressive writing should be demonstrated to officers with the intention of changing their attitude. The improvement of the participants' mood after expressive writing in this study can be demonstrated quantitatively as well as qualitatively. As indicated quantitatively on the Thought Record in Section 4.2.9, Category 9, a minor decrease in anxiety was sufficient to allow most participants to feel better; and it would last for an extended period. Expressive writing also allowed some of them to acquire more positive thoughts (as indicated by their positive statements); and as a result, it was possible to come up with strategies to deal with problems that contributed to stress. This is indicated quantitatively on the expressive writing journals in Section 4.2.11, Category 11.

6.5 Study Limitations

There are limitations with the current study: the risk of inducing a negative effect, the sample selection and size, the goal of expressive writing, and the inherited problem with proposing the thought record. The following elaborates on each of those topics.

6.5.1 Risk of Inducing Negative Effect

Self-reflecting on emotions or moods may activate stress-related triggers. The originator of expressive writing applied the method to thousands of people with traumatic experiences worse than test anxiety, and he found that there was no negative effect if expressive writing does not work (Pennebaker & Evans, 2014). Nevertheless, as mentioned in the chapter on Ethical Considerations, if it became obvious that expressive writing created additional stress, they would be invited to withdraw. There were also counsellors available at the institution if a participant becomes upset during the intervention. I informed the participants of the availability of this support at the start of the intervention.

6.5.2 The Sample Selection and Size

The small sample may be considered as another limitation. The study relied on a single workplace setting for the participants. As a result, there was a small pool of candidates from a specific location to select from. It resulted in a convenience sample with a limited number of participants. The study is not intended to be a case study of the Toronto Police Service but to give some insights into how expressive writing may be utilized by law enforcement officers. Future studies can explore expressive writing as an intervention with a larger sample to represent the Toronto Police Service. Such future research would likely bring further insights, such as more educational analysis of workplace learning and assessment and revelation of its cultural and sociological factors.

6.5.3 The Goal of Expressive Writing

Pennebaker and Evans (2014) and Pennebaker and Smyth (2016) expanded the original theory on alleviating emotional inhibition. Besides alleviating the inhibition, the goal is also to eventually strive to understand it. According to Pennebaker and Evans (2014), the participants should eventually write a moderate number of negative emotional statements. People who see the positive sides of negative experiences cope better. There should also be a change in perspective. The ability to see an upheaval from different angles may be beneficial. According to Pennebaker and Smyth (2016), when there is a change in perspective, the participants become more detached

from the event. They would be able to consider complex causes of the event and would achieve insight into their predicament. By understanding the causes, they can take steps to avoid those situations.

According to Nicholls (2009), the ability to gain insight may not be possible during the writing of the initial draft. You cannot assume that expressive writing immediately allows the writer to gain insight. According to Section 5.2, however, I found that a participant with high test anxiety, Participant C, was able to come up with coping strategies. I found that other participants with low test anxiety, Participants A, G, and H, still benefitted from expressive writing without resorting to a strategic plan. They still alleviated their anxieties for an extended period.

6.5.4 The Thought Record Tool

The Thought Record is employed in a positivist manner for the purpose of theory testing. It tests the application of expressive writing. According to the study, I relied on the inhibition theory. I tested the theory by applying a pre-test post-test design. According to Cook and Campbell (1979), the problem with a pre-test post-test design is the data's history and regression to the means. The definition of history is that there could be something else in the interim to cause the participants to lower their pre-intervention data. Regression to the means refers to the possibility that a participant's high level of anxiety was lowered due to spontaneous remission or lowered due to its own accord instead of attributing it to expressive writing.

I attempted to deal with both those problems by acquiring the post-intervention data immediately after the expressive writing intervention. By acquiring the post-intervention data immediately on the first day, it sets the tone for the other days. The participants would compare how they felt during the next four days to their moods that were already re-ranked. They are not comparing their moods in the next four days to how they originally felt but to their moods that were already revised.

6.6 Concluding Comments

According to the literature, the assumption is that participants attempting to write a test were assumed to benefit from expressive writing if their grade point average increased. The current

study emphasises the importance of understanding test anxiety during the preparation for the test as opposed to the actual sitting of the test. Test anxiety could take place during the preparation for the test and not just during the test on the scheduled test date. In the present study, expressive writing was conducted about one month prior to the actual test. The study found that there could be other types of anxieties that aggravated the test anxiety if one's test anxiety occurred at an early age. The results also showed that external causes of test anxiety related to stress from the workplace can aggravate one's test anxiety.

The study showed that it was possible to engage in expressive writing just once for 25 minutes, and the benefit derived would last for an extended period. The findings also showed that a positive attitude, a change in perspective, and the persistence to seek a coping strategy during the preparation of a test contribute to a decrease in adverse thoughts.

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Appendices

Appendix A: Thought Record Template

Adverse Thoughts	Intensity of Mood as a %	Rerank Mood as a % Day 1	Rerank Mood as a % Day 2	Rerank Mood as a % Day 3	Rerank Mood as a % Day 4	Rerank Mood as a % Day 5

Adapted from: *"Mind Over Mood: Change How You Feel by Changing the Way You Think,*" by D. Greenberger and C. A. Padesky. Copyright 2016 by The Guilford Press.

Appendix B: Test Anxiety Inventory (TAI) Statements

Rank the following statements from 1-4:

1 = Almost Never; 2 = Sometimes; 3 = Often; 4 = Almost Always

1. I feel confident and relaxed when taking tests.

2. While taking examinations I have an uneasy, upset feeling.

3. Thinking about my grade in a course interferes with my work on tests.

4. I freeze up on important examinations.

5. During exams I find myself thinking about whether I'll ever get through school.

6. The harder I work at a test, the more confused I get.

7. Thoughts of doing poorly interfere with my concentration on tests.

8. I feel very jittery when taking an important test.

9. Even when I'm well prepared for a test, I feel very nervous about it.

10. I start feeling very uneasy just before getting a test paper back.

11. During tests I feel very tense.

12. I wish examinations did not bother me much.

13. During important tests I am so tense that my stomach gets upset.

14. I seem to defeat myself while working on important tests.

15. I feel very panicky when I take an important test.

16. I worry a great deal before taking an important examination.

17. During tests I find myself thinking about the consequences of failing.

18. I feel my heart beating very fast during important tests.

19. After an examination is over I try hard to stop worrying about it, but I can't.

20. During examinations I get so nervous that I forget facts I really know.

Participants were categorized to four different levels of test anxiety according to their test anxiety inventory scores: scores between 20 and 35 no anxiety, 36 – 50 mild anxiety, 51 – 65 moderate anxiety and 66 – 80 severe anxiety.

Adapted from: *"The Test Anxiety inventory,*" by C. D. Spielberger. Copyright 1980 by Consulting Psychology Press.

Appendix C: Instructions for the Expressive Writing Task

During today's writing session, I want you to let go and write about your very deepest thoughts and feelings about the exam. In your essay, you may want to write about your thoughts and feelings regarding the exam itself, the effect of the exam on your life in the present, the exam's implications for your future goals, and alternate plans you may have. The important thing is that you dig down into your deepest emotions and explore them in your writing.

Adapted from: *"Expressive Writing Moderates the Relation Between Intrusive Thoughts and Depressive Symptoms,"* by S. J. Lepore. Copyright 1997 by *Journal of Personality and Social Psychology*.

Appendix D: Interview Protocol

I would provide each participant the following information during the first meeting:

What data I am interested in collecting.

What I am studying.

Why I am studying it.

A bit about myself

Confidentiality in what is said remains between the interviewee and I.

The participant has the right to withdraw at any time if the writing becomes uncomfortable.

The participant may see my write-up.

Sign statement of inform consent form.

Give participants my contact information.

Remind interviewee I may have follow-up questions for clarification.

Appendix E: Participant Info Letter

UNIVERSITY OF LIVERPOOL

Participant Information Sheet

Title of Study

The Application of Expressive Writing as an Intervention for Test Anxiety

You are being invited to participate in a research study. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and feel free to ask us if you would like more information or if there is anything that you do not understand.

1. **What is the purpose of the study?**

The purpose of the study is to identify the types of "worries" that you may have due to test anxiety and the types of "worries" that may be adaptive after expressive writing. I also want to know how long you can adapt to them. The findings will help to consider the possibility of further interventions and resources to support the participants' preparation for managing test anxiety.

2. **Why have I been chosen to take part?**

You are chosen for this study because you intend to take an entrance test with the Toronto Police Service in the near future. Being aware of having a test anxiety is not a criterion for taking part in the study. You may also take part even if you are not aware that you have any test anxieties. If you do not experience any test anxiety, it may also be due to inhibition. You may still express any concerns related to writing a test.

3. **Do I have to take part?**

Your participation is voluntary, and you are free to withdraw at anytime without explanation and without incurring a disadvantage.

4. **What will happen if I take part?**

There are three stages in your participation:
Stage 1: In an one hour face-to-face meeting you will be asked to complete two columns on the Thought Record (for 10 minutes). Then you will be given instructions and asked to write your thoughts on test anxiety (for 25 minutes). After writing in your journal, you also have the option of handing in the journal on that day or the next day after you edit it; or you may decide not to hand it in to me at all. You will be asked to complete another column on the Thought

Record again (for 10 minutes) once you finished writing. We will conclude our session with a chat about test anxiety (for 15 minutes).
Stage 2: You are asked to complete the Thought Record for the next 4 days after our meeting and send to me the results by interoffice mail. You will be given an assigned code to ensure anonymity. I will be the only person receiving the data.
Stage 3: After taking the test, you are invited for another 15 minute face to face interview to discuss the intervention.

You are given a Participant Consent Form to sign during our first meeting. Consent should be given before you can proceed.

5. Are there any risks in taking part?

There are no identified risks with the proposed study. A certain degree of test anxiety is normal before a test. The study will be conducted well in advance of the actual test so that it does not interfere with your test or test preparation. However, if you feel uncomfortable during the study, you can withdraw at anytime and ask me to remove your data. Risks associated with expressive writing have not been identified; but if you feel you are affected by writing your thoughts, there are counsellors you can access. The study is not offering treatment or counselling and does not make an assessment of your writing skills or thoughts.

6. Are there any benefits in taking part?

Expressive writing is known to allow one to adapt to test anxieties. According to the literature, release of inhibition by expressive writing allows one to adapt to ruminating thoughts about the impending test. However, we cannot guarantee that you will pass your exam after taking part in this study without further exam preparation. There will be no compensatory payout or gifts for participating.

7. What if I am unhappy or if there is a problem?

If you are unhappy, or if there is a problem, please feel free to let us know by contacting [John Yee, 647-393-2228] and we will try to help. If you remain unhappy or have a complaint which you feel you cannot come to us with then you should contact the Research Governance Officer at ethics@liv.ac.uk. When contacting the Research Governance Officer, please provide details of the name or description of the study (so that it can be identified), the researcher(s) involved, and the details of the complaint you wish to make.")

8. Will my participation be kept confidential?

The data collected will be stored securely in a password-protected device which will be kept in a locked cabinet which only the researcher will have access to. A code will be assigned instead of your name, and no real names will be used in the writing of the study. The data will be kept no later than December 31, 2019. After that period, it will be destroyed. Anonymised research data will be kept for 5 years.

9. What will happen to the results of the study?

The study will help students identify why they have test anxiety and try to work towards managing it as part of their exam preparation. It will be useful for educators as well as students. I will provide a copy of the study upon request. While the results may be used for publications, the information will be anonymous and participants or institution will not be identifiable.

10. What will happen if I want to stop taking part?

You can withdraw from the study at anytime without explanation. The journal and Thought Record collected up to the time of your withdraw will be destroyed or returned to you.

11. Who can I contact if I have further questions?

If you have further questions, you can contact me, or you can also contact the Research Participant Advocate at the University of Liverpool with any question or concerns you may have. You can also contact the Legal Department, Toronto Police Service.

My contact details are:
John Yee, 647-393-2228 Email: johnyee@email.com

The contact details of the Research Participant Advocate at the University of Liverpool are: 001-612-312-1210 (USA number)
Email address liverpoolethics@liverpoolonline.com

Please keep a printed copy of this information sheet.

Appendix F: Thought Records

Thought Record for Participant A

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Apprehension	75	65	65	65	65	65
Afraid to change	35	35	35	35	35	35

Thought Record for Participant B

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Uncertainty	10	5	5	5	5	5
Procrastination	90	90	90	90	90	90
Fear of failing again	10	10	10	10	10	10
Disappointment	100	100	100	100	100	100
Bad concentration	60	60	60	60	60	60
Family distraction	60	60	60	60	60	60

Thought Record for Participant C

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Procrastination	80	70	60	50	50	50
Fear	70	65	50	45	45	45
Apprehension	90	85	40	40	40	40
Anxiety	90	85	45	45	45	45
Uncertainty	80	80	70	75	75	75

Thought Record for Participant D

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Fear	60	55	55	65	75	75
Apprehension	40	35	35	50	50	50
Anxiety	85	75	75	90	95	95
Confidence issues	80	75	75	90	95	95

Thought Record for Participant E

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Sense of Failure	75	75	75	75	75	75
Lack of Knowledge	50	50	40	40	40	50
Uncertainty	95	95	95	95	95	95
Need to improve	95	95	95	90	90	95
Lack of Confidence	95	95	95	90	90	95

Thought Record for Participant F

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Uncertainty	95	85	80	75	75	75
Fear of Failure	10	8	6	5	5	5

Thought Record for Participant G

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Uncertainty	50	25	25	25	25	25

Thought Record for Participant H

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Fear	50	40	20	20	20	20
Cost	50	40	20	20	20	20
Lack of Motivation	50	40	20	20	20	20
Confidence	50	45	45	45	45	45
Lack of Sleep	25	15	20	20	20	20
Lack of Exercise	25	20	20	20	20	20

Appendix G: Total Offsetting Statements and Negative Statements

Total Offsetting Statements and Negative Statements in Expressive Writing Journals

Offsetting Statements from Journal	Subject A	Subject B	Subject C	Subject D	Subject E	Subject F	Subject G	Subject H
Positive Statements	5		9	7	2	1	3	6
Positive Attributions	8		3			2		
Need for Improvement	2				2			2
Realization of Strength	1			2				2
Strategy Statements			5					1
Total Offsetting Statements	16	0	17	9	4	3	3	11
Negative Statements from Journal	5	4	7	47	5	7	0	1

Appendix H: Coding of Journals, Interviews, and Thought Records

Note: This appendix has been redacted.

Participant A's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant A

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Apprehension	75	65	65	65	65	65
Afraid to change	35	35	35	35	35	35

Coding of the Thought Record

First itemized cause of test anxiety: Apprehension

Number of days Participant A was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Second itemized cause of test anxiety: Afraid to Change.

Number of days Participant A was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Participant B's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant B

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Uncertainty	10	5	5	5	5	5
Procrastination	90	90	90	90	90	90
Fear of failing again	10	10	10	10	10	10
Disappointment	100	100	100	100	100	100
Bad concentration	60	60	60	60	60	60
Family distraction	60	60	60	60	60	60

Coding of the Thought Record

First itemized cause of test anxiety: Uncertainty

Number of days Participant B was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Second itemized cause of test anxiety: Procrastination

No decrease in intensity after expressive writing during Day 1

Third itemized cause of test anxiety: Fear of Failing Again.

No decrease in intensity after expressive writing during Day 1

Fourth itemized cause of test anxiety: Disappointment

No decrease in intensity after expressive writing during Day 1

Fifth itemized cause of test anxiety: Bad Concentration

No decrease in intensity after expressive writing during Day 1

Sixth itemized cause of test anxiety: Family Distraction

No decrease in intensity after expressive writing during Day 1

Participant C's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant C

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Procrastination	80	70	60	50	50	50
Fear	70	65	50	45	45	45
Apprehension	90	85	40	40	40	40
Anxiety	90	85	45	45	45	45
Uncertainty	80	80	70	75	75	75

Coding of the Thought Record

First itemized cause of test anxiety: Procrastination

Number of days Participant C was able to maintain the decrease in anxiety of this item: until the end of the fifth day.

Second itemized cause of test anxiety: Fear

Number of days Participant C was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Third itemized cause of test anxiety: Apprehension

Number of days Participant C was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Fourth itemized cause of test anxiety: Anxiety

Number of days Participant C was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Fifth itemized cause of test anxiety: Uncertainty

Number of days Participant C was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Participant D's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant D

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Fear	60	55	55	65	75	75
Apprehension	40	35	35	50	50	50
Anxiety	85	75	75	90	95	95
Confidence issues	80	75	75	90	95	95

Coding of the Thought Record

First itemized cause of test anxiety: Fear

Number of days Participant D was able to maintain the decrease in anxiety of this item: Until day 2, then she had a relapse by day 5.

Second itemized cause of test anxiety: Apprehension

Number of days Participant D was able to maintain the decrease in anxiety of this item: Until day 2, then she had a relapse by day 5.

Third itemized cause of test anxiety: Anxiety

Number of days Participant D was able to maintain the decrease in anxiety of this item: Until day 2, then she had a relapse by day 5.

Fourth itemized cause of test anxiety: Confidence Issues

Number of days Participant D was able to maintain the decrease in anxiety of this item: Until day 2, then she had a relapse by day 5.

Participant E's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant E

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Sense of Failure	75	75	75	75	75	75
Lack of Knowledge	50	50	40	40	40	50
Uncertainty	95	95	95	95	95	95
Need to improve	95	95	95	90	90	95
Lack of Confidence	95	95	95	90	90	95

Coding of the Thought Record

First itemized cause of test anxiety: Sense of Failure

No decrease in intensity after expressive writing during Day 1

Second itemized cause of test anxiety: Lack of Knowledge

Number of days Participant E was able to maintain the decrease in anxiety of this item: Until day 4, then she had a relapse by day 5.

Third itemized cause of test anxiety: Uncertainty

No decrease in intensity after expressive writing during Day 1

Fourth itemized cause of test anxiety: Need to Improve

Number of days Participant E was able to maintain the decrease in anxiety of this item: Until day 4, then she had a relapse by day 5.

Fifth itemized cause of test anxiety: Lack of Confidence

Number of days Participant E was able to maintain the decrease in anxiety of this item: Until day 4, then she had a relapse by day 5.

Participant F's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant F

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Uncertainty	95	85	80	75	75	75
Fear of Failure	10	8	6	5	5	5

Coding of the Thought Record

First itemized cause of test anxiety: Uncertainty

Number of days Participant F was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Second itemized cause of test anxiety: Fear of Failure

Number of days Participant F was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Participant G's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant G

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Uncertainty	50	25	25	25	25	25

Coding of the Thought Record

First itemized cause of test anxiety: Uncertainty

Number of days Participant G was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Participant H's Coding of Journal, Interview Transcript, and Thought Record

Thought Record for Participant H

Adverse Thoughts	Intensity of Mood as a %	Re-rank Mood as a % Day 1	Re-rank Mood as a % Day 2	Re-rank Mood as a % Day 3	Re-rank Mood as a % Day 4	Re-rank Mood as a % Day 5
Fear	50	40	20	20	20	20
Cost	50	40	20	20	20	20
Lack of Motivation	50	40	20	20	20	20
Confidence	50	45	45	45	45	45
Lack of Sleep	25	15	20	20	20	20
Lack of Exercise	25	20	20	20	20	20

Coding of the Thought Record

1. First itemized cause of test anxiety: Fear

Was there a decrease in anxiety of this item after expressive writing during the first day? Yes

Number of days Participant H was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

2. Second itemized cause of test anxiety: Cost

Was there a decrease in anxiety of this item after expressive writing during the first day? Yes

Number of days Participant H was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

3. Third itemized cause of test anxiety: Lack of Motivation

Was there a decrease in anxiety of this item after expressive writing during the first day? Yes

Number of days Participant H was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

4. Fourth itemized cause of test anxiety: Confidence

Was there a decrease in anxiety of this item after expressive writing during the first day? Yes

Number of days Participant H was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

5. Fifth itemized cause of test anxiety: Lack of Sleep

Was there a decrease in anxiety of this item after expressive writing during the first day? Yes

Number of days Participant H was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

6. Sixth itemized cause of test anxiety: Lack of Exercise

Was there a decrease in anxiety of this item after expressive writing during the first day? Yes

Number of days Participant H was able to maintain the decrease in anxiety of this item: Until the end of the fifth day.

Appendix I: Research Agreement with Toronto Police Service

THIS SECURITY AND CONFIDENTIALITY AGREEMENT of Personal Information for Research Purposes made in duplicate this 24th day of April, 2019.

BETWEEN

JOHN YEE
(the "Researcher")

-and-

CHIEF OF POLICE, TORONTO POLICE SERVICE
(the "TPS")

WHEREAS this Security and Confidentiality Agreement of Personal Information for Research Purposes ("Agreement") is consistent with R.R.O. 1990, Reg. 823 and O Reg. 172/16, made under the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. M.56, as amended ("*MFIPPA*");

AND WHEREAS, for the purposes of this Agreement, "personal information" has a meaning that is consistent with s. 2 of the *MFIPPA*;

AND WHEREAS, the Researcher has requested permission to post a notice in Court Services recruiting for off-duty participation in a study of the application of expressive writing to alleviate test anxiety;

NOW, THEREFORE, the Researcher UNDERSTANDS AND PROMISES TO ABIDE BY the following terms and conditions:

1. The Researcher acknowledges that participation is strictly voluntary and the TPS will not compel members/officers to participate.
2. The Researcher will not use any personal information collected for any purpose other than the research purpose, described immediately below, without the prior written authorization of the TPS:

   The objective of the research is to determine the effect expressive writing has on what each participant defines as their test anxiety; to determine the types of symptoms that are readily adaptable and the types of symptoms that are less readily adaptable after applying expressive writing once for 25 minutes. The research will also explore the correlation between certain symptoms and planning and preparing for a test after applying expressive writing once for 25 minutes. Alleviating the symptoms due to test anxiety could allow the participants to prepare and study more efficiently for a test. Being better prepared may, in turn, reinforce the lowering of test anxiety during the actual writing of the test.

3. The Researcher will give access to personal information in a form in which the individual to whom it relates can be identified only to those individuals immediately associated with the research.
4. Before disclosing personal information to any person referred to in item 3, the Researcher will enter into a Confidentiality Agreement (appended herein as Appendix 'A') with said person to ensure that they will not disclose said information to any other person. Every executed Confidentiality Agreement shall be attached to and form part of this Agreement.
5. The Researcher and the persons referred to item 3, above will keep notes relating to the data collection in a physically secure location, access to which is provided only to the Researcher and to the persons mentioned above.
6. In consideration of the TPS approving the Researcher's request, the Researcher hereby acknowledges and agrees to destroy all personal identifiers in the information no later than December

31, 2019. The Researcher, by signing this Agreement, confirms that he/she will provide the TPS with written confirmation, once the destruction has taken place. The written confirmation shall be provided to the TPS utilizing the form appended herein as Appendix 'B'. The completed form should be sent via regular mail to the Senior Planner, Strategy Management Unit – Strategic Planning, Toronto Police Service, 40 College Street, Toronto, Ontario, M5G 2J3 or via email to research.requests@torontopolice.on.ca.

7. Without exception, the Researcher will not, either directly or indirectly, contact any individual to whom the personal information relates and will also ensure that no information is used or disclosed that would personally identify the individual to whom the information relates.

8. The TPS has the right to review the findings of the research prior to any publication to ensure that the conditions set-out in this Agreement have been met. Should any of the conditions under this Agreement, concerning the use of personal information, be breached, the TPS retains the right to edit any non-compliant information from the research prior to publication.

9. The Researcher will notify the TPS in writing immediately upon becoming aware that any of the conditions set out in this Agreement have been breached.

10. The Researcher agrees to provide the TPS with a copy of the final research paper/report for its information. The copy should be sent to the Senior Planner, Strategy Management Unit – Strategic Planning, Toronto Police College, 40 College Street, Toronto, Ontario, M5G 2J3.

11. If the Researcher deems an amendment to this Agreement requires amendment subsequent to its signature, the Researcher shall submit a written request to the Senior Planner, Strategy Management Unit – Strategic Planning, Toronto Police College, 40 College Street, Toronto, Ontario, M5G 2J3 outlining the amendment required and the explanation for said amendment. The written request for an amendment to this Agreement shall be submitted thirty (30) days prior to the amendment taking effect and shall be agreed to by the TPS and the Researcher.

IN WITNESS WHEREOF the parties hereto have signed this Agreement.

Researcher

JOHN YEE

Print Name

205 WYNFORD DR., UNIT 2204
TORONTO, ONTARIO, M3C 3P4

Address & Telephone No.

Representative of TPS

CARROL WHYNOT, SR. PLANNER, 88971

Print Name, Rank & Badge No.

Toronto Police Service

40 College Street, Toronto, Ontario, Canada. M5G 2J3
(416) 808-2222 FAX (416) 808-8202
Website: www.TorontoPolice.on.ca

Mark Saunders
Chief of Police

File Number: .....

April 26th, 2019

Ethics Committee
University of Liverpool
Foundation Building
Brownlow Hill
Liverpool L69 7ZX
United Kingdom

To Whom It May Concern

Re: Research Project – The application of expressive writing to alleviate test anxiety: A case study of Toronto Police exams

This is to confirm that the Toronto Police Service has reviewed the above noted research project proposed by John Yee, as part of the requirements for a Doctorate in Education.

The Toronto Police Service has approved member participation in the research project, and the Police Service and Mr. Yee signed a Research Agreement on April 24th, 2019, setting out the terms and conditions for the proposed research project. The participation of Service members in in this research project will be strictly voluntary and the Service will not compel members to participate.

If you require any further information, please feel free to contact Ms. Carrol Whynot, Toronto Police Service Senior Planner, at Carrol.Whynot@torontopolice.on.ca.

Sincerely,

Mark Saunders

Mark Saunders, O.O.M.
Chief of Police

Appendix J: Ethics Approval from University of Liverpool

Dear John Yee,	
I am pleased to inform you that the EdD. Virtual Programme Research Ethics Committee (VPREC) has approved your application for ethical approval for your study. Details and conditions of the approval can be found below.	
Sub-Committee:	EdD. Virtual Programme Research Ethics Committee (VPREC)
Review type:	Expedited
PI:	
School:	Lifelong Learning
Title:	The application of expressive writing to alleviate test anxiety: A case study of Toronto Police exams
First Reviewer:	Dr. José Reis Jorge
Second Reviewer:	Dr. Deborah Outhwaite
Other members of the Committee	Dr. Lucilla Crosta, Dr. Eileen Kennedy, Dr. Janet Hanson
Date of Approval:	20/06/2019
The application was APPROVED subject to the following conditions:	
Conditions	
1 Mandatory	M: All serious adverse events must be reported to the VPREC within 24 hours of their occurrence, via the EdD Thesis Primary Supervisor.

This approval applies for the duration of the research. If it is proposed to extend the duration of the study as specified in the application form, the Sub-Committee should be notified. If it is proposed to make an amendment to the research, you should notify the Sub-Committee by following the Notice of Amendment procedure outlined at http://www.liv.ac.uk/media/livacuk/researchethics/notice%20of%20amendment.doc.

Where your research includes elements that are not conducted in the UK, approval to proceed is further conditional upon a thorough risk assessment of the site and local permission to carry out the research, including, where such a body exists, local research ethics committee approval. No documentation of local permission is required (a) if the researcher will simply be asking organizations to distribute research invitations on the researcher's behalf, or (b) if the researcher is using only public means to identify/contact participants. When medical, educational, or business records are analysed or used to identify potential research participants, the site needs to explicitly approve access to data for research purposes (even if the researcher normally has access to that data to perform his or her job).

Please note that the approval to proceed depends also on research proposal approval.

Kind regards,

Lucilla Crosta

Chair, EdD. VPREC