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Anxiety, Depression, and Persistent Complex Bereavement among the Families of the Enforced Disappeared and Deceased during the Lebanese Civil War

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Abstract

The purpose of this research was to study mental health implications among the families of the deceased and forced disappeared during the Lebanese Civil War. The aim was to compare the families on the following variables: anxiety, depression and persistent complex bereavement. A purposeful and convenient sample of 26 Lebanese individuals participated in the study, 13 of whom had lost a family member to death, and 13 others who had lost a family member to forced disappearance. Data were collected using a survey that included a demographic questionnaire, the “Beck Anxiety Inventory”, the “Beck Depression Inventory”, and the “Inventory of Complicated Grief”. Between-subjects t tests were used to test the hypotheses. As hypothesized, the results showed that individuals who had lost a core family member to enforced disappearance scored significantly higher on symptoms of anxiety, symptoms of depression, and symptoms of complicated grief than those who had lost a family member to death.

Keywords: enforced disappearance, ambiguous loss, depression, anxiety, complicated grief

1. Introduction

As defined by the International Convention for the Protection of all Persons from Enforced Disappearance, enforced disappearance is the arrest, detention, abduction, or any other form of deprivation of liberty by agents of the state or by persons or groups of persons acting with the authorization, support or acquiescence of the state, followed by a refusal to acknowledge the deprivation of liberty or by concealment of the fate of the disappeared

person, which place such a person outside the protection of the law (Yakintho, 2015).

Although such practice constitutes a breach to a variety of human rights thousands of enforced disappearances have nonetheless globally occurred (Solar, 2021). This research intends to study the enforced disappearance and its psychological correlates within the Lebanese context.

Since the beginning of the Lebanese Civil War in 1975, and for almost two decades, the Lebanese have suffered

from a lethal combination of internal and regional conflicts, leaving around 150,000 persons dead, 800,000 displaced, and 17,000 forced disappeared (International Committee of the Red Cross, 1999). Years following the civil war, the Lebanese government did not provide any information regarding disappearances, and although addressed by international organizations with steps towards resolving the disappearances problem, the situation was not settled (Sherry, 1997). Determined to know the truth about their loved ones, and position the cause on the government's agenda, the families of the missing formed a Committee of the Families of the Kidnapped and Disappeared in Lebanon (CFKDL) in 1982 powered with different forms of advocacy and street pressure. To this day, unfortunately, the families continue to wait for news on their missing loved ones' whereabouts, with faint expectations on finding them alive (Maalouf, 2019).

Such occurrence of loss without confirmation and closure, is referred to as ambiguous loss. Defined as the unclear physical or psychological loss of a loved one, and endured without verification, ambiguous loss hinders coping and causes psychological problems and impairment (Boss, 2004). Due to the lack of confirmation and vagueness characterizing such loss, individuals are often confused, and unable to begin their grieving process. Ambiguous loss defies resolution, it is a loss in which individuals are denied the needed closure, and as such, its psychological implications are wide-ranging (Baraković et al., 2014). Prior research indicates that such loss causes prolonged grief and is associated with depression and anxiety symptoms. A study by Barakovic et al. (2014), based on a sample of women displaced during the war in Bosnia and Herzegovina, who had war missing family members, showed that these women have significantly higher results of anxiety, depression and somatization when compared to women displaced during the war, but with no missing family members (Baraković et al., 2014).

Although some studies showed that the symptoms of depression and anxiety among the families of the forcibly

disappeared are more severe than those observed in people who faced a loved one's death (Baraković et al., 2014; Testoni et al., 2020), other studies hypothesized otherwise. In one cross-sectional study on prolonged grief among a sample of relatives of disappeared persons in Columbia, no differences were found in terms of depression and prolonged grief between the sample of bereaved individuals when compared to a sample of those who lost a significant other due to disappearance (Heeke et al., 2015).

Hence, the understanding of psychological implications of ambiguous loss, especially when compared to confirmed loss, is still limited, and a need to further investigate it was necessary.

2. Literature Review

The purpose of this study was to compare the families of the missing and forced disappeared with families who have lost a loved one on the variables of symptoms of anxiety, symptoms of depression and symptoms of persistent complex bereavement. This chapter focuses on the review of literature of the study in order to provide the needed context to establish the study's hypotheses.

1.1 The Lebanese Context of Enforced Disappearance

In Lebanon, from 1975 until 1990, Lebanese factions, Palestinian militias, the Syrian military, and the Israeli military waged wars (Elghossain, 2020). It is considered one of the most long-lasting and destructive wars any country has endured, where the conflicts have left some 150,000 people dead, and 17,000 missing (International Committee of the Red Cross, 1999).

For the Lebanese, the "disappearances" phenomenon is a manifestation of the civil war and the Syrian presence in the country, and although Lebanese leaders acknowledged that the Syrian regime had imprisoned Lebanese in Syria, the Syrian government did not provide information regarding disappearances (Elghossain, 2020). Lebanese

and Syrian government officials were addressed by the Human Rights Watch with expressions of concern and steps recommended to resolve the problem of the “disappearances”, but letters remain unanswered, and the persons continue to be detained/ disappeared (Sherry, 1997).

In November of 1982, a Committee of the Families of the Kidnapped and Disappeared in Lebanon (CFKDL) was formed and was spirited with different activism forms to place the cause on the decision makers’ political agenda Touma, Zaghbour, 2020).

And after decades of activism and struggle, Lebanese authorities passed the Law 105 in 2018 on the right to truth of the families of the disappeared, the right to know the fate of the missing and their whereabouts, and the location of their detention and remains (Touma, Zaghbour, 2020).

As hopes for finding the missing loved ones alive dimmed, the call shifted from the release of the detainees to a call for truth. To this day, the families of the “disappeared” continue to wait for official confirmation and news of the life and death of their relatives (Maalouf, 2019).

1.2 Ambiguous Loss

The forced disappearance does not only affect disappeared individuals, but their families as well. The families of the missing persons are plunged into a state of distressing uncertainty that severely disrupts their lives (International Committee of the Red Cross, 2020). This phenomenon of loss without confirmation, and potentially without closure, resembles an ambiguous loss. Ambiguous loss is an unclear loss of a loved one either physically or psychologically, endured without official verification or community validation (Boss, 2004). Due to constraints that block coping- beyond the control of the individual-ambiguous loss causes psychological problems, on a personal and family level. Such loss is confusing, it makes people perplexed and immobilized. Their problem solving and grieving are hindered as they cannot know whether the loss is final or temporary (Boss, 1999).

Beyond the lack of information about the missing person’s whereabouts, there is no official verification that anything is lost; there is no death certificate, no body, and no funeral (Boss, 1999). Due to this existing uncertainty around such loss, individuals are denied of rituals important to grieving and cannot begin their grieving process (Baraković et al., 2014).

Those who suffer such loss, deal with an array of psychological implications different from a clear-cut loss. The most apparent usual loss is death; it is a loss validated by rituals in which everyone agrees that a permanent loss has occurred, and the grieving process can begin. Most people deal with death with what is called normal grieving, a mourning that is meant to end. Fewer people deal with death with what is called complicated grieving; in the case of complicated grieving, the person remains stuck on the missing loved one. In the event of an ambiguous loss, the complicated grief is considered common given the complexity of the situation and the inability to achieve the detachment necessary for normal closure. The inability to resolve the loss is not related to personality defects, rather external factors (Boss, 1999).

1.3 Mental Health Correlates Post Disappearance

Several studies indicated that the enforced disappearance of a family member, has a significant negative impact on the mental health of the missing person’s family members. The prolonged and complicated grieving resulting from the ambiguous loss is manifested in symptoms of anxiety, depression, and somatization (Baraković et al., 2013).

Of the major sources of the distressing uncertainty, are avoidance and active search. Families of the missing usually resist the idea of the missing person’s death and have a strong fear of the permanent loss of a loved one. The family members would spare no effort or resource, to acquire any information on the whereabouts of the missing relative. Driven by an anxiety to know, they may resort to sources that are likely to tell them what they want and need

to hear which could carry the risk of false hope and prevent the psychological readjustment necessary to cope with such absence (International Committee of the Red Cross, 2020).

The absence of the loved one becomes an inescapable feature of daily life. Each reminder of the missing person no matter how small, stimulates a state of unnatural alertness and worries, be it clothes, friends, important dates, or places the missing person usually went to. This constant worrying and intense anxiety affect aspects of daily life such as concentration, sleep, and other. They could also cause somatic problems such as chest pain, headaches, and muscular tension (International Committee of the Red Cross, 2020).

Several studies showed that, even years after war and disappearance, family members of the disappeared individuals, exhibit feelings of depression and anxiety, with symptoms more severe than those observed in people who faced a loved one's death (Lenferink et al., 2019). In one study by Zvizdic and Butollo on the post-war related experiences among a sample of 816 adolescents who have lost their fathers in Bosnia-Herzegovina- to confirmed and non-confirmed loss- it was found that those whose fathers had disappeared and were still missing displayed the highest levels of depressive reactions and were more exposed to war-related traumatic events (Zvizdic & Butollo, 2001). Another study conducted on the long-term psychosocial consequences among a sample of 119 individuals who are first-degree relatives of people detained-disappeared or executed for political reasons in Chile more than 20 years post-disappearance showed that anxiety disorders' prevalence rates were significantly higher among the relatives of the disappeared (Pérez-Sales et al., 2000).

Furthermore, in other research on ambiguous loss, it appeared that unlike cases of bereavement and grief following a loved one's death, those who suffer ambiguous loss experienced their grief as disenfranchised (Thogersen & Glintborg, 2021). In this research, implications of

ambiguous loss were assessed on a sample of individuals whose spouses are Acquired Brain Injury (ABI) survivors, in terms of ambiguous loss, physically present but mentally absent. This study showed that such individuals received less social recognition, sympathy, and support on their right to grief given there is no confirmed death. The social and cultural aspects to grief should not be undermined or overlooked, as such lack of social recognition in the cases of ambiguous loss worsens the reactions to loss and contributes to confusion among these individuals (Thogersen & Glintborg, 2021). The previously mentioned term "disenfranchised grief" refers to a loss that is not openly acknowledged or socially mourned- this grief does not only occur when someone dies and poses emotional processing and expression difficulties (Albuquerque et al., 2021). Such non-death losses such as forced disappearance, incarceration, and military deployment cause ambiguous grief, and the lack of recognition around this form of loss and grief undermines the bereaved person's ability to move on and means that their grief is more likely to be disenfranchised (Knight & Gitterman, 2019).

Research however on ambiguous loss and its mental health implications is still limited. Although unconfirmed loss is associated with complicated grief, somatization, depression, anxiety, PTSD, and substance abuse, some prior studies did not find statistically significant results with regards to psychopathology between confirmed and unconfirmed loss. One cross-sectional study among a Columbian sample of 295 individuals who were relatives of deceased and disappeared individuals indicated that there are no differences between the two groups when it comes to traumatic exposure, PTSD, anxiety, and symptom severity of prolonged grief disorder (Heeke et al., 2015). Another exploratory study conducted in Honduras, which examined the psychosocial effects of political assassination and forced disappearance on surviving child family members, did not find significant differences of depression levels between the two groups (Munczek & Tuber, 1998).

Furthermore, in a systematic review of 15 quantitative peer-reviewed articles that assessed psychopathology among family members of missing persons- mainly PTSD and depression- the comparative review showed no differences in psychopathology levels between relatives of missing and deceased persons; even in research where psychopathology levels differed between relatives of the missing and relatives of the deceased, not all psychopathology indices differed significantly (Lenferink et al., 2019). Another research that found no statistically significant differences in psychopathology levels between family members of the missing or deceased, is one that was conducted on a sample of 14 adult children of service men missing in action and killed in action during the Vietnam War. The PTSD prevalence rates in this research had no statistical difference levels between the two groups (Reisman, 2003). Also, when social dysfunction and somatic symptoms were compared on a sample of women whose husbands were missing or killed in the 1992-1995 war in Bosnia and Herzegovina, no statistically significant differences were found across the two groups (Powell et al., 2010). In this same research, in terms of “existential grief”, no statistical differences were also found between the two groups of women.

Based on the above, we concluded that such mixed previous results limit our understanding on the concept of ambiguous loss; accordingly, correlates of psychopathology among the families of the missing should be further investigated to obtain more insights into its nature and prevalence (Lenferin et al. 2019). Therefore, the purpose of our study was to shed more light on this topic by hypothesizing the following:

Lebanese family members of the enforced disappeared during the Lebanese civil war (1975-1990) show

- higher scores on symptoms of anxiety (measured by Beck Anxiety Inventory) compared to Lebanese families of deceased members during the same time period.

- higher scores on symptoms of depression (measured by Beck Depression Inventory) compared to Lebanese families of deceased members during the same time period.

- higher scores of persistent complex bereavement (measured by the Inventory of Complicated Grief) compared to Lebanese families of deceased members during the same time period.

3. Methods

This chapter lays out the research methodology that was used to execute this study. It includes the description of the participants, a detailed description of the measures used, the procedure followed to carry out the study, and an explanation of the data analysis.

3.1. Research Design

This study was a quantitative one based on a survey design applying cross sectional research methods to examine the proposed hypothesis. In this study, a between-subjects t-test was used to compare the scores of the two groups and determine whether there exists statistical evidence that group results are significantly different as hypothesized. An equivalent number of participants in each group was allocated to ensure a balanced design and decrease the possibility of threatening the validity of the t-test.

3.2. Participants

The sample size initially chosen from a convenient purposeful sample was fifty adult Lebanese individuals who are family members of enforced disappeared persons and fifty adult Lebanese individuals who are family members of deceased persons. The reason for choosing this sample size was based on the review of other psychological research conducted (Powell et al. 2010; Renner et al. 2021) using similar sample sizes when studying such population across these variables.

However, due to the situation around COVID-19 and the inability to reach people in person, as well as difficulty finding and reaching this specific population, the sample size reached was 26 individuals consisting of 13 participants in each group.

One inclusion factor here was the time of the disappearance/death, which was between 1975 and 1990, during the Lebanese civil war. Another inclusion factor in this research was the relationship to the disappeared. The sample only included individuals who had close family relationships to the disappeared, primarily spouses, parents, and adult children. The reason behind this is that the research intended to shed light on boundary ambiguity and its psychological implications on core family members directly affected by the loss. The aim was to obtain a sample size consisting of equal participants among the two groups. The contact information for the participants were retrieved from an International NGO after the participants gave their consent. The individuals were contacted over the phone, and briefed on the research, the survey link was then shared with them online. The data analyzed were collected from a sample of thirteen individuals who had lost a family member to death and thirteen individuals who had lost a family member to disappearance in the Lebanese civil war.

3.3. Materials

The survey was prepared in the Arabic and English languages; however, all the participants took the Arabic version of the survey. It included a participant information letter, demographic questions, a consent form, and three psychological self-report measures.

The psychological measures were: The Beck Anxiety Inventory, The Beck Depression Inventory, and the Inventory of Complicated Grief. All the tests were translated to Arabic from their original English language; the process involved forward and backward translation.

3.3.1. Demographic Form

This form was placed at the end of the survey and was intended to collect demographic information about the participants which are age, gender, marital status, residential location, and education level.

3.3.2. Beck Depression Inventory

The Beck Depression Inventory (BDI) is among the most popular and most widely used self-report scales for screening for depression and assessing its severity in clinical practice and among the general population (Lee et al., 2017).

The BDI has good psychometric properties and is considered a reliable tool for measuring the severity of symptoms of depression (Lee, 2017). In one study of the validity and reliability of the BDI across a sample of 1,072 Korean adolescents, the test was found to have good internal consistency with a Cronbach's alpha score of .89; the items were significantly correlated with the total score. It also had a strong rate of concurrent validity with a score of .75 when compared to other self-report measures (Lee, 2017).

The BDI is a 21-item scale inventory, each of the items is rated on a 4-point scale; it takes around 15 minutes to complete. Scores above 10 up to 18 indicate mild to moderate depression while scores from 19 up to 29 indicate moderate to severe depression, and scores above 29 up to 63 indicate severe depression.

3.3.3. Beck Anxiety Inventory

The Beck Anxiety Inventory (BAI) is among the most widely used self-report instruments for assessing clinical anxiety (Toledano-Toledano et al., 2020). It was initially developed to assess for unique aspects of anxiety disorders that differ from depression (Oh et al., 2018).

The BAI has very good psychometric properties; the test's overall internal consistency is excellent with an alpha coefficient of .90, and it has a high test-retest correlation ($r = .67$). (Toledano-Toledano et al., 2020). On tests of convergent and discriminant validity the BAI does better than other measures of anxiety (Fydrich et al., 1992).

The BAI assesses symptoms of anxiety based on 21 items rated on a 4-point Likert scale from 0 (not at all), 1 (Mildly, but it didn't bother me much), 2 (Moderately – it wasn't pleasant at times), to 3 (severely – it bothered me a lot) (Oh, H., et al, 2018). The BAI anxiety levels are scored using ordinal categories: minimal (1–5 points), mild (6–15), moderate (16–30) and severe (31–63) (Toledano-Toledano, et al, 2020).

3.3.4. *Inventory of Complicated Grief*

The inventory of Complicated Grief (ICG) is a scale designed to measure maladaptive symptoms of loss and assess for indicators of pathological grief. The test assesses for symptoms of grief that predict long-term functional impairments (Prigerson et al. 1995).

The ICG is a self-report measure consisting of 19 items related to bereavement thoughts and behaviours rated from “never” to “always” on a 5-point Likert scale.

The Inventory of Complicated Grief has good psychometric properties. It has very good internal consistency with an alpha coefficient of .94 and has good test- retest reliability ($r=.80$). The ICG has convergent and criterion validity and is considered a sound assessment tool for complicated grief (Prigerson, 1995). Across a Norwegian sample, the ICG was found to have high reliability and results support the use of the scale for bereaved populations (Thimm et al. 2019).

3.4. Procedure

First, a pilot study was conducted with 10 individuals, five of which had lost a family member to death and five others who had lost a family member to enforced disappearance during the war. The pilot study ensured that participants had no confusion with the survey given or problems with the procedure.

The pilot tested the reliability of the scales that were utilized in the study in the sample. The Cronbach alpha of the pilot was .951 for the 21-items of the Beck Anxiety Inventory that measures symptoms of anxiety. The Cronbach alpha of the pilot was .888 for the 21-items of the Beck Depression Inventory that measures symptoms of depression. And the Cronbach's alpha of the pilot was .924 for the 19 items of the Inventory of Complicated Grief that assesses indicators of pathological grief.

Once the pilot study was finalized and the reliability of the scales was determined, individuals who had lost family members to death and enforced disappearance during the Lebanese civil war were contacted to take the survey after providing their consent for participation. Data were collected in February 2022 from twenty-six individuals, and statistically analyzed using the Statistical Package for the Social Sciences to determine whether there are significant differences between the means of the two groups.

4. Results

The purpose of this study was to determine whether there are statistically significant differences in symptoms of anxiety, symptoms of depression, and symptoms of complicated grief between the families of the deceased and the families of the enforced disappeared during the Lebanese civil war. This chapter includes the reliability findings of the scales and the findings contributing to the hypothesis testing using the Statistical Package for the Social Sciences (version 26).

4.1. Reliability Testing

The reliability coefficients were calculated for each of the 3 scales used in this research. To verify the internal reliability of each of the scales, Cronbach's alpha was generated on SPSS. The reliability coefficient for the 21-item Beck Anxiety Inventory (BAI) gave a Cronbach's alpha of .951. The reliability coefficient of the 21-item Beck Depression Inventory (BDI) gave a Cronbach's alpha of .903. The reliability coefficient of the Inventory of Complicated Grief (ICG) gave a Cronbach's alpha of .913.

4.2. Hypothesis Testing

Hypothesis 1: Lebanese families of the enforced disappeared during the Lebanese civil war (1975-1990) will show higher scores on symptoms of anxiety (measured by Beck Anxiety Inventory) compared to Lebanese families of deceased members during the same time period.

To test this hypothesis, a between subjects t-test was run to show the presence or absence of a significant difference in symptoms of anxiety between those who have lost a family member to death and those who have lost a family member to enforced disappearance.

The results indicated that participants who are family members of a deceased person during the civil war have significantly lower BAI scores (7.92 ± 7.974) compared to participants who have a disappeared family member (20.54 ± 16.696).

Results showed that there is a statistically significant difference between those who have lost a family member to death and those who have lost a family member to disappearance $t(17.203) = 2.458, p = .025$. Therefore hypothesis 1 was confirmed.

Hypothesis 2: Lebanese families of the enforced disappeared during the Lebanese civil war (1975-1990) will show higher scores on symptoms of depression (measured by Beck Depression Inventory) compared to

Lebanese families of deceased members during the same time period.

To test this hypothesis, a between subjects t-test was run to show the presence or absence of a significant difference in symptoms of depression between those who have lost a family member to death and those who have lost a family member to enforced disappearance.

The results indicated that participants who are family members of a deceased person during the civil war have significantly lower BDI score (8.31 ± 7.465) compared to participants who have a disappeared family member (19.85 ± 11.239).

Results showed that there is a statistically significant difference between those who have lost a family member to death and those who have lost a family member to disappearance $t(20.863) = 3.083, p = .006$. Therefore hypothesis 2 was confirmed.

Hypothesis 3: Lebanese families of the enforced disappeared during the Lebanese civil war (1975-1990) will show higher scores on symptoms of persistent complex bereavement (measured by the Inventory of Complicated Grief) compared to Lebanese families of deceased members during the same time period.

To test this hypothesis, a between subjects t-test was run to show the presence or absence of a significant difference in symptoms of complicated grief between those who have lost a family member to death and those who have lost a family member to enforced disappearance.

The results indicated that participants who are family members of a deceased person during the civil war have significantly lower ICG score (26.08 ± 13.188) compared to participants who are family members of a forced disappeared person (42.85 ± 14.605).

Results showed that there is a statistically significant difference between those who have lost a family member to death and those who have lost a family member to disappearance $t(23.754) = 3.073, p = .005$. Therefore hypothesis 3 was confirmed.

5. Discussion

The purpose of this study was to determine whether there exists a significant difference in symptoms of anxiety, depression, and complicated grief between family members of individuals deceased and family members of individuals forced disappeared during the Lebanese civil war. The results obtained and presented in Chapter 4 will be discussed in this chapter and linked to existing literature on ambiguous loss.

5.1. Anxiety

It was found that Lebanese individuals who have lost a family member to enforced disappearance in the civil war, have significantly higher symptoms of anxiety than individuals who have lost a family member to death in the same time period, with the majority having severe symptoms of anxiety.

These results are complementary to prior research conducted in 2011 to investigate mental health disorders and stress reactions in a sample of Rwandans exposed to the 1994 genocide (Schaal et al., 2011), and other research conducted with the families of missing persons in the Nepali context following the conflict in Nepal (Robins, 2010); these studies concluded that these individuals experience significantly strong feelings of anxiety. This anxiety can be explained due to a changed family role and social status after the disappearance; many individuals have to take up a new family role (such as the father's role) following the incident of disappearance which is also linked with depression and somatization beyond anxiety (Baraković et al., 2013). Unlike cases of death however, families of the missing

persons have no idea whether the missing individual will return or not and accordingly experience feelings of anxiety due to their inability to anticipate the situation (Boss, 2002).

According to prior research, not only does anxiety occur as a symptom of depression or trauma, but also as an anxious disorder such as generalized anxiety (Pérez-Sales et al., 2000). Often, this anxiety is also paired with chronic somatic symptoms of high intensity (Robins, 2010).

5.2. Depression

As hypothesized, depression levels significantly differed as well between those who had lost a family member to death and those who had lost a family member to disappearance.

The majority of the participants with a war missing family member had moderate depression and around 16% of them had severe depression. On the other hand, none of the participants who had a deceased family member in the war had moderate or severe depression. The vast majority had mood disturbances that are considered normal.

As mentioned earlier, the symptoms of depression faced by individuals who suffer an ambiguous loss are long lasting and intense. They include feelings of immense sadness, disappointment, and dissatisfaction. They also include feelings of discouragement about the future and in some instances suicide ideation. These individuals can feel more irritable, lose interest in others, and even have difficulty taking decisions. The depression symptoms can also be somatic in that such persons get tired more easily yet have more difficulty sleeping; the symptoms can also extend to loss of appetite and weight loss.

The findings in this research are in line with previous research on ambiguous loss and symptoms of depression. Studies on mental health correlates of ambiguous loss within families of missing persons due to war across different countries indicated that these individuals have grave depressive symptoms that persist for years following the loss (Zvizdic & Butollo, 2001).

5.3. Persistent Complex Bereavement

The study results showed that while almost all individuals who had lost a core family member to enforced disappearance had complicated grief, these results were lower by almost 30% for the group of individuals with a deceased family member.

Following the death of a parent, partner, or a child, family members go through a mourning process, which may develop into a pathological grief; in the case of an ambiguous loss however, this process of mourning cannot even begin. Although loss is a challenging experience, most people can successfully adapt to it without developing long-term consequences (Testoni et al., 2020). In cases of loss due to death, the necessary detachment is achieved, the loss is dealt with, and closure is enabled. The primary difference between clear-cut loss and ambiguous loss is the paradox of absence-presence, or what is referred to as “boundary ambiguity”. In cases of ambiguous loss such as enforced disappearances, a definitive separation is not achieved leading to complicated grief due to this unresolved loss and the inability to comprehend the finality of the loss (Testoni et al., 2020).

Although complicated grief only occurs in the minority of bereaved individuals, it commonly occurs in cases of individuals facing an ambiguous loss causing them to be entangled in a futile struggle and freezing their grief process (Shear, 2012). Rather than accepting the inevitability of the loss and learning to emotionally

regulate which is the normal grief process following the event of death, in the event of disappearance the course of grief is altered to the worst preventing the progression of the natural healing process (Shear, 2012).

As hypothesized and shown in this research, those who faced the disappearance of a loved one deal with a lot of complicated grief symptoms that are not common in clear-cut losses; and, these symptoms persist for a long time following the incident, hence, the terminology of persistent complex bereavement. These individuals are in constant feeling of disbelief over the loss, they feel a great deal of loneliness, and feel strongly bitter over the loss even with the passage of time.

6. Conclusion

Ambiguous loss is of complex nature, and a need to further investigate it still exists in order to develop specific interventions and adequate psychological support for the family members dealing with the disappearance of a loved one.

This study showed that the Lebanese family members of enforced disappeared individuals during the Lebanese civil war have significantly higher scores on symptoms of anxiety, depression, and persistent complex bereavement than family members of deceased persons during the same time period. It is worth noting that Lebanon has been assailed by multiple crises, COVID-19, the Blast at the Port of Beirut, and an economic crisis, all of which are known to cause mental health problems such as depression and anxiety (Ng et al., 2013). Yet, amid the ongoing crises, the scores for the family members of deceased individuals were still significantly lower than the scores of those dealing with enforced disappearance on the same symptoms, further reinforcing the need for distinct psychosocial interventions for this population.

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Discriminating the Best from the Rest – An Analysis of the Mental Toughness, Happiness, and Performance in High-Performance Olympic Sailors

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Abstract

Past research linked the level of mental toughness and separately positive emotions to better performance. Sport of sailing combines mental and physical factors, which determine the level of performance. This study examined the differences between the best and the rest of athletes, focusing on mental toughness and happiness measured by Mental Toughness Questionnaire 10-item (MTQ-10), Oxford Happiness Questionnaire (OHQ), and analyzed how they relate to performance in the Olympic high-performance sailing categories as measured by the participation in Medal Race within the last 2 years in 49er, 49erFX, Nacra17 classes. It was found that within 74 active sailors (age range 17-55), happiness was the most significant contributor to performance. Additionally, gender differences were observed. Correlational and regression analyses further confirmed the formulated hypotheses. Details and results are further discussed and critically reviewed.

Keywords: Mental Toughness, Happiness, Sailing Performance, Oxford Happiness Questionnaire, Mental Toughness Questionnaire 10-item

1. Introduction

Mental toughness has been studied in various sports, and it has been associated with many psychological processes across different situations and experiments. Since sports psychology is on the rise and is being extensively studied, research on mental toughness grew, as did its applications. However, its definition and framework remain controversial and ambiguous due to its complexity and its far-reaching effects on other psychological processes,

which were not yet thoroughly investigated (Jones et al., 2002; Gucciardi, 2017). Mental toughness was linked to a positive effect on mental health and performance across many studies, but to this day, it has not been confirmed that the level of performance is based on an athlete's mental toughness or how happiness fits into the mix. This study focuses on the connection between happiness, mental toughness, and performance in the high-performance sailing sample. Hence, this paper needs to establish what mental toughness and happiness are and how they relate to

each other and performance by reviewing the existing literature.

2. Literature Review

2.1 Defining the Concept of Mental Toughness in Sport

Mental toughness does not have a unified definition. However, generally, it reflects the athlete's ability to cope effectively with training, and the competition demands, aiming to remain resilient (Liew et al., 2019). As Brewer (2009, as cited in Liew et al., 2019) noted, *mental toughness* is a psychological factor that separates winners from losers. It is viewed as the essential factor of an athlete's successful outcome in an elite level sport.

The most prevalent framework in the peer-reviewed literature is currently the "four Cs" model, developed from Kobasa's (1979) hardiness theory by Clough et al. (2002). This model emphasizes the notion that athletes can act via the four Cs, challenge, control, commitment, confidence, to achieve a good performance and thus cope with adversities along the way (Gordon & Gucciardi, 2011). They defined mentally tough athletes as more relaxed and less anxious in a competitive setting with a strong self-belief and locus of control over their actions.

The latest mental toughness framework includes positive and negative pressures, adversities or challenges and incorporates dealing with challenges from everyday life (Gordon & Gucciardi, 2011). Gucciardi et al. (2009) developed this framework based on the "integration theory" and thus, invented a definition of mental toughness, which relies on a collection of experientially developed cognitions, behaviours, values and others that influence the person's response to various challenges to consistently achieve their goals (Gordon & Gucciardi, 2011). The present paper uses Gucciardi's (2009) description of mental toughness as the operational definition for this paper.

2.2 Defining the Concept of Mental Toughness in Sport

American Psychological Association (APA) defines *happiness* as an emotion of joy, gladness, well-being, and satisfaction (APA, 2021, p. 482). Generally, this definition applies. However, happiness is also associated with tremendous success and overall well-being and self-awareness (Collins et al., 2018). Nonetheless, the primary connection between sport (physical activity) and happiness starts at the neurobiological level. Dsouza et al. (2020) described several neurotransmitters, which play a role in biological happiness, particularly dopamine, oxytocin, serotonin, endocannabinoids, endorphins, epinephrine, norepinephrine, cortisol, and melatonin.

Moreover, Hawkes (1992) uncovered that, specifically, beta-endorphins are engaged in the process of happiness by increased pain tolerance and providing the athlete with a "high" (proneness to exercise addiction). Beta-endorphins are neuropeptides that engage in pain management in the natural reward circuit and have similar effects on the brain as morphine (Sprouse-Blum et al., 2010). Dfarhud et al. (2014) found that there may be partly genetic effectiveness on happiness, around 35-50%. The amygdala, limbic system and hippocampus play a role in controlling happiness along with the previously mentioned neurotransmitters, adrenal, and pituitary glands (Dfarhud et al., 2014). Though happiness is an emotion, it has a profound biological base connecting it to various brain and body mechanisms, including physical exercise (sport).

2.3 Happiness and Sport Performance

Research on emotions and performance focuses primarily on the positive (happiness) and negative (anger) emotions. However, as Woodman et al. (2009) demonstrated in their research study, happiness did not affect performance. Other studies found varying results to the extent of its intensity, but most research supports a positive role of happiness on performance.

Lyubomirsky et al. (2005) suggested a dual relationship, where happiness influences success and vice versa. Frey and Gullo (2021) dug deeper to understand the direction of the relationship, aiming to answer the causality of the connection between happiness and sport. They found a positive correlation between sports participation and life satisfaction in the younger and older population (Frey & Gullo, 2021). An exciting study of the popular smartphone game "Pokémon GO!" revealed that players who played the game felt significantly happier than those who did not play, and they spent longer periods outside doing the physical activity than non-players (Williams & Slak-Valek, 2019).

Furthermore, Calleja-González et al. (2018) studied happiness in high-performance sport, and they found that athletes in a more positive mood performed significantly better than other athletes in a neutral or negative mood. Denny and Steiner (2009) showed in their research study, it is vital to look at external and internal factors influencing happiness in elite college athletes. They uncovered those internal factors (locus of control, mindfulness, self-restraint, and self-esteem) correlated more strongly with happiness than did the external factors (playing time and scholarship) (Denny & Steiner, 2009).

Additionally, Rathschlag and Memmert (2013) revealed that participants performed significantly better when they recalled anger or happiness. Similarly, Vast et al. (2010) highlighted that excitement and happiness were closely related to concentration. Also, positive emotions led to more performance-relevant focus and automatic physical movements leading to significantly better concentration and performance (Vast et al., 2010). Hopfensitz and Mantilla (2019), in contrast with Rathschlag and Memmert (2013) or Vast et al. (2010), focused on the emotional expression in sports teams, namely the World cup soccer players. They observed that displays of both anger and happiness were positively correlated with team

performance (Hopfensitz & Mantilla, 2019). However, teams that showed more anger scored significantly fewer goals than teams that displayed more happiness, which is an emotion associated with confidence (Hopfensitz & Mantilla, 2019). Since happiness is something, every person strives to achieve, it is essential to properly study it and its role in sport because the two are strongly related.

2.4 Mental Toughness and Sport Performance

Mental toughness is unmistakably associated with sports performance in various disciplines. It is essential to mention that since mental toughness and mental hardiness are similar and highly correlate with each other (Wieser & Thiel, 2014), as Sheard (2009) demonstrated in his study, mental toughness was a stronger predictor of success than was hardiness. Similarly, Madrigal et al. (2017), in their study on the relationship of mental toughness, hardiness, and optimism on coping in collegiate athletics, proved mental toughness to be the strongest predictor of positive coping behaviours. Hence, Wieser and Thiel (2014), due to the hardiness/toughness similarity, observed that football players who played for national teams achieved a bit higher mental hardiness level than did players who did not participate in national teams when they measured the mental hardiness and toughness during the same study (Wieser & Thiel, 2014).

Moreover, Gucciardi et al. (2014) sought to find evidence of mental toughness and its connection to behavioural perseverance. Findings showed a 95% probability that behavioural perseverance and mental toughness are linked. Also, results supported the proposition that mental toughness's behavioural signature is perseverance and persistence (Gucciardi et al., 2014).

Anxiety goes hand in hand with any performance, especially in sport, since there is much pressure. Frequently, performance is a condition for continuing the sport of the athletes' choice and sponsorship hanging on the

line. Kristjánsdóttir et al. (2018) studied elite handball players focusing on their psychological skills, mental toughness, and anxiety levels. Results indicated no differences in levels of psychological skills, anxiety, or mental toughness across different age groups (Kristjánsdóttir et al., 2018). Nonetheless, men's anxiety scores were lower than those of females. Also, younger participants were more likely to be in a national team if they had high mental toughness scores and lower anxiety scores (Kristjánsdóttir et al., 2018). Kristjánsdóttir et al. (2019) showed further differences in mental toughness and anxiety (except for control and somatic anxiety sub-scales) between the national and first and second division players, and also national team having the highest levels of mental toughness, they demonstrated the lowest levels of anxiety within the three levels of competitive football players.

Wu et al. (2021) showed that dispositional mindfulness was positively linked to psychological skills and the overall score of mental toughness, especially in positive effort and dealing with pressure sub-scales. Wilson et al. (2019) found that in their sample, mental toughness was perceived as a coping mechanism together with common humanity, mindfulness, and self-kindness. Mahoney et al. (2014) also discovered that higher levels of positive affect were positively associated with more outstanding mental toughness, and mental toughness was negatively associated with lower levels of negative affect.

Cowden et al.'s (2019) study indicated that mental toughness was positively linked with self-determined motivation. Pure personal perfectionism and self-determined motivation were also mediated by mental toughness (Cowden et al., 2019). Cowden's 2017 study on competitive tennis players' self-awareness and mental toughness finding self-insight rather than self-reflection to predict global mental toughness score (Cowden, 2017).

Lastly, Chen and Cheesman (2013) also made an essential contribution to exploring the relationship between

mental toughness and performance, mainly in martial arts. Findings showed that mental toughness was higher in athletes performing at higher levels of the competition (Chen & Cheesman, 2013). Results also indicated that professional athletes' confidence, positive cognition, and determination scores were higher by approximately 10% than semi-professionals and amateurs (Chen & Cheesman, 2013).

2.5 Current Research on Sailing

Research on Sailing concerns predominantly psychological skills and sport psychology interventions to enhance the performance of elite sailors. Leggs et al. (2000) concluded, after studying New Zealand's sailors between 1994 and 1995 finding that sailors started to pay more attention to sport psychology and recognize the need to further work on the sailors' psyche, not only their physical fitness. Hodge et al. (2007) focused on the psychological preparation of New Zealand athletes (including sailors) for the summer and winter Olympics. They emphasized specific mental skills that are almost unique to the Olympic environment including, stress management, games wobbles, pre-event mental preparation, interpersonal conflict, psychological aspects of injury rehabilitation, and second-week blues, that athletes need to be prepared to deal with effectively (Hodge et al., 2007). A sense of unity and togetherness enabled New Zealand's athletes to thrive, and their performance skyrocketed during many of the following Olympic Games (Hodge et al., 2007).

Olmedilla et al. (2015) did a case study of a Spanish Laser Radial sailor (Olympic class) and measured her stress control, performance assessment, motivation, and mental skills. Her mental skills were shallow at baseline, significantly compared to the other domains. However, after a sport psychology intervention, all domains improved significantly, two of the four being in the high 90's (Olmedilla et al., 2015). Incredibly, her mental skills

went from 30 right to 97.5, which proves the intervention worked. There were improvements in self-confidence, concentration, anxiety, and tension (Olmedilla et al., 2015).

An essential study by Brandt et al. (2016) explored the association between mood states and the performance of Brazilian elite sailors. Moods assessed included vigour, tension, depression, anger, mental confusion, fatigue, and winners differed significantly from losers in depression, fatigue, and vigour. Namely, winners had significantly lower levels of depression and fatigue and higher vigour levels (Brandt et al., 2016). Brazilian sailors are one of the best in the World. In the 49erFX category, they won the Olympic gold medal twice in 2016 and 2021. Similarly important was a study by Mikhailova (2021) focused on psychological training in sailing, specifically in the performance improvement domain. The central concept for training improvement was psycho-regulation. The result showed that manoeuvre times were faster, tactical mistakes decreased, general self-discipline increased, and the rigging time significantly decreased. Violation of rules, objections, disqualifications, and start delays decreased significantly. Thus, the psycho-regulation proved to increase tactical and technical readiness, and generally, the performance effectiveness increased during the competition (Mikhailova, 2021).

In the present study, I investigated the link between mental toughness and happiness levels and how they relate to sailing performance. To the best of my knowledge, to the current date this is the first study examining mental toughness together with happiness and their link to performance in Sailing. Considering this, the main hypothesis is that well-performing athletes will have higher levels of mental toughness and happiness.

3. Method

3.1 Participants and Procedure

The researcher recruited participants via purposive and snowball sampling using social media and specific sailing chat groups (Facebook, WhatsApp, Instagram) and personal contacts with sailors and their coaches. Inclusion criteria was an active participation as a sailor in the Olympic sailing classes 49er, 49erFX, and Nacra17 for the duration of at least 2 years in total. Data from the OHQ and MTQ-10 were collected through Google forms utility. All statistical analyses were calculated by Jamovi Statistical Software (version 1.2.2.).

The final sample was $N=74$ participants, 41 females (~55%) and 33 males (~45%), (age: range 17-55; $M=25,7$; $SD=7.11$). Participants had to complete OHQ, MTQ-10 followed by demograohics in this order. All study participants provided electronic version of Informed Consent. This study has been approved by the ethical committee of the University of New York in Prague and SUNY Empire State College.

3.2 Materials

3.2.1 *The Medal Race and 2021 Olympic Games*

Sailing performance was measured by cross-referencing the sailing number (the athletes' identification in a competition) with the results of major championships (European, World, Asian), where only the top 10 teams were labelled as good performing via their participation in Medal Race available only to the top 10 boats at the end of each championship, and presence at the Olympic Games 2021, where all the teams were considered well-performing.

3.2.2 *The Oxford Happiness Questionnaire*

OHQ was derived from the Oxford Happiness Inventory (OHI) by Hill and Argyle in 2002 (Hill & Argyle, 2002). It has 29 items and a 6-point Likert scale (from strongly

disagree=1 to strongly agree=6). Reversed items are questions 1, 5, 6, 10, 13, 14, 19, 23, 24, 27, 28, and 29 (Hill & Argyle, 2002). As Hadinezhad and Zaree (2009) found, the OHQ showed a good correlation coefficient of the test-retest scores of 0.78 ($p < .001$) and the Cronbach's Alpha of the test-retest stages were 0.84 and 0.87, thus considering the questionnaire reliable. The content validity of the study was demonstrated by a panel of expert psychologists, all of whom regarded the OHQ as a valid uni-dimensional instrument for measuring happiness (Hadinezhad & Zaree, 2009).

3.2.3 The Mental Toughness Questionnaire

10-item

The MTQ-10 is a shortened version of the original valid and reliable measure MTQ-48 developed by Clough, Earle, and Strycharczyk in 2002 (Vaughan et al. 2018). The MTQ-10 is a uni-dimensional measure consisting of 10 statements with a 5-point Likert scale indicating agreement (from strongly disagree= 1 to strongly agree=5) with three reverse-coded items (Papageorgiou et al., 2018). Papageorgiou et al. (2018) indicated that Cronbach's Alpha was satisfactory ($\alpha = 0.77$) together with the test-retest reliability (0.74). Dagnall et al. (2019) showed that the MTQ-10 was a psychometrically superior measure of mental toughness.

4. Results

Descriptive statistics can be found in Table 1. Overall levels of mental toughness and happiness were generally high, but they varied within genders and good and bad performing athletes.

The first hypothesis states that better-performing athletes will have higher means of mental toughness, happiness and age as Table 1 showed, the well-performing group had higher means in all variables. The second hypothesis states that the Nacra17 sailors will have the highest mean age, mental toughness, and happiness.

Nacra17 class (mandatory gender mixed crews) had the highest age mean ($M=28.62$), but 49er class (males only crews) had the highest mental toughness ($M=38.42$) and happiness ($M=4.69$) scores. The third hypothesis states that men will have higher mental toughness means than women in both performance groups. Males had a higher mean of mental toughness only in the worse-performing group ($M=37.55$). In the well-performing group, women had higher mental toughness mean score than males ($M=38.29$). The fourth hypothesis states that women will have higher happiness in both performance groups. This was only the case for the best-performing female group ($M=4.75$), but not for the worse-performing group, where males had a higher mean happiness score ($M=4.64$) than did females have ($M=4.08$).

Table 1

Descriptive Statistics of Age, Mental Toughness, and Happiness Split by Performance and Gender

| | Performance | Gender | Age | Mental Toughness | Happiness |
|-----------------------|-------------|--------|--------|------------------|-----------|
| <i>N</i> | Bad | Male | 20 | 20 | 20 |
| | | Female | 20 | 20 | 20 |
| | Good | Male | 13 | 13 | 13 |
| | | Female | 21 | 21 | 21 |
| <i>Mean</i> | Bad | Male | 26.35 | 37.55 | 4.64 |
| | | Female | 21.85 | 34.40 | 4.08 |
| | Good | Male | 30.69 | 37.38 | 4.62 |
| | | Female | 26.00 | 38.29 | 4.75 |
| <i>Shapiro-Wilk p</i> | Bad | Male | < .001 | .048 | .257 |
| | | Female | .404 | .590 | .150 |
| | Good | Male | .827 | .069 | .680 |
| | | Female | .859 | .052 | .429 |

The fifth hypothesis states that there will be a significant positive correlation between mental toughness, happiness and performance. There was a significant positive correlation between mental toughness and happiness, $r(72)=.65, p<.001$. There was also a positive correlation between happiness and performance, $r(72)=.26, p=.028$. Mental toughness did not correlate significantly with performance $r(72)=.19, p=.102$. The sixth hypothesis stating that there will be a significant positive correlation between mental toughness and happiness, which was confirmed.

The seventh hypothesis states that mental toughness and happiness will statistically significantly predict performance. Results showed that mental toughness and happiness together did not predict performance, $F(2, 71)=2.52, p=.087$, accounting for 4% of the explained variability of performance ($adj.R^2 = .04$).

Happiness significantly predicted performance $F(1,72)=5.2, p=.028$, accounting for 5% of the explained performance variability ($adj.R^2 = .05$). Further, happiness was a slightly stronger predictor of performance (.26) than mental toughness (.19) according to the standardized estimates. Simple linear regression analysis uncovered a bidirectional predictive relationship between mental toughness and happiness $F(1,72)=51.49, p<.001$, accounting for 41% of vice versa, both mental toughness and happiness (see Table 2). Moreover, the standardized estimates revealed a strong link between these two variables (.65).

Table 2

Model Fit Measures of Happiness and their Effect on Performance

| Model | Adj. R^2 | F | $df1$ | Overall Model Test | |
|-------|------------|------|-------|--------------------|------|
| | | | | $df2$ | p |
| 1 | 0.05 | 5.02 | 1 | 72 | .028 |

5. Discussion

5.1 Mental Toughness and Performance

In this study, mental toughness did not correlate with nor predict performance. Meggs et al. (2019), Kuan and Roy (2007), and Jones and Parker (2019) all proved a link between mental toughness and performance. Wiesel and Thiel (2014) with Chen and Cheesman (2013) directly demonstrated that mentally tough athletes performed better. Piggot et al. (2019) observed a stable mental

toughness in athletes who performed well. No such occurrences in the present study might be due to the abnormally distributed sample and wide gaps between well-performing athletes and the worse-performing group. There is no age limit for sailors in the Olympic high-performance classes; hence, the age range was quite wide (17-55). However, the mean age in my study was around 25 years old, meaning that the study sample consisted mainly of members of the younger generation of sailors. That was expected since every four years (4-year Olympic cycle), teams put everything on the line to qualify for the Olympics. When examined more closely, the best-performing athletes' age means ranged from 26 to 30, with higher mental toughness and happiness levels.

5.2 Happiness and Performance

Sailors come from various backgrounds, and the demandingness of each class determines the psychological and physical attributes needed for a successful performance. Taylor et al. (2010) noted that one of the psychological strategies for overcoming stress and managing adversities is positive psychological and philosophical strategies, including humour, determination, and the belief that things will be better. Lyubomirsky et al. (2005) confirmed that happiness was linked to success. As the current data showed, athletes with higher happiness levels performed better. Cheung et al. (2014) discovered that people with higher trait self-control were happier than those with lower self-control. Reasons for this association Cheung et al. (2014) explained that people with trait self-control are more promotion-focused and less prevention-focused, thereby inclining increasingly towards approach-oriented behaviours. Denny and Steiner (2009) concluded that internal factors increase happiness. Positive emotions generally lead to a growth mindset, which allows for flow to occur. Hence, internal factors such as intrinsic motivation, locus of control, mindfulness, self-restraint, and self-esteem contribute to higher happiness levels.

Richards et al. (2015) further mentioned that happiness levels increased with a higher volume of physical activity, supporting the current findings because better performing athletes exercise more than those doing it as a hobby or athletes who are not full-time sailors. Bajaj et al. (2022) discovered that mindfulness was significant in enhancing happiness through the mediating effects of resilience and stress. This relationship might have also occurred in the present sample since resilience and stress frequently occur in sailing and much more in the Olympic sailing. Wu et al. (2021) additionally supported the present results, linking happiness as an umbrella term and, in their study, mindfulness with better performance.

Hopfensitz and Mantilla (2019) supported the current findings. Additionally, Ulukan et al. (2020) provided further support for the link between happiness and performance. They also found that gender differences favouring females in terms of happiness levels and better performance (Ulukan et al., 2020). The present findings revealed that males, in general, had higher levels of mental toughness and happiness. Nevertheless, when the sample was split by gender and performance, good-performing females had noticeably higher mental toughness and happiness levels than males and worse-performing females. Interestingly, males in both performance groups did not differ significantly, but females did.

According to Vast et al. (2010), happiness is related to higher focus and auto-movements, and it gives the high-performance sailors an enormous advantage compared to other sailors with lower happiness levels. Happiness was connected with acting as a protective factor against burnout based on the Calleja-González et al. (2018) study. In a high-performance sailing, burnout is a threat hanging over the athlete's head during times of lacking success. The current sample comprised sailors who effectively countered burnout throughout their career, and evidence suggests that it could have been due to the level of happiness. Allen and McCarthy (2016) also observed a

bidirectional link between performance and happiness. It has been a concern in the present study whether the athletes were happy, and after all, they performed well or performed well because they were happy.

5.3 Bidirectional Link between Happiness and Mental Toughness

Mental toughness exhibited a similar pattern in the descriptive statistics analyses, as did happiness. Gerber et al. (2013) studied whether mental toughness provided psychological resilience against stress. They found that mental toughness decreased the link between high stress and depressive symptoms, thus aiding as a protective factor against stress (Gerber et al., 2013). Mental toughness was also positively correlated to overall resilience and negatively correlated with stress, according to Cowden et al. (2016). Haghighi and Gerber (2019) also uncovered that mental toughness was associated with fewer health complaints and better sleep than acting as a resilient factor against stress and depression. Even though mental toughness did not significantly correlate with performance, nor was a significant predictor of performance, the findings indicated that good sailors had higher levels of mental toughness in almost all conditions.

Wang et al. (2021) revealed that mindfulness training enhanced mental toughness levels and lowered the threshold of fatigue in college female athletes, showing a relationship between the components of happiness and associated concepts and mental toughness. Ajilchi et al. (2021) confirmed such findings, highlighting the increase in mental toughness and personal well-being after the mindfulness training. Mahoney et al. (2014) further agreed with the current results, finding that positive affect was significantly related to mental toughness. Similarly, Jackman et al. (2016) described factors in athletes with higher mental toughness, among which were confidence, locus of control, optimism, and concentration. These

themes also arose in the studies of happiness and its link to performance agreeing with Wilson et al. (2019).

Additionally, Stamatis et al. (2020) observed a significant correlation between mental toughness, mental health, and self-compassion (including mindfulness). Self-compassion partially mediated the link between mental toughness and mental health (Stamatis et al., 2020). Hence, the relationship between mental toughness and aspects of happiness is, connected to good mental health. As Gucciardi et al. (2017) concluded, mental toughness and mental health are not contradictory. The present sample's correlational and predictive link between mental toughness and happiness was significant. Even though only happiness significantly predicted performance, according to the descriptive statistics, mental toughness levels increased with better performance, as did happiness levels. Nevertheless, this bidirectional connection has yet to be thoroughly studied.

5.4 Gender Differences in Mental Toughness and Happiness

The present findings demonstrated that females scored visibly higher on mental toughness and happiness variables, especially in the well-performing group. This could be due to mental maturation, which occurs earlier in females than males (Koolschijn & Crone, 2013). Guimarães et al. (2021) further reported that the development of skill/game proficiency in older male basketball players enhanced their performance significantly, supporting the role of maturation in sporting achievement. Vaughan et al. (2019) also reported that the athletes' decision-making ability heavily relied on their athletic expertise level. Older female sailors presumably have more experience in sailing because they begin sailing earlier than males, particularly the Olympic classes. Males use the 49erFX as a steppingstone towards the 49er and Nacra17. Newland et al. (2013) described higher mental toughness in males (Kumar (2016). According to the

general gender-split descriptive analysis, Kumar's (2016) and Newland et al.'s (2013) findings supported the current outcomes. However, Ulukan et al. (2020) contradicted the present findings regarding the happiness data, which showed that males had slightly higher happiness scores than females. The present sample consisted of diametrically different sailors, from Tokyo Olympic medalists to high-performance sailing beginners. Therefore, the gender differences could not be thoroughly studied and controlled.

5.5 Coaching, Mental Toughness and Happiness

Coaches impact the athletes' mental health. Stamatis et al. (2021) reported that coaches emphasized mental toughness but were unsure about its components. Huang et al. (2021) revealed that positive leadership significantly positively affected sports enthusiasm and, in turn, the happiness of the athletes. Therefore, how coaches lead their teams strongly influences whether the athletes will develop a solid mental toughness and happiness foundation resulting in a good performance. In Olympic sailing, coaches play a significant role in building a solid sailing team. The level of coaching professionalism thus affects the mental health outcomes of the sailors, especially at the beginning of their sailing career.

5.6 Comments from Tokyo 2021 Olympic Gold Medalist

An Olympic gold medalist from the Tokyo 2021 Games shared thoughts on the present study during the data collection. She highlighted the importance of mental health in sports is essential for a successful performance. One of the themes she expressed was the general lack of mental health care among sailors, resulting in non-consistent performance. Bauman (2016) elaborated on a similar topic of mental health stigma. He recognized the demandingness of an athlete's life, linking it to mental health issues that had their roots at a young age, which arose because of being

untreated during the beginning of an athletic career. For her, mental health is crucial for participation in the Olympic sailing. This sailor excels because of her consistently perfect performance for several years. Therefore, even before the current data were analyzed correctly, her claims bared significant weight. After the statistical analysis, her claims turned out to be correct.

Bellar et al. (2015) described that experience in a sport, in this case, CrossFit, predicted better performance as Sarkar et al. (2015) highlighted the importance of undergoing adversities, which led to a more successful performance long-term. Overcoming various adversities accumulates with age and experience in a particular area. This Olympic athlete underwent quite many adversities. Hence according to Sarkar et al. (2015), this could be why her exponentially better performance compared to other sailors in this area. Marchant et al. (2009) also observed that mental toughness improved with age, supporting the present study.

5.7 View of High-Performance Coaches on the Present Findings

Several coaches had comments regarding the findings of the present study. Generally, they agreed with the results. Similarly, as the Tokyo Gold medalist, they declared that happiness is severely overlooked by the athletes in many areas other than mental health, such as diet, exercise, and sleep, all of which are essential for feeling happy. They further identified stress and anxiety as the real adversaries on the way to a good performance. All coaches supported the practical implications of the current research in their practice.

6. Limitations

Acquiring participants was problematic due to their busy schedules, and the current sample was uneven due to the general avoidant attitude of sailors towards any research. Also, the sample size was small for the theoretical

range of the study. This study relied on self-report. Therefore, the data might not have been entirely valid due to self-enhancing bias.

7. Implications for Future Research

Future studies should research gender differences in a performance-wise balanced sample of elite athletes because, especially in sports with gender-mixed teams, it could be a performance factor. The link between mental toughness and happiness warrants a thorough examination, focusing on what factors grouped under the umbrella terms happiness and mental toughness are significant in the bidirectional relationship observed in the present study. Lastly, for future studies on all the variables mentioned above, the quantitative data warrants a qualitative analysis to explain the interplay of performance, happiness, and mental toughness, for example, explaining why mental toughness was not related to performance. A separate topic for further research will be the study of interpersonal relationships within the crew and their mutual compatibility in terms of personality traits.

8. Conclusion

The current study investigated what separates the best from the rest in high-performance Olympic sailing classes while looking at the relationships between mental toughness, happiness, performance, and whether gender differences occurred in those variables. Findings revealed a bidirectional relationship between mental toughness and happiness. The analysis highlighted that only happiness predicted performance, not mental toughness, and that gender differences in those variables changed according to the level of performance. This study added to the existing literature a rarely studied sport, which combines the physical and mental skills, thus pushing the limits of understanding performance.

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Psychological Consequences of Obesity/Overweight in Elementary School

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Abstract

Obesity and overweight in childhood are among the direst public health problems in this day and age. Being obese/overweight in childhood has a massive influence on children's future physical and psychological health. A significant number of children who are being obese/overweight in their younger years might suffer from long term consequences such as negative self-image, eating disorders, low self-esteem, etc. Furthermore, various comorbidities (diabetes, asthma, menstrual abnormalities, etc.) are connected to obesity/overweight in childhood, which might be problematic even in young adulthood. As a result, people might experience a lower quality of life, eventually growing into anxiety and depression. This study focuses on the relationship between being obese/overweight in elementary school and experiencing long-term psychological consequences in young adulthood because of this problem. This study focused mainly on evaluating the body image and self-esteem of the respondents concerning how they viewed their bodies and themselves in elementary school. To test the hypothesis that obese/overweight children are more prone to having low self-esteem, negative self-image, and in general, experience various psychological consequences in young adulthood, an online questionnaire was distributed to young adults in the age of 18-25 years old. The data were collected from 58 respondents, and responses were meticulously analyzed using correlation and factor analysis. The results of the run tests were significant, and our hypothesis was therefore confirmed.

Keywords: obesity, overweight, lifestyle, self-image, self-esteem, anxiety disorders

1 Introduction

Obesity and overweight in childhood are severe public health problem in today's society that has an extensive and continuous unfavorable consequence for health. Over 42 million children in the past five years are estimated to be obese or overweight. By the year 2025, it has been estimated that there will be over 70 million obese or overweight children if the present trends continue (Rankin et al., 2016). Obesity is considered one of the most critical health challenges of the 21st century. That is also why many programs to promote healthy

weight in childhood are being conducted and supported even by governments (Public Health England, 2018).

2 Literature review

2.1. Consequences of Obesity/Overweight in Elementary School

Obesity and overweight in childhood are severe public health problem in today's society that has an extensive and continuous unfavorable consequence for health. Over 42 million children in the past five years are estimated to be obese or overweight. By the year 2025, it has been estimated that there will be over 70 million obese

or overweight children if the present trends continue (Rankin et al., 2016). Obesity is considered one of the most critical health challenges of the 21st century. That is also why many programs to promote healthy weight in childhood are being conducted and supported even by governments (Public Health England, 2018).

Obesity and overweight in young children tremendously affect their childhood and influence their future psychological and physical health. It was found that obese children have trouble socializing, are isolated, and are often the target of bullies. Researchers have proven an existing relationship between obesity, psychological difficulties, and disorders. In general, it was discovered that many children with obesity have short and long-term psychological consequences that relate to a negative self-image, eating disorders, low self-esteem, and low health-related quality of life (Pizzi & Vroman, 2013). Normal-weight children have higher self-esteem than children with obesity and overall higher quality of life. Their peers view them as clever, healthy, attractive, kind, happy, having more friends, etc. (Taylor et al., 2013). This finding also corresponds with the fact that obese and overweight children have increased body dissatisfaction and a lower sense of self-worth and self-competence (Rankin et al., 2016).

Obesity in childhood is connected to a higher risk of various comorbidities. Examples include fatty liver disease, sleep apnea, Type 2 diabetes, asthma, hepatic steatosis (fatty liver disease), cardiovascular disease, high cholesterol, gallstones, glucose intolerance, insulin resistance, skin conditions, menstrual abnormalities, and orthopaedic problems. Even though some of these diseases might disappear in adolescence, if the child gets to a healthy weight, some of these consequences may be prevalent the entire life. Sometimes, some of these health conditions may even lead to death (Sahoo et al., 2015). Furthermore, children and adolescents who suffer from obesity report shorter sleep duration, poor sleep behaviors,

and difficult breathing. Not enough quality sleep can also lead to depression and anxiety disorders later in life (Mazurak et al., 2021). That is why Sanders et al. (2015) declare that obesity in childhood is viewed as a "disease burden" also for the healthcare system. Therefore, recognizing children at a higher risk of being obese in adulthood could lower the risk of being obese in adulthood by reducing their body weight and improving their lifestyle (Simmonds et al., 2016).

2.2. Operational Definition of Our Construct

In this research, we define the consequences of obesity in childhood and how it affects young adults' psychological and physical health.

2.3. Other Author's Definition of Our Construct

According to Pizzi & Vroman (2013), obesity and overweight in childhood affect their lifestyle and future psychological and physical health. There are long-term effects connected to childhood obesity (Pizzi & Vroman, 2013).

Rankin et al. (2016) confirm that obese and overweight children are more likely to develop depression and anxiety than children at an average weight. They also have a lower sense of self-worth and self-competence that continue throughout their adulthood (Rankin et al., 2016).

2.4. Other Scales Measuring Our Constructs

The Adolescence Body Image Satisfaction Scale (ABISS) by Leone et al. (2014) focuses on measuring adolescent body image and overall satisfaction/dissatisfaction with one's body. ABISS originally provided valid and reliable support for assessing athletes' body image and assisted in designing health-promotive strength programs and observing body image dissatisfaction (Leone et al., 2014).

2.5. Subscales

The Body Appreciation Scale (BAS) by Avalos et al. (2005) measures individuals' acceptance and respect for their bodies. This scale focuses on the positive attitude toward people's bodies, whereas our scale measures how our childhood image negatively affected our view of our body now.

3 Methodology

3.1. Participants

Participants consisted of 58 young adults (age 18-25). 56,9 % were females, 34,5 % were males, and 8,6 % would prefer not to say their gender. The age of the respondents was chosen intentionally so that the young adults would at the same time remember their experiences from elementary school and be already able to evaluate the influence these had over them in adulthood. Overall, the majority of our respondents were 23 years old. Respondents for this study were mainly from the Czech Republic and the USA.

3.2. Materials

For this study, the researchers created a non-standardized questionnaire, which was later used during the data collection. The non-standardized survey consisted of 3 scales (ABISS, BAS and our PCOOES) that explored how body image relates to people's psyche and, more specifically, how being overweight/ obese in childhood can influence people later in life. ABISS consists of 16 items, BAS of 13 items, and our questionnaire had ten items. Therefore, the final number of questions the participants answered was 39. The ABISS scale focuses on measuring body image satisfaction. The BAS scale, which should measure the opposite of our construct, measures individuals' acceptance and respect towards their bodies. Our scale PCOOES focuses more in-depth on the negative future aspects of overweight or obese in elementary school.

3.3 Procedure

The questionnaire was constructed via google forms and then distributed online. Due to the sample consisting mainly of US or Czech people, who had a fluent knowledge of English, the questionnaire was created in the English language. The survey consisted of 39 questions, which took approximately 10 minutes to answer. The collection of data from respondents took three weeks in total, and during this period, the google forms were available for participants online. To secure data validity and obtain a random sample of participants, the respondents were chosen regardless of their occupation, gender, or socioeconomic status. Subjects submitted their informed consent online before filling out the questionnaire. The collected data were thoroughly analyzed.

4 Methodology

4.1. Validity Analyses

4.1.1. Face Validity

In the Body Appreciation Scale (BAS), two of our participants suggested that in the item, which asked the following question: "I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body." the question should also include images of men presented in the media. Therefore, the item would be more relatable to our male participants.

4.1.2. Criterion-related Validity

Our PCOOES scale is strongly significantly correlated with the ABISS Scale, which measures a similar construct; therefore, it focuses on how one's body image influences their body satisfaction/ dissatisfaction. The items on the ABISS scale were correlated with the PCOOES scale. Results showed that the ABISS scale was directly significantly correlated to the PCOOES scale $r(df) = .865, p < .001$ (see Table 1). Therefore, our scale achieved convergent criterion validity.

The items on the BAS scale were correlated with the PCOOES scale. Results showed that the BAS scale was negatively significantly correlated to the PCOOES scale $r(df) = -.846, p < .001$ (see Table 2). Therefore, subscale 1 attained discriminant criterion validity.

4.1.3. Content Validity

Our scale PCOOS consisted of 10 items selected to measure how being obese/overweight in elementary school affected the psyche and the young adult's body image. Overall, the ten chosen questions were agreed upon by the three panelists. However, two additional questions were more suited to be put into demographics according to our panelists, which we did. No other items were added to our questionnaire. Items with CVR above 0 were deemed essential and were included in the questionnaire.

4.1.4. Construct Validity

Initially, the factorability of 39 items was examined. The Barlett's test of Sphericity was significant $\chi^2(45) = 498, p < .05$; therefore, the assumption of Sphericity was confirmed (see Table 3). The Keiser Meyer Olkin measure of sampling adequacy was 0.858, above the commonly recommended value of 0.5 (see Table 4). The minimum residual extraction method was used in combination with the oblimin rotation. The communalities were all above 0.4 after we changed the load factor size from 0.3 to 0.4. Therefore, factor analysis was suitable for all 39 items (see Table 5).

4.1.5. Internal Consistency

Cronbach's alpha was computed for the revised questionnaire. The full scale consisted of 39 items ($\alpha = .916$). Cronbach's alpha should be minimum of 0.7; therefore, the internal consistency is considered high (see Table 6).

5 The Final Questionnaire

The final version of the PCOOS questionnaire contains ten items. Items 6 and 10 were problematic because they loaded on two factors simultaneously. Nevertheless, these items had internal consistency as well as content validity; therefore, they remained in our questionnaire. The answers to our questions consisted of a 7-point Likert scale ranging from strongly disagree to strongly agree.

5.1. Psychological Consequences of Overweight/Obesity in Elementary School (PCOOS)

- 1) During elementary school I perceived myself as overweight/obese.
- 2) I try to watch my weight because I did not like how I looked when I was younger.
- 3) My body image now is impacted by my body image at elementary school.
- 4) I do not like how my body looks.
- 5) I often feel depressed about my body.
- 6) I feel anxious when looking back at the photos of my body from elementary school.
- 7) I tend to isolate myself because I am ashamed of how my body looks.
- 8) I am content with how my body looks.
- 9) I feel ashamed about my weight.
- 10) I suffer from a certain disease because I was obese/overweight in elementary school.

Table 1

Correlation Matrix of Sum of Scores from the ABISS scale and Sum of Scores from the PCOOS Scale

| | | PCOOS | ABISS |
|-------|-------------|-------|-------|
| PCOOS | Pearson's r | — | |
| | p-value | — | |
| ABISS | Pearson's r | .865 | — |
| | p-value | <.001 | — |

Table 2

Correlation Matrix of Sum of Scores from BAS scale Sum of Scores from PCOOS Scale

| | | PCOOS | BAS |
|-------|-------------|-------|-----|
| PCOOS | Pearson's r | — | |
| | p-value | — | |
| BAS | Pearson's r | -.846 | — |
| | p-value | <.001 | — |

Table 3

Bartlett's Test of Sphericity of PCOOS Scale

| χ^2 | df | p |
|----------|----|-------|
| 498 | 45 | <.001 |

Table 4

KMO Measure of Sampling Adequacy of PCOOS Scale

| | MSA |
|--------------|------|
| Overall | .858 |
| O1 | .815 |
| O2 | .679 |
| O3 | .872 |
| O4 | .845 |
| O5 | .877 |
| O6 | .890 |
| O7 | .864 |
| O8 - Reverse | .899 |
| O9 | .886 |
| O10 | .872 |

Table 5

Factor Loadings of PCOOS Scale on Two Factors

| | Factor | | Uniqueness |
|--------------|--------|------|------------|
| | 1 | 2 | |
| O4 | .933 | | .2273 |
| O9 | .897 | | .1873 |
| O8 - Reverse | .876 | | .2593 |
| O5 | .822 | | .2146 |
| O7 | .781 | | .2336 |
| O1 | | .981 | .0424 |
| O3 | | .790 | .3347 |
| O2 | | .760 | .5232 |
| O6 | | .688 | .2448 |
| O10 | | .427 | .5081 |

Table 6

PCOOS Scale Reliability Statistics

| | Cronbach's α |
|-------|---------------------|
| scale | .916 |

6 Discussion

The study explored the consequences of being obese/overweight in elementary school on young adults. The analysis of the data collected from 58 respondents indicates that young adults who were obese/overweight in elementary school were more prone to psychological problems, low self-esteem, negative self-image, etc., than young adults who were not obese/overweight in elementary school. The results confirmed the hypothesis based on the previous literature review of the topic. The results align with other studies that focus on the consequences of obesity/overweight in children in elementary school. We obtained high content validity, construct validity, and criterion-related validity based on the results. The internal consistency and homogeneity of test items were high as well.

The findings of this study suggest that the focus of parents and the educational system should pay attention to

this problem much more since it truly represents a huge burden not only to the socioeconomic sphere but, more importantly, to the overall quality of life (Simmonds et al., 2016). Such realization can serve as a reminder that obesity/overweight in childhood should not be viewed lightly, and preventive steps should be taken to ensure the child's physical and mental health (Pizzi & Vroman, 2013). Even though the hypothesis was confirmed, and the results follow previous studies done in this field, the research has its limitations. One of the limitations was the number of respondents since it would be preferred to have more than 58. Another limitation might be not having more participants from other cultural settings since the majority were from USA and Czech Republic. It would make the research more culturally relevant and inclusive.

7 Conclusion

This research was conducted to explore the consequences of childhood obesity/overweight and its effect on young adults. Although various studies considering the topic had been done previously, no studies similar to this research design were found. Many of those studies have not directly connected elementary school children and young adults. It is needed to emphasize that future research should focus on why children become obese/overweight in elementary school and how these reasons affect their psychological well-being. This would help to adjust better and personalize the preventive steps.

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The Narratives of the Survivors of the Beirut Port Blast in relation to their Recollections of Past Tragedies in Lebanon

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Abstract

On August 4, 2020, the city of Beirut was struck by a blast that exploded in the capital's port. In Lebanon, trauma-related mental health dysfunction should be examined in light of the layers of piled up wars, hence the present study aims to explore the narratives of the survivors of the Beirut blast in relation to past war-related traumatic memories. Based on case study design, and using semi-structured interviews, this qualitative study used content analysis to explore themes emerging from the narratives of a sample of eight Beirut port explosion survivors who have also survived past war-related traumatic experiences. The emergent themes were linking memories, anxiety, emotional impact, coping mechanism and complicated grief. The analysis of such narratives provided an important window into conceptualizing trauma through a lens that is unique to the Lebanese context, and an understanding that could serve as a guide for future psycho-social and clinical interventions.

Keywords: Beirut Port explosion, complex collective trauma, survivor narratives, post-traumatic stress disorder, missing loved ones.

1. Introduction

On August 4, 2020, the city of Beirut was struck by a blast after roughly four tons of ammonium nitrate exploded in the capital's port. The explosion has left an insurmountable impact on the psychological, emotional, and financial wellbeing on the residents of Beirut which is still yet to be explored (UNFPA, 2020). Throughout its modern history, Lebanon has witnessed layers of piled up wars, traumas and insecurities. Any trauma-related mental health dysfunction among Lebanese citizens must be examined in light of this unique complex of stressors, and not through the traditional post-traumatic stress disorder paradigm used in much of trauma research. Thus it is

hoped that the examination of the subjective experiences of the Lebanese survivors of the Beirut Port blast while taking into consideration the Lebanese context will be of great added value to the scientific community since it may add some contextual explanations of the experience of PTSD and eventually other mental health related issues, based on the unique dynamics and complexities of Lebanon. This study aims to explore the narratives of the survivors of the Beirut blast in relation to past war-related traumatic memories, among which the trauma of experiencing the ongoing disappearance of a loved one during the Lebanese Civil War era (1975-1990).

An area that was not given much research attention is that related to the devastating damage the war left on the

families whose loved ones were kidnapped during the period of 1975-1990 and who are estimated to be 17,000 people (El Deeb, 2018). The loss that the families of the missing persons had to endure has been coined “ambiguous loss” and is defined by Boss (1999) as “a situation of unclear loss that remains unverified and thus without resolution”. This loss is not definitive, as there is not a clearly defined “death” that can draw a sense of closure; families are left with a feeling as if they are “in limbo” as they struggle to live with and adapt to this ambiguity (Boss, 2016).

The present study is three-fold: It first investigates the unique and subjective experiences of the Lebanese survivors of the Beirut Port blast, including bearing its consequences such as losing a loved one/property, being subjected to physical and emotional pain, and all that lies in between. Second, the study explores the perceived relationship between past and present traumas; and third, it examines the factors that helped the survivors cope with their trauma-related memories and their experience of the present disaster. This study was sponsored by a bigger project titled “Dealing with the Past - Memories for the Future” by the office of the United Nations High Commissioner for Human Rights. This project aims to support civil society, individual families, and national institutions in their collective efforts to seek the truth and move towards reconciliation around the legacy of the protracted period of civil wars (1975-1990) where several Lebanese people were abducted and whose fate is still unknown. Therefore, a specific emphasis on the experience of families of the missing persons is addressed throughout this research.

2. Methodology

2.1 Research Design

The present study is a qualitative research using the case study design to capture the unique and subjective

perceptions and interpretations of the survivors of the Beirut Port blast, in relation to their experiences of several repeated past traumas. Qualitative research is recommended when the research is focused on particular experiences and the meaning behind the experiences (Merriam & Tisdell, 2015). Case studies are “an exploration of a ‘bounded system’ of a case or multiple cases over time through detailed, in-depth data collection involving multiple sources of information rich in context” (Creswell, 1998, p. 61).

2.2 Research Instruments

Creswell (2009) and Merriam (1998) posit that all methods of data collection may be used within case study analysis. The present study used exploratory semi-structured interviews with ten open-ended questions. These were completed individually, either face-to-face or virtually via ZOOM or WhatsApp after the consent form (in the participants’ preferred language) was signed. Questions of the interview were tailored to specifically address (a) the experience of the Beirut Port blast, (b) the memories associated with such a traumatic experience, including the memories related to the missing person(s) in families, and (c) the mechanisms that have been developed overtime to cope with continuous stressors. The average duration for the interviews overall was approximately 31 minutes.

2.3 Participants and Procedure

To gain multiple perspectives around people’s subjective experiences with the traumatic event (the Beirut Port blast) purposeful sampling technique was used to recruit participants for this research.

This study was conducted with eight participants from the public, three males and five females, four participants of whom belong to the families of the missing persons.

Participants were chosen from different areas in Lebanon and were approached via gatekeepers, such as an active NGO who responded to the Beirut Port Blast and preferred to remain anonymous, and the Committee for Families of the Kidnapped and Missing Persons as well as Legal Action Worldwide who provided the contacts for the families of the missing persons. The gatekeepers were provided with the necessary information about this study and were informed of the criteria for choosing participants. The study has been approved by the ethical review committee at Haigazian University.

2.4 Data Analysis

Strauss and Corbin (1998) describe data analysis as a process of breaking down, organizing, and reassembling data to develop a different understanding of phenomena. After all data had been collected from all eight participants, all interviews were transcribed independently and later translated to the English language with a focus on preserving the accuracy of the original Arabic text and the cultural subtleties that transpired from each of the interviews. Once transcribed, the data were coded. Data coding facilitates the process of forming clusters of themes and establishing relations between these different clusters. Corbin and Strauss (2014) view this process as “digging beneath the surface to discover the hidden treasures contained within the data.” (p.159). In the present research, three coding strategies were used: (1) Open coding, in consultation with a second reader of the interviewees’ narratives, which allowed us to identify all possible themes transpiring from the data and cluster them into conceptual labels, (2) Selective coding, where open-coded themes were related together to create thematic categories, and (3) Theoretical coding, where emergent thematic categories were compared, and relationships were drawn beyond the narratives in order to construct a conceptualization of the trauma-related experience of the participants. It is important to note that throughout the coding process, the

data was not coded sentence by sentence or paragraph by paragraph, but coded for meaning.

Following the coding phase, content analysis was applied whereby all emerging themes were reviewed, compared and adapted, when necessary, to themes generated from our literature review on the topic of trauma, loss and resilience, and related to the study’s research aims in an attempt at generating a conceptual model for the past and present trauma-related experience of the Lebanese people.

2.4.1 *Establishing Trustworthiness*

In quantitative research, trustworthiness is established through ensuring the criteria of validity and reliability. This is paralleled in qualitative research by establishing the criteria of credibility, transferability, dependability, and confirmability.

Credibility, the first and most important criterion that must be established, requires the researcher to clearly link the research findings with reality; to do so, researchers usually resort to triangulation. In triangulation, the researcher uses multiple methods, data sources, observers, or theories in order to gain a more complete understanding of the phenomenon under study (Creswell, 2009; Yin, 2015). Triangulation ensures that the research findings are robust, rich, comprehensive, well-developed and free from biases or limitations of a specific collection method (Maxwell, 2005).

The present study used analyst triangulation, ie. using one or more analysts to review the findings: Following the open data coding phase, two graduate assistants from the department of psychology at Haigazian University were approached, briefed about the study, and were provided with five interview questions that were randomly chosen from the sample. The graduate assistants were requested to identify the salient themes across the coded data. Similarities between the researcher’s identified themes and the graduate assistants’ themes were remarkably noticed

across all five questions, thus validating the researcher's coding methodology and increasing the trustworthiness in the coded data (Freeman et al., 2007). As for transferability, the second criterion of trustworthiness, it refers to demonstrating that the research findings are applicable to other similar contexts (similar situations, similar people, etc.). In order to ensure transferability, we used "thick description" in our analysis of the findings, delving into minute details, and relying on several quotations from the participants to illustrate concepts, as is revealed in the discussion of findings below.

3. Findings and Discussion

Overall, the outcome of the findings addressed all three research aims of the present study, namely, to explore the subjective experiences of the survivors of the Beirut Port blast, the link between their past and present trauma-related memories and the coping mechanisms used during times of difficulty.

Content analysis of the present data revealed five general themes: (1) memories from the past, with two sub-themes, namely linking past traumatic experiences and nostalgia for the Civil War era, (2) a state of continuous anxiety, (3) emotional impact of trauma, with three sub-themes, namely sadness and hopelessness, anger and hate, and emotional numbness, (4) coping mechanisms which included the positive and the negative strategies of participants, and (5) complicated grief (which is exclusive to the participants of the families of the missing persons).

The recollection of previous war memories was captured in the instantaneous thoughts of most of the participants in the moment of the Beirut Port blast. The recollection of those memories was inevitable to the interviewed sample, meaning that their past is very much connected to their living present. Intrusive memories of past traumas are common among trauma survivors during

the days and weeks directly following the traumatic event, however, our study shows that such memories were still prevalent a year after the blast, which matches the clinical profile of PTSD. Indeed, a recent review by El Hajj (2021) focused on the prevalence of PTSD in Lebanese adults, and insinuated that PTSD is relatively common within the Lebanese, especially with the presence of other risk factors and psychological comorbidities. In the present study, PTSD was not a variable that was accounted for, however, based on the work of El Hajj (2021), it can be inferred that the retrieval of those traumatic memories was likely to occur as most of the participants in our study are trauma victims of the Civil war. The continuous state of anxiety expressed by all participants comes to corroborate the argument that PTSD, often non-diagnosed or underdiagnosed, may be much more common among the Lebanese population than we think it is.

The processing of trauma plays a major role on how the impact of it will unfold (Brewin et al., 2010). Previous literature has shown that the Lebanese processing of the wars' aftermath was overruled by silence and detachment to the war events (Larkin, 2010). In accordance, the third theme in our study highlighted a unified emotional impact among all participants, consisting of a constellation of worry and panic, sadness, hopelessness, anger, hate and numbness. The variety of these negative emotions that surfaced in their answers can inform us that despite the tragedy being the same for all participants, the emotional reactions generated are unique and distinct to each participant alone. Tuval-Mashiach et al. (2004) indicate that the differences in the perception and interpretation of a traumatic event may arise from various sources among which are personality traits, situational factors (if one was directly exposed to the traumatic event or not), physical injury, and background variables (such as past trauma). In this study, factors such as previous life stressors, direct exposure to the blast, and availability of support after the

blast played a crucial role in determining the intensity of the lived emotional experience and the level of resilience after the trauma (Bonanno et al., 2007; Goldmann & Galea, 2014).

As for the theme of complicated grief, which is the theme dedicated to the families of the missing persons, the narrative of the concerned participants was very much in line with what the previous literature on ambiguous loss and complicated grief describes (Rowland-Klein & Dunlop, 1998; Boss, 1999; Boss, 2016), namely feelings of guilt, self-blame, anxiety and immobilization, a feeling of being “in limbo” as they struggle to live with and adapt with this ambiguity.

The analysis of the theme of coping mechanisms revealed interesting findings, mainly that participants predominantly presented with positive coping mechanisms, despite their lived tragedies and experiences, which helps them manage their symptoms and move forward with their lives. One such coping mechanism, social connectedness is seen in earlier studies (e.g., Farhood et al., 1993) as the primary means for managing the aftermaths of the Beirut Port blast. This finding confirms that Lebanon, as a collectivist society (Ali, 1993), leverages on people’s ability to make use of one another as their main source of relief and support during uneasy times. The families of the missing persons depended on two main forms of coping in addition to social connectedness, namely optimism and professional help. It is important to note that seeking professional help was more expressed in response to the Beirut blast than in the context of the Civil War. This is understandable since professional mental health seeking is more acceptable today than in the past due to the stigma against mental illness which prevails in Lebanon (Rayan & Fawaz, 2017). Some factors that influence the reluctance for seeking mental health services can be the belief that they can manage their symptoms on their own (Abdin et al., 2012) or the doubt they have of the effectiveness that the

services would provide (Wilson et al., 2011). As for Arabs, including Lebanese, other factors related to values, culture and religion come to play, such as believing that mental illnesses are a test from God or a consequence from one’s wrong doings and sins (Youssef & Deane, 2006). In general, the Arab World has its own unique sociocultural, religious, and political factors that are crucial to take into account when discussing the access and use of psychiatric care services (Rayan & Fawaz, 2017). The coping mechanisms illustrated in the present study can serve as a guide for future psychosocial interventions utilized by clinicians and practitioners in Lebanon as they are relevant to the present dynamics and contexts.

Our analysis revealed that social connectedness, optimism, and professional help seeking have shown to be adaptive strategies for all participants from the two sub-groups (the Beirut blast survivors and the families of missing ones); it is therefore worthwhile exploring them in depth. Our study showed that the participants who have less social connectedness than others showed more maladaptive coping mechanisms, such as turning to drugs, developing learned helplessness, and preferring isolation. As Fergus and Zimmerman (2005) indicated, there is increasing evidence that social support is an important resilient factor in PTSD, and a large body of literature suggests that lower levels of social support are associated with more severe PTSD symptoms (Galea et al., 2002; Hobfoll et al., 2006). It should be noted, however, that social support is a multidimensional construct that includes the structure of a support network, the function of the support, and the user and giver’s perceptions of it (Sherbourne & Stewart, 1991). For example, one participant who recognized the need for social support yet had a negative perception about it reported doing worse than another participant who positively perceived social support as her main coping mechanism regardless of its quality or availability. Paul et al. (2015) confirm the

prominence of social support in their cross-sectional study of trauma-exposed disaster victims who have shown a negative relation between social support and PTSD symptoms severity. As a conclusion, there is a consensus that elevated social support from family, friends, and community members is shown to be associated with reduced PTSD symptom severity (Price et al., 2018).

Because of the imperative role human relationships, connectivity and attachment play in one's healthy psychological development (Sullivan, 1953; Bowlby, 1969; Ainsworth, 1979), we posit that Interpersonal Therapy, which focuses on fostering social connectedness as one of the main foundations that helps patients work on their issues and decrease their interpersonal stress, may be adopted by Lebanese clinicians to provide counsel for trauma-survivors in Lebanon since it is based in relationships, connections, and social support, all of which have been shown to be natural support systems used by our participants. The stigma and reluctance to seek mental health professional help in Lebanon, that was discussed earlier, increases especially when the available treatment modalities are not consistent with one's worldview (Pratt et al., 2017) and one's culture.

The theme of religiosity was also revealed in our study as a prominent coping mechanism for half of the sample; this poses the need for developing evidence-based paradigms that align with faith and culture, two components that are essential when considering the services provided to the Lebanese. This is supported by the work of Bernal and Scharrón-Del-Río (2001) who advocate for the inclusion of ethnic and cultural factors while developing or delivering psychosocial treatments. They propose that psychotherapy itself is a cultural phenomenon that plays a key role in the treatment process. In addition, ethnic and cultural concepts may clash with mainstream values inherent to traditional psychotherapies. In alignment with that, Merhej (2019) poses the need for having culturally competent psychiatry

for the de-stigmatization of mental illness and mental health treatment in the Arab world. This would encompass having a people-friendly image of the psychiatrist that is in accordance with the local religious, social, and cultural values of the country instead of solely adopting the Western standards of psychiatry. For example, the findings of Pratt et al., (2017) highlight the need for religious congruence in order for interventions to be considered acceptable for religiously oriented Muslims, and in the context of PTSD, other findings associate positive religious coping mechanisms, such as the use of prayer, with lower PTSD symptom severity (Aflakseir & Coleman, 2009). Therefore, culturally sensitive therapy that embraces the notions of faith and culture, if utilized in Lebanon, can motivate trauma-survivors in Lebanon to seek professional help. Effective stress-related therapies such as *trauma-focused CBT* has been shown to yield positive results with trauma survivors. Results from several meta-analyses (Watts et al., 2013; Cusack et al., 2016; Kline et al., 2017) have verified the efficacy of trauma-focused CBT in reducing trauma-related psychopathology, with evidence of long-term persistence of gains. The integration of a culturally sensitive Interpersonal Therapy with trauma-focused CBT to fit the local context and dynamics of Lebanon would encourage more people to seek professional help and benefit from the therapy provided.

As for complicated grief and specifically ambiguous loss, these present their own distinctive challenges when it comes to approaching the grieving process, and require a different method for healing (Boss, 1999). Boss (2017) did not recommend adopting traditional grief or trauma therapies that are catered for definitive deaths, instead she recommends the use of methods such as narrative therapy; which is re-telling the story and externalizing the blame to build resilience for long-term unresolved loss, as well as methods of psycho-education, where people are taught ways of thinking that de-emphasize binary thinking (dead

or alive) and instead encourage entertaining a “both/and” thinking, that is the practice of holding and tolerating contradictory thoughts (Boss, 2017, p. 256).

Boss et al. (2003) also underlined the importance of an ethno-psychological approach to ambiguous loss, which means the comprehension of the ethnic and cultural contexts where the loss occurred. Boss (2006) highlighted important factors such as the organization of the society and the religious/spiritual beliefs which influence the resilience and the mechanisms of adaptation of the families in the case of ambiguity. For example, in our study, one participant who had a strong religious belief that the loss of her husband is according to God’s will, showed positive progress and well-being in dealing with the ambiguous loss.

Boss (2017) also stressed that the first general requisite for intervention is to use a family and community-based approach where family meetings are recommended in order to openly discuss the ambiguous loss in a safe and supportive environment. This requisite would fit impeccably in the Lebanese collectivist society which depends on family and social connectedness as a means of coping with disasters. It is evident that developing treatment modalities that are different from those used for definitive deaths and incorporating the cultural component that encompass values and faith, are vital elements to consider for crafting a therapy modality for those dealing with ambiguous loss in Lebanon.

Unfortunately, prospects for positive outcomes from any intervention are meagre due to the fact that the Lebanese people are presently undergoing massive stressors at the socio- economic and political levels (Wessells, 2009; Stevens et al., 2013; Wispelwey & Abu Jamei, 2020). Hence, the survivors of the Beirut Port blast and the families of the missing persons are both disadvantaged when it comes to processing and managing their traumas. The presence of continuous unpredictable

stressors and the absence of accountability and liability in the country is aggravating their worry and distress and is pushing them to reach hopelessness and learned helplessness.

On the other hand, Frankl’s (1985) logotherapy emerged from discovering the meaning in suffering, which reminds us of the hope theme that was engraved in the narratives of the survivors and families of missing persons. Frankl often quotes Nietzsche’s statement, “He who has a why to live can bear almost any how.” Frankl’s meaning-seeking model reinforces the idea that meaning is essential for resilience, and that to effectively cope with suffering, we need to believe that there is coherence and order in the world, and there is a reason or meaning for everything that happens, including our own sufferings. The Lebanese who still have hope in their future or in Lebanon are probably extracting that hope from the meaning they made out of their tragedies and stories, a meaning that gives them a purpose to stay and work for it.

4. Limitations

The first limitation of the present study lies in the choice of its design; a common criticism for qualitative designs is that they are perceived to be subjective or biased to the researchers’ interpretations (Corbin & Strauss, 2014). In order to reduce researcher’s bias, the present study adhered to the four criteria of trustworthiness established by Lincoln and Guba (1985), ensuring openness, transparency, and thoroughness in the data collection and analysis phases.

A second limitation has to do with *recall bias*. As the Beirut Port blast took place more than a year ago, recalling specific memories and images may be clouded with the events that are currently taking place, similarly, for the recollections of experiences related to the missing persons. Recall bias is an inevitable phenomenon: we never remember past events as an accurate picture of what happened. Our memories are often distorted by shock at

the time of an event, a post-traumatic stress disorder or any one of a number of diseases and conditions that affect the brain. In the case of the present study's participants who are all people who have lived an accumulation of traumas, recall bias is expected, and in most cases, is assumed to be unintentional. To reduce the amount of expected recall bias, the participants were given ample time to respond to questions requesting recall of specific events; the face-to-face interview technique that was used in this study provided the participants with a feeling of safety where they were given enough room to discuss their past in a non-threatening way, thus allowing memories to flow in as smooth a stream as possible. In addition, the interview questions were designed in such a way as to trigger specific recollections for specific events and avoid any interferences with other events. The study protocol and the pilot testing were important tools to help the researcher familiarize herself with the interview context and reframe her interview questions in such a way as to later guide the study's participants into the interview process in as careful a way as to control for recall bias.

5. Future Research

Since qualitative research on Lebanese trauma in general is scarce, the present study only serves as a basis for future clinical psychology research. Perhaps future research studies can be directed towards exploring maladaptive and adaptive coping mechanisms in a larger sample of Lebanese while taking into account the unique dynamics and socio-political complexities of Lebanon. In addition to that, it would be of added value to further explore the concept of "resilience" and the meaning it holds to the Lebanese who have experienced a unique and distinct form of resilience which is not usually documented in the present literature. The Lebanese having been subjected to repeated traumas throughout the years, it would be interesting to know whether their resilience is the result of them becoming less fragile and vulnerable in the face of adverse circumstances, or is it

the result of their learnt helplessness as they became accustomed to the circumstances. A replication of the present study with a larger sample is paramount to corroborate current or bring forward new themes that may emerge which were latent or were not properly addressed by the present interview questions. Further, a mixed-methods research that would also include quantitative methods to operationalize the trauma experiences (perceptions, cognitions, emotions) of the Lebanese population and draw parallels with the DSM 5 symptomatology of trauma and stress related disorders is strongly recommended.

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Abortion and Effects on Women

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Abstract

This study examines the link between abortion and the after-effects on mental health. The basic proposition is that women who experience negative factors such as abortion experience, low psychological support, stigma, and bad attitude from medical professionals might be more likely to experience negative psychological symptoms. The consequences of pregnancy termination on mental health are inconclusive (Eastern Journal of Medicine, 2020); therefore, this qualitative study provides an in-depth interview analysis of three women who had undergone spontaneous or induced abortion. This study provides an understanding of 3 unique experiences; however, it notes that the abovementioned factors and challenges that women go through might impact well-being after the abortion. Therefore, this research aims to improve the quality of life of women who need additional support throughout the decision-making and gain information about post-abortion consequences on mental health.

Keywords: abortion, psychological effects, pregnancy, mental health, pregnancy termination

1. Introduction

Unwanted pregnancy and its consequent termination are controversial topics in contemporary societies, and individuals who undergo such a challenging process may feel pressure from stigma, prejudice, and discrimination (Warren, 1973). Furthermore, this decision may change their relationship with their partner and create tension between close friends and family due to its bilateral nature. Moreover, either one strongly sides with the perspective that killing an embryo would be the same as killing the reader of this paper or that a woman's right over her own body equals the importance of life preservation. However, the research suggests that one out of four women in the United States of America will have an abortion by forty-five (Henshaw, 1998). This means that the negative outcomes of abortions on well-being lead abortion and its effects on women to be a worldwide

ignored issue, precisely due to post-abortion guilt and the inability to speak openly about this topic.

Pregnancy termination may happen spontaneously, or one makes a conscious decision to abort. Those two events might seem very similar because of the involvement of the same institution, medical staff, and similar counseling support. However, women who experience spontaneous abortion lack control over the event. Therefore, one has to be aware that both can be prone to feelings of shame and stigma. Nevertheless, the experience may vary precisely due to the control variable (Huss, 2021).

While some studies have found that there is no correlation between poor mental health and abortion (Huss, 2021), others strongly sided with the argument that there is such a significant shift from the biological perspective that it is plausible to anticipate the psychological consequences of stress (Camilleri et al., 2019). Moreover, several factors such as stigma, the experience of abortion, psychological

support, medical care and personal factors influence the post-abortion state of mind (Murphy, 1998; Meaney et al., 2017; Adler, 1975). Therefore, women who experience negative factors stated above might be more prone to experience negative psychological symptoms.

2. Literature Review

2.1 History and Cultural Background

In contemporary societies, individuals may observe a change in attitudes towards abortion and miscarriage. Women are provided with opportunities for therapies, and doctors are asked to be sensitive toward females who undergo both spontaneous and non-spontaneous abortions (Elliot, 2014). However, this is not true for all cultures. In some countries, the negative attitudes have been persistent, and abortions have been outlawed ever since (Singh, 2005).

In the context of the United States of America and most countries of western Europe, the change of law and attitudes toward pregnancy termination are granted to the feministic movement and pressure from the civil society (Layne, 2006; Dudova, 2010). This movement started to spread approximately in 1960. Apart from equality of both genders, safe and legal abortion was one of the items that primarily second-wave feminists inquired. The outcomes of this movement may be seen in increased overall autonomy of women around the world and reevaluation of women's access to abortion (Dudova, 2010).

However, this was not the case for the Czech Republic. According to Dudova (2010), the legislation regarding abortion shifted in 1957, which might be considered an early time compared to other countries. Nevertheless, the very reason was the pressure from gynecologists towards the government rather than the feministic moment. As a result, legal abortion needed to be approved by a professional either due to the mother's health or "other

important reason" (Dudova, 2010, p. 951). In brief, the situation in the Czech Republic at that time was unfortunate, as the state was recovering from the Second World War. In 1968, the violation of the Warsaw pact led to the change of the political system, which consequently led to censorship of the media and degradation of the feministic movement (Kalinova, 1999; As cited in Dudova, 2010). As a result, pregnancy terminations became highly regulated, and due to the socialist aid for parents, the birth rate rapidly increased. On the other hand, the abortion rate concurrently decreased. However, in the years 1970 and 1980, contraception was not as effective and, for most women, unavailable. Therefore, number of pregnancy terminations grew again. The increase in abortion estimate led to the legislation in the Czech Republic, which was passed in 1987 and allowed women to choose within the first 12 weeks of pregnancy (Dudova, 2010).

2.2 Experiences of Induced Abortion

Lena Aléx and Anne Hammarström (2004) analyzed five women who had undergone an induced abortion to increase the qualitative empirical research in this area. Almost all females did not describe the moment of discovery about the unplanned pregnancy as something negative, rather joyful and shocking. Nevertheless, one of the women experienced a severe shock accompanied by suicidal thoughts. Subsequently, during interviews, the ladies underlined that the decision to have a termination of pregnancy was entirely their alone. However, some factors guided this choice, such as social norms and childhood memories (Aléx & Hammarström, 2004). Furthermore, most women emphasized their experience of growing up, which was brought to attention, especially during the pregnancy. Therefore, some highlighted the importance of having a partner when raising a child and others described their adverse childhood experiences.

Additionally, the financial aspect was one of the pillars of the decision-making process (Aléx & Hammarström, 2004). Therefore, the feeling of ambivalence about the decision-making process accompanied all five respondents of this study. Interestingly enough, the outlook on ethical aspects of pregnancy termination was somewhat optimistic; however, this view drastically shifted when focusing on attitudes about their abortion. Additionally, the importance of the closest individuals that would support their decision was primarily stressed by all participants (Aléx & Hammarström, 2004). Women in this study were asked to answer questions connected to induced pregnancy termination's psychological and physiological experiences. Considering the physiological symptoms, they differ very much among all participants. Some women reported high pain levels with heavy bleeding and sickness; others were surprised that they did not feel anything. Psychological symptoms in the hospital were highly associated with the staff's attitude towards the participant. Most women reported cold personnel, which led to feelings of sadness, shame, and uncertainty (Aléx & Hammarström, 2004).

Furthermore, most of the respondents felt loneliness after leaving the clinic and persistent feelings of ambivalence even after the abortion. Some women experienced a stronger bond with their partners in social relations, precisely partnerships. While others left the relationship, for most, a change occurred in terms of partnership (Aléx & Hammarström, 2004). This study points out the ignorance of medical professionals that has to be changed to create a better environment for individuals who decide to abort. Healthcare personnel should handle women in the pre-abortion and post-abortion states with more consciousness and sensitivity because those experiences might lead to possible adverse lifetime outcomes (Aléx & Hammarström, 2004).

2.3 Experience of Spontaneous Abortion

The quality of the care given to women during their pregnancy drastically improved. Nevertheless, the studies indicate that between twenty to thirty percent of women in the United Kingdom experience miscarriage each year (Simons et al., 2006; As cited in Meaney et al., 2017). Hurt et al. (2011) defined spontaneous abortion as the "natural death of an embryo or fetus before it can survive independently" (As cited in Huss, 2021, p. 2807). Factors that might increase the prevalence of miscarriage are smoking, drug use, old age, and obesity. Nevertheless, unwanted abortion is mainly perceived as an unanticipated event (Huss, 2021). According to Murphy (1998), the experience of spontaneous abortion may negatively impact both men and women. However, individuals could lower those outcomes with strong family support (Adolfsson, 2010; As cited in Meaney et al., 2017). According to Meaney et al. (2017), there is an ongoing debate whether the onset of negative psychological impact is more prevalent during the first two months or somewhere after six to twelve months after the experience of spontaneous abortion.

In a qualitative study presented by Meaney et al. (2017), ten females were interviewed using a semi-structured interview schedule to broaden the empirical research in this area. The themes examined were management, pregnancy, diagnosis, support, the experience of miscarriages, and future pregnancies. In the context of abortion experience, the results indicated the importance of six predominant themes. Firstly, women highlighted the significance of recognizing their spontaneous abortions by the healthcare practitioners and society as a whole. Participant one, who had two miscarriages, stated, "What I think happens, from my own experience, is I do not think it is recognized enough" (Meaney et al., 2017, p.3). Additionally, all interviewees believed in avoidance of the topic of miscarriages in the public sphere. Moreover, most participants only recognized the prevalence of abortions in their own families after the

event. Miscarriage conversation and information exposure should be fostered in various venues, including health education for children (Meaney et al., 2017). Secondly, the doctor's care and the clinic environment were correlated with the distress experienced at the time of the event. Women who had miscarried were often seen in the same clinics as joyful mothers, who proudly displayed their fetal heart recordings to the other patients. This experience made participants feel emotionless.

Hospitals specialized in early pregnancies were seen as a more private and safer environment for emotional expression (Meaney et al., 2017). Most women dealt with grief through close community support and shift to work focus. According to Meaney et al. (2017), the experience of miscarriage was significantly different whether the participant experienced previous pregnancy. The distress for childless women centered around the ideas of fertility and concern about health. Additionally, the result showed that some females experienced guilt because the doctors could not find any particular reason for this unfortunate event, and individuals mostly felt unprepared and lacked information. Findings from this study are supported by research from Wong et al. (2003) and Moohan et al. (1994), who gave great emphasis on providing women who experience miscarriage with information concerning their psychological and physical health in the hopes of reducing distress or guilt caused by ambiguity. (As cited in Meaney et al., 2017). Healthcare facilities should pay attention to women with increased risk for spontaneous abortion and consequently pass on detailed information and provide support such as counseling (Meaney et al., 2017).

2.4 Possible Psychological Symptoms

The results of studies held by the Eastern Journal of Medicine (2020) on the psychological consequences of abortion are inconclusive. Different women go through

different mental challenges. However, there is no documented rise in psychiatric diseases, according to the data supplied in the above-mentioned article (2020). Nevertheless, abortion might result in emotional challenges leading to post-traumatic stress disorder (PTSD), difficulties with interpersonal relations, and depression. The psychological effects of pregnancy termination are usually determined by three key factors: the reason for abortion, type of abortion, and term of pregnancy. Additional vital factors might include financial and social status, religious beliefs, and women's values. Furthermore, woman who experiences psychological problems as a result of the abortion, frequently report the symptoms four months after the termination is performed. In addition, most individuals undergo the procedure while unaware of the possible requirement for psychological support (Zareba, 2020).

As abortions become more widely discussed, alongside with the medical complications, psychological consequences associated with abortion are gaining interest. According to the literature review presented in the "Psychological Effects of Abortion" (2020), most women suffering from long-term complications have undergone abortion for medical reasons and are typically in the late stages of pregnancy. A survey was conducted on a group of nineteen induced abortion patients three weeks, three months, and a year after the termination. The results showed that women viewed the termination as a loss similar to a miscarriage; nevertheless, none suffered severe psychological consequences such as PTSD (Zareba, 2020).

According to Adler et al. (1990), empirical research suggests that adverse psychological outcomes after induced abortion in the first trimester are not present. However, women may experience emotions of guilt, sadness, and regret. Nevertheless, most women feel relief and happiness, which was revealed in a study conducted

by Lazarus (1985), who found a lower correlation between negative emotions. Adverse emotions mirrored the internal concerns and social disapproval in the first-trimester induced abortion. Moreover, the most prominent negative emotion was guilt (Lazarus, 1985).

Subsequently, a higher correlation was found with positive emotions; 76% of participants reported happiness (As cited in Adler et al., 1990). This claim is supported by Adler (1975), whose research used Beck Depression Inventory to correlate psychopathology and abortion. Participants were analyzed two to three months after the abortion. Interestingly enough, women did not report any increased signs of psychopathology. Additionally, the findings of this study indicate the importance of circumstances that individuals go through during the abortion and unexpected pregnancy. Besides, the severity of negative and positive emotions felt, are directly correlated to the conditions of an individual (Adler, 1975). Among many variables in this study, two factors stood out in connection to feelings of sadness and guilt. Firstly, the internalized beliefs about pregnancy and termination. As a result, a woman who feels fulfilled and wants to retain the baby but chooses to abort will experience more negative feelings. Second significant factor is stigma and perceived influence of the social environment.

It should be noted that a woman who are not surrounded by supporting conditions have a higher possibility of experiencing shame and guilt. According to Adler (1975), those two factors might influence each other, even though they function independently. Thereafter, this research supports that most women do not experience intense feelings of shame, guilt, and anxiety but rather relief and happiness (Adler, 1975). Even though some case studies presented a conflicting view, concerning the distress and psychopathology after the termination of pregnancy, Adler (1975) states that “severe negative reactions after

abortions are rare and can best be understood in the framework of coping with a normal life stress” (p. 43).

However, the study from Major et al. (2009) pointed out a direct answer cannot be given to a question such as “Does abortion cause harm to women’s mental health?” (p.864). This is because researchers would need a randomized experimental design, where variables would be controlled. However, that is not possible with pregnant women due to ethical considerations. Therefore, most reliable study would be longitudinal, which include mental state before the time of the abortion, controlling for external variables such as relationships, and mental health outcome variable as a covariate. Nevertheless, the causal relationship of abortion and psychological well-being cannot be deduced with a hundred percent accuracy, due to reasons stated above (Major et al., 2009).

3. Case Study Methodology

This study investigates the relationship between abortion and mental health consequences. Moreover, it provides a deductive analysis on the topic of abortion and effects on women. This was accomplished through a review of the literature and three interviews with women who had underwent pregnancy termination. Followingly, it aims to present three distinct experiences that will either support or refute the empirical research explored. Theoretical framework led to pre-identification of themes such as background, stigma, experience of pregnancy, medical care, and psychological support. Moreover, this section will explore the study objectives, design, participant, procedure and interview analysis.

3.1 Case Study Objectives

Case studies of 3 women were intended to contribute to broader scope of understanding in terms of pregnancy terminations and its consequences on mental health. Moreover, qualitative research aims to validate unique

experiences which might aid both medical workers who may not be aware of how harmful the experience can be and counselors who want to reduce or avoid bad results from occurring. Consequently, Case study results were consolidated into the following outputs:

- Abortion Experience
- Medical Care
- Psychological Support
- Psychological Effects

3.2 Design

Research philosophy accommodated in this research follows the interpretivism. Therefore, the core of this research derives from subjective experience which is explored through self-reflection of the individual interviewed. Moreover, the deductive nature aims to confirm the proposed hypothesis, which states that negative influence of the factors investigated might create a compelling force leading to drops in mental well-being. Interviews were gathered cross-sectionally; therefore, exclusively at one point in time.

Furthermore, this study used semi-structured interviews to examine variables such as pre-abortion anxiety, decision-making process, social pressures, cultural background, family background, the experience of abortion, post-abortion anxiety. This interview was recorded and then analyzed into themes designated by the literature reviews. Individuals' backgrounds, pregnancy experiences, medical treatment, abortion experiences, psychological impacts, and psychological support were among the topics covered. In addition, interviews were summarized based on the portions listed above, with the actual transcript of parts provided to back the final assertions. Furthermore, the above-mentioned themes influenced women's

psychological states before, during, and after the abortion. Interviews took place where the participants felt most at ease, either at their selected location or at their house. Interviews did not last longer than one hour. Lastly, this study aimed to guarantee ethical approval from the SUNY Empire College and the academic thesis advisor Dr. Weissenberger.

3.3 Participants

Women in this study were selected through non-probability sampling. Following the initial post on a Facebook support group and an inquiry for participants, females applied directly to email address provided and were chosen accordingly to convenience sampling. This study incorporated three women specifically from the Czech Republic who experienced abortion. Women A and B had experienced spontaneous abortion. As opposed to women C, that experienced induced termination of pregnancy. Majority of women are currently in a long-term partnership, except for Women C, who is presently divorced. The main differences in terms of demographical background were observed in terms of education, age, history of a psychiatric disease, and the number of children successfully conceived. Lastly, participants had to be over the age of 18 to take part in this study.

3.4 Procedure

Participants approached the researcher by email, directly from the inquiry. Once participants were selected, individuals were asked to read through the consent form and sign it. Followingly, demographic data were collected, and the procedure was explained verbally. Moreover, it was clearly stated that participants could disregard any given question or pause in between questions to feel comfortable. Additionally, women were informed that they had the right to leave in the middle of the interview and did not have to explain why.

The study included semi-structured interviews that took approximately 1 hour. Interviews were scheduled to investigate women's perceived journey from the discovery of pregnancy to the post-abortion period. Furthermore, time management was required in order to spend equivalent amounts of time on different subjects. Finally, participants were handed a debriefing form, which they were instructed to peruse at their leisure. Participants were also invited to provide comments on the recent interview as well as suggestions for future study. Followingly, the interview which was conducted in the Czech language had to be translated into English for the purpose of this thesis.

3.5 Interview Analysis

Interview recording was analyzed through thematic analysis. Themes observed in the empirical research. Moreover, some topics were preidentified from the extensive research. However, some spontaneously emerged during the interview analysis process. Consequently, the patterns found were evaluated for coherence throughout the interview and clarified for further analysis.

4. Results

The women presented in this study were born in the Czech Republic and were over the age of 30, Woman A (n=32), Woman B (n=40), and Woman C (n=52). Both women B and C have acquired a university degree diploma and woman A high school education. Moreover, woman A comes from a divorced family and has a history of a psychiatric disorder. On the other hand, women B and C come from strong family backgrounds. Similar to woman A, woman C was treated with Major Depressive Disorder; however, in the post-abortion period. Woman A

and Woman B had gone through the experience of spontaneous abortion. Woman C decided on induced abortion at the age of 22. Additionally, all women reported a feeling of loneliness, sadness, and anger. However, guilt was only experienced by woman B, and woman C stated that she did not feel guilt on the conscious level.

Moreover, the emotion of shame was non-existent in consideration of the pregnancy termination. In addition, persistent feeling of anxiety was felt by woman B, who was consequently diagnosed with Depression. However, among all women, woman B went through the most challenges. As such, her father was diagnosed with cancer and passed away. Consequently, her mother was diagnosed with Depression. Even though all women argued that this experience had changed them, persistent adverse psychological effects were present only for woman B.

Nevertheless, women A and B reported more substantial relationships with their husbands after the abortion. Therefore, positive effects were primarily seen in terms of interpersonal relationships with a mate. Increased satisfaction in the interpersonal relationship was not observed in the case of woman C, who left her partner post the abortion. None of the women felt stigmatized. Apart from describing abortion as "not a pleasant experience," women in this study experienced an unprofessional attitude on the side of the medical staff.

Moreover, the women A and B who used public health care services reported the need for a more cautious and empathetic manner and a lack of information about the procedure and options for psychological or alternative support. In the context of psychological support and alternative resources, women A and B reported that the Facebook support group was essential for maintaining stable well-being. Women A and C found hope in spirituality, and rituals helped them with closure. On the

other hand, woman B disregarded spirituality and instead focused on the support from science. Overall, the level of life satisfaction only differed for woman B.

5. Discussion

This study aimed to provide an in-depth understanding of the psychological effects of women who experienced either spontaneous or induced pregnancy termination. Moreover, the basic proposition stated that women are more likely to experience negative psychological effects. Consequently, the findings presented are diverse in terms of psychiatric illness background, the experience of pregnancy, psychological effects, psychological support and challenges that each woman was facing at the time of the abortion. However, even though unique answers were reported, the interview analyses identified the experience of abortion, medical care, psychological support, the challenges that each woman faced, and psychological support as critical factors that contributed to their mental well-being.

5.1 Abortion Experience

Murphy (1998) argued that the experience of abortion might negatively influence post-abortion mental state. Woman A reported her experience as non-traumatic; therefore, she did not experience any long-term effects. However, she did feel disappointment, regret, and anger. Woman B was overwhelmed by the various problems she encountered and the fact that she had undergone an unexpected spontaneous abortion before being hurried into the clinic for an emergency surgical abortion, which might explain her continuing feeling of anxiety. Women C and B were rushed into emergency surgery after the first abortion, and their well-being might have been influenced precisely due to this experience. Additionally, traumatic experiences of abortion might increase the possibility of the post-abortion syndrome (Rue and

Speckhard, 1992). However, none of these women reported symptoms of PAS.

5.2 Medical Care

There were two sets of answers given by women in terms of the care provided by the medical staff. Woman A, who received care at a private clinic, reported an empathetic environment, where doctors took time to explain the procedure and reassured her that it was a common experience, reported lower stress and fear about her whole journey. Nevertheless, Women B and C, who were treated in a public setting, reported lousy manner of the staff and no additional information. As a consequence of this attitude, woman A and woman B reported more negative impacts. This claim might be supported by Meaney et al. (2017), who argued that the distress during abortion experience is correlated with the recognition of the hardship that this event incorporates as well as the treatment of the medical professionals.

Moreover, after the abortion, women were placed in the same environment as happy mothers, which led them to feel emotionless. As a consequence of this proceeding, women reported high distress at the time of the event (Meaney et al., 2017). This experience is noted by woman B, who, following the abortion, was placed into a room with a mother who had just given birth. Consequently, woman B reported, “the worst part of this experience was probably waiting in the waiting room with the happy women calling their family and friends to express their happiness about their future newborn, I felt sadness and persistent feeling of anxiety.”

5.3 Psychological Support

According to research from Adler (1975), women are less likely to experience adverse post-abortion psychological effects when being surrounded by a supportive environment. All women in this study reported support from family and friends. Even though woman A felt as if

she was the one supporting her partner, she benefited from the Doula. In addition, spirituality was a significant force that gave her stability. Woman B found her support in science. Moreover, both women A and B used the Facebook group, where they could openly speak and read about other women's experiences, which both reported as increasing their well-being and feeling of loneliness. Nevertheless, woman B experienced severe psychological damage in the following years. On the other hand, Woman C did not join any organization since she felt unable to discuss the subject publicly and was instead supported by her partner.

Psychological Effects

Similar to findings from Wong et al. (2003), woman B experienced guilt precisely because she did not know the reason for her miscarriage. Moreover, in the interview with woman A she states, "person cannot change the outcome of this event; therefore, there was no reason for me to feel guilt." This statement supports Mohan et al.'s (1994) claim, believing that post-abortion anxiety might be lowered by reducing uncertainty. Contrary to this study, where guilt was not present for all women and was not quite as persistent, Lazarus (1985) argued that guilt was the most eminent emotion in women who experienced induced abortion.

In research by Aléx and Hammarström (2004), women noted the feeling of loneliness. Likewise, all women in this study reported feelings of loneliness. Additionally, according to existing literature, I expected to find that existing stigma will influence post-abortion psychological state (Hanschmidt, 2016; Frederico, 2018). However, none of the women reported the experience of the direct stigma that would influence their well-being. The protentional reason for this might be due to the evolving nature and people's perspective on abortion in the Czech Republic.

According to Adler (1975), "severe negative reactions after abortions are rare and can best be understood in the framework of coping with a normal life stress" (p. 43). In the foundation of this study, one might note that woman B faced many challenges at the time of pregnancy loss. Therefore, due to pressure at work as well in the family department and the negative experience of abortion, one might believe that all those factors lead to her diagnosis of Major Depressive Disorder. Additionally, woman B shared that until this day, due to this event, she fears the process of childbirth, which to this research is one of the key findings, as this shows a direct consequence of abortion on mental state. However, contrary to this finding, Huss (2021) stated that there is no correlation between poor mental health and abortion.

On the other hand, women A and B did not acquire any psychiatric disorders after the abortion. However, woman C reported a difference in life stability and long-term psychological effects until the pregnancy with her daughter. In contrast, woman A did not report any long-term effects and stated, "due to the ritual, I felt closure, and this event is a closed chapter for me." This study suggests that the psychological state of women might be supported due to no experience with stigma.

Correspondingly, Lazarus (1985) believed that pregnancy terminations in the first trimester are lower when individuals do not feel disapproval by the society (As cited in Adler et al., 1990).

Nevertheless, the effects of abortion were not exclusively adverse. Women A and B experienced a stronger relationship with their partner during the post-abortion period. Additionally, woman A reported having higher confidence and belief in her ability as an individual "after the abortion, I knew that I can do anything." As for woman C, who consciously decided to abort, the decision and the abortion were also accompanied by a feeling of relief. She stated, "I cannot imagine going through with

the pregnancy, and I am happy with my decision.” One may infer that it even lowered her uncertainty about her future and aided her internal locus of control. Research from Adler (1990) suggests that women after abortion feel positive emotions such as happiness quite profoundly. The results of his study showed that as much as 76% of participants reported happiness after the abortion.

Unfortunately, as supported by this study and Zareba (2020), most women who have undergone pregnancy loss or pregnancy termination are unaware that psychological assistance may be required throughout and after this event. Furthermore, all of the women in this research felt that having access to therapy before, during, and after the abortion would be highly beneficial to their psychological distress.

6. Conclusion

This thesis presented factors that contribute to and might influence the psychological outcomes of induced and spontaneous abortion. The findings indicate that for specific individuals such as woman B, perceived challenges and no interventions at the time of the spontaneous abortion experience; may lead to long-term psychological effects such as Depression and long-term fear of childbirth. However, the evidence also supports the claim that if there is enough autonomy, psychological support, and no challenges, such as in the case of woman A, spontaneous abortion might lead to positive outcomes such as higher confidence and strengthening of partnership. Even though woman A did feel anxiety and pain during the process. In terms of induced abortion of woman C, the findings support that there might be minor psychological adverse effects. Additionally, this thesis suggests that more emphasis should be given to medical care given to patients who have undergone this event. Critical analyses led me to believe that the scope of this thesis might have been too broad; therefore, future studies might provide a rather in-depth analysis of one of these

themes to increase the internal validity. Moreover, the theoretical basics should have additionally focused on the demographical background such as marriage, history of psychiatric disease, age, education, socioeconomic status, and family background to strengthen the connection between the psychological effects of abortion. Despite these limitations, the study provides valuable resources and findings that might be applied in both clinical and counseling settings. It is evident that there is a need for a better understanding of the medical professionals about the possible mental health outcomes of pregnancy termination to apply more empathy and offer additional psychological recourse for clients that go through such an event.

However, as Major et al. (2009) stated, the cause-and-effect association between abortion and psychological well-being cannot be established with an absolute certainty. Therefore, future research is needed in areas not considered in this thesis, as such consideration of abortion impacts on the younger populations, precisely the ages lower than twenty. Furthermore, research that focuses on treatments and recourses that serve to aid counselors and the differences in the decision-making and abortion experience of rape victims.

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Psychological factors and its connection to practicing various dancing styles

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Abstract

Development of positive relationship between a woman and her body is a worldwide issue. Striving for achievement of the perfect body, female individuals tend to experience issues related to a negative body image. It was hypothesized that participants regularly engaging in pole and twerk will score higher on self-body image (SBI) and sexual self-esteem (SSE) than the ones exercising ballet and street dance. Regarding quantitative data collection, The Body Appreciation Scale (the BAS) was administered to measure self-body image and sexual self-esteem was measured with The Sexual Self-Esteem Inventory for Women (SSEI-W). Moreover, the findings showed the positive correlation between self-body image and sexual self-esteem; $r=.55, p=.000$. There was not found any statistically significant relationship between the dance types when tested for self-body image and sexual self-esteem. Both qualitative and quantitative part of the research showed that some of the non-significant differences between the dance types may be substantially meaningful and thus contributing to the importance of future research.

Keywords: self-body image, sexual self-esteem, Twerk, Pole dance, Street dance, Ballet

1 Introduction

The relationship between an individual and their body is a topic that has been discussed for centuries. Women have been reminded of the importance of matching their appearance with the body ideals that derive from socio-cultural perspectives (Wykes & Gunter, 2004).

Whether a body of a female individual looks similar to that of Kim Kardashian with curves, or it reminds more of a thin body of a Victoria's Secret model, it is never enough to keep on the track with body ideals. The media profits from creating an impression in its customers that it is important to strive for having a perfect body (Grogan,

2016). When trying to follow body ideals, one may develop unhealthy attitudes towards their own body (Lewis, 2016).

Based on previous studies on one's relationship with their body, a negative self-body image is a common issue among young adult women. Research conducted by Darlow et al. (2010), at least 80 % of 274 overweight young adult female participants have reported unhealthy levels of self-body image due to perception of a thin body as a body ideal (as cited in Pakki & Sathiyaseelan, 2018). When an individual has a positive self-body image, they accept and positively praise their own body. In addition, experiencing pleasant feelings and thoughts towards one's own body is involved in the positive self-body image (Lewis, 2016). If a person does not have a positive relationship with their own body, they are prone to the development of a negative self-body image. A negative self-body image refers to an unrealistic self-perception of one's body, that includes negative feelings and thoughts towards their own body appearance (Grogan, 2016). As a result, they are likely to experience health issues related to self-body image (Killion & Culpepper, 2015). For instance, a negative self-body image is associated with low self-esteem (Pop, 2016).

The idea of the negative SBI is supported by the media, and often negatively affects women (Oliver, 2008). For example, women with negative body image may develop eating disorders, depression, isolation from others, low self-esteem, and obsessions with weight loss. On the other hand, individuals with a positive body image tend to feel secure and satisfied in terms of their body appearance (Lewis, 2016), and have a positive self-perception of their physical fitness (eg. physical competence) (Sani et al., 2016). Since having a positive self-body image is crucial for one's mental health, it is important to develop an optimal relationship with one's own body.

Based on the previous research, self-body image is associated with dance (Oliver, 2008). Moreover, various types of dances may differ in their impact on self-body image. For example, the study done by Pellizzer et al. (2016) showed that women who do pole dance recreationally tend to have a positive self-body image compared to female individuals not engaged in Pole dance. Ballet dancers are prone to having a negative self-body image, if they are expected to have a certain weight (Swami & Harris, 2012). As a result, one's self-body image may be negatively influenced by factors such as requirements on the dancer's weight. On the other hand, factors that focus on the body appreciation during a dance practice such as

proprioceptive awareness (self-perception of own body movement), tend to improve one's self-body image (Oliver, 2008). Furthermore, dance/movement therapy (DMT) suggests that dance improves one's self-body image. Since DMT applies body movement to the treatment, it encourages one to develop a positive relationship with their body (Gleissner, 2017). Whereas each dance style uses its unique aspects related to one's body, various dance styles may differ in their associations with one's self-body image.

Having a low sexual self-esteem can lead to disrupted sexual functioning (the response to sexual stimuli without the self-perceived difficulties) (Hannier et al., 2017). For instance, one can find it difficult to perceive sexual pleasure during sexual intercourse. Since sexual functioning (the response to sexual stimuli without the self-perceived difficulties) contributes to one's psychological health, it is important to have a healthy sexual self-esteem (Woertman & Brink, 2012).

Some studies have shown the dance styles that are focused on aspects of sexuality may improve sexual self-esteem in women (Dodson, 2019). Twerk is a dance type which emphasizes buttocks movements (Johnson, 2020). For instance, twerk improves self-perception of one's sexuality

through its focus on the body parts that are the center of sexual energy (bottom, pelvis, etc.) (Toth, 2017). While various dance styles differ in the use of sexual aspects, each dance style may differ in its relationship with one's sexual self-esteem.

Furthermore, a relationship has been found between self-body image and sexual self-esteem. Individuals having a negative self-body image are likely to report issues linked with sexual relationships (Lordello et al., 2014). A positive self-body image is related to healthy sexual self-esteem, since individuals who like their body show high levels of positive appraisal of one's own sexuality. Positive sexual praise is defined by having a healthy sexual self-esteem (Hensel et al., 2011, as cited in Hannier et al., 2017).

For instance, an optimal sexual self-esteem is expressed via healthy sexual behaviors such as allowing oneself to experience sexual pleasure (Zeanah & Schwarz, 1996).

Considering the previously stated studies, self-body image, sexual self-esteem, and dancing styles may be mutually connected. In addition, there are shown associations between self-body image and sexual self-esteem in adult women. The relationship between various styles of dance, self-body image, and sexual self-esteem is present in adult female dancers, while each dance style

contributes to one's self-perception of their body and sexuality.

The study is expected to show the potential differences in self-body image and sexual self-esteem between Twerk dancers compared to Ballet dancers and Street dancers. Also, Pole dancers are compared to the same dance groups as Twerk. The author assumes that the findings of the research would make adult women think about their own self-body image and sexual self-esteem, and encourage them to practice dance. The results of the study should bring new ideas that can be used in the clinical setting when treating various psychological issues.

2 Results

Hypothesis one assumes that twerk and pole dancers will score higher on self-body image compared to street and ballet dancers. One-way ANOVA for unrelated scores showed that on average, 31 twerk dancers had the highest positive body image ($M=4.06$, $SD=0.53$) followed by the group with 20 ballet dancers ($M=3.92$, $SD=.71$), 20 street dancers ($M=3.89$, $SD=0.499$) and 37 pole dancers ($M=3.84$, $SD=0.64$). An analysis of variance found that the dance groups did not statistically significantly differ on self-body image, $F(3, 104) = 0.792$, $p = .501$, $\eta^2 = 0.02$.

In the second hypothesis author expected that twerk and pole dancers will on average score higher on sexual self-esteem compared to ballet and pole dancers. Similarly to the first hypothesis, one way ANOVA for unrelated scores did not detect any statistically significant difference in sexual self-esteem based on the dance group, $F(3, 104) = 0.51$, $p = .674$, $\eta^2 = .02$. Pole dancers ($n_1 = 20$) scored the highest ($M = 4.81$, $SD = 0.51$) followed by equally scoring Twerk ($n_2 = 31$, $M = 4.70$, $SD = .64$) and ballet dancers ($n_3 = 20$, $M = 4.70$, $SD = 0.53$) and the street dancers were the group with the lowest sexual self-esteem average score ($n_4 = 20$, $M = 4.61$, $SD = 0.51$).

Regarding the third hypothesis, it was examined if there is a positive and significant relationship between the sexual self-esteem and self-body image. The bivariate correlation showed the statistically significant relationship between the body self-image and sexual self-esteem, and the constructs were positively correlated, $r = .55$, 95 % CI [.43, 1.00], $p = .000$, one-tailed. The third hypothesis was confirmed.

3 Discussion

In total, the 108 regular adult female dancers across cultures participated in the study on the differences in self-body image and then sexual

self-esteem based on the four distinct dance styles (twerk, pole dance, street dance and ballet).

The third hypothesis “Self-body image and Sexual Self-esteem will be positively and significantly correlated” has been confirmed. These findings were consistent with few studies that focused on the relationship between SBI and SSE; Hannier et al. (2017) has stated that a woman’s self-perception of her body can determine the extent to which her sexual experience will be pleasurable. If a woman has negative self-body image, she feels insecure about her body appearance. As a result, she may not be able to relax during sexual intercourse and experience sexual pleasure (Peplau et al., 2008, as cited in Woertman, et al., 2012). According to Ackard et al. (2000), women with a positive SBI tend to experience more orgasms compared to those with a negative SBI (as cited in Woertman & Brink, 2012).

Regarding non-significant differences, Twerkers reported higher self-body image compared to each of the dance types. For example, the respondent of Twerk explained that the dance type helped them to express themselves via body movement: *“Dance helped me feel into my whole body. I’m not great*

expressing myself through words so dance has always been a way to express. Twerk helped me confront all the things society tells us is not desirable and move those thought patterns to a healthier more accepting space. It built my confidence and when you’re not worrying about how you appear on the outside it opens up space in the mind for other thought’s.”

Considering the dimension of sexual self-esteem, Pole dancers showed higher scores than Ballet dancers. One of the Pole dancers explained how doing Pole dance positively shaped their SSE throughout the years: *“...after abusive marriage and a very long period of being single (abstinent) I have the healthiest relationship I have ever had both sexually and emotionally through the confidence dance has given me. I have just turned 50 but have never felt more confident, beautiful and sexy. It is all attributable to dance and the incredible women who have taught me.”*

4 Conclusion

The statistically significant relationship has not been confirmed for the group of Twerk dancers and Pole dancers when compared to the group of Ballet and Street dancers. The importance of the non-significant differences has been explained previously in the section of Discussion. To conclude, the findings of the current study

contribute to the literature in the area of dance, self-body image, sexual self-esteem, and the relationship between the constructs.

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