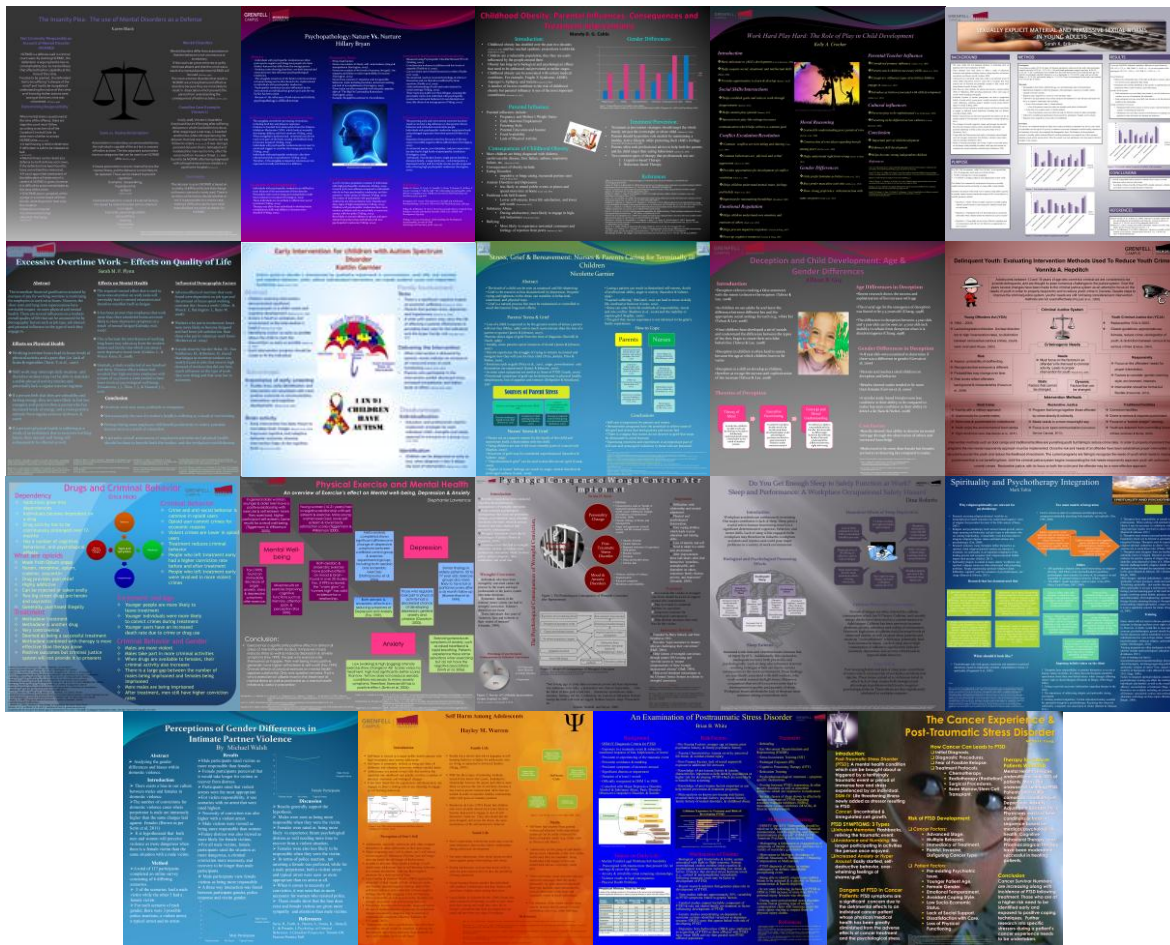


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PSYCHOLOGY PROGRAM



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Independent Projects
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Department of Psychology

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The capstone course, Psychology 4950, in the Bachelor's Degree Psychology Program allows students to carry out research on a topic of their choice and to prepare reports on their findings. This compilation of papers represents the results of their efforts.

The faculty and staff of the Psychology Program congratulate the members of the Year 2013 course on their accomplishment, and wish them continued success.

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The Insanity Plea: The Use of Mental Disorders as a Defense

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This paper examines the use of the Not Criminally Responsible on account of Mental Disorder (NCRMD) defense. The history of the defense and how it was established is discussed as well as some different mental disorders and automatism that fall under the scope of the defense. All aspects of the trial, from the fitness to stand trial, the review board, possible dispositions and subsequent treatment are reviewed as well as the public's attitude towards mentally ill offenders. Further research into the topic of NCRMD is suggested to further understand the offenders, the disorders and treatment.

In order to find a person guilty of an offence, there has to be evidence that the accused is criminally responsible for committing the offence. In most cases there are two elements that need to be proven, *actus reus*, the person committed the act and *mens rea* or a guilty mind, the person committed the act intentionally, and for rational reasons of their own free will (Allnutt, Samuels O'Driscoll, 2007; Torry & Billick, 2010). However there are some cases that are the exception to the rule, a guilty act may have occurred but there was a lack of guilty mind, often as a result of mental illness (Sinha, 2009).

Mental illness is a growing health problem that as of 2001 impacted 450 million people worldwide and the number is still growing (Sinha, 2009). Mental health is not a new issue but it is becoming more prominent in today's society and is something the Criminal Justice System needs to take into consideration. With the increase in knowledge regarding mental illness it has been easier to accommodate offenders who suffer from a disorder through the use of the Not Criminally Responsible on Account of Mental Disorder (NCRMD) plea (Sinha, 2009; Torry & Billick, 2010).

NCRMD is a defense that is used in criminal court cases when the offender's criminal culpability was impacted at the time of the offense by a mental disorder. The

Canadian Criminal Code defines mental illness as a disease of the mind, and for someone to be criminally responsible for his/her actions he/she must be unable to understand that the behavior was wrong (Latimer & Lawrence, 2006). If the accused has a mental disorder and lacked the ability to understand his/her actions were wrong at the time of the crime he/she could be eligible for an NCRMD plea which can help provide the offender with the necessary treatment (Torry & Billick, 2010).

The use of NCRMD has always been a sensitive subject in the literature, the criminal justice system and especially among the public. There are some arguments that support the use of mental disorders in court cases, stating that it is morally wrong to punish someone suffering from a mental disorder however the more common theme among the general public is very negative (Hans, 1986). However, the majority of public is under a few misconceptions, the main one being that the use of the mental illness defense is a common when in reality less than 1% of criminal court cases involve a plea for NCRMD (Lymburner & Roesch, 1999).

History

The use of mental illnesses as a defense for crimes has been occurring for a very long time, with evidence suggesting it goes back as far as the third century (Allnutt, Samuels & O'Driscoll, 2007). Over time, as

the courts have changed and understanding of mental illness has increased, the defense has evolved to accommodate these differences. There has been evidence that shows the debate over whether an individual with a mental illness can be held responsible for his/her criminal action has existed since the third century in Roman law and again in “code of Justinian” in the sixth century (Allnutt et al., 2007). In the thirteenth century the “Wild Beast Test” was devised by Henry De Bracton, whereby ‘a man must have no more understanding than an infant, brute, or Wild Beast’ (Allnutt et al., 2007).

William Lombard further developed this idea in the late sixteenth century with the idea that “a natural madman or a lunatic” could not commit a felonious act because of his/her lack of understanding (Allnutt et al., 2007). During the seventeenth century, Mathew Hale listed four types of insanity that the law would recognize; idiocy, melancholy, total alienation of the mind and perfect madness. However because these ideas were ill defined and vague they were hard to use in actual court cases (Allnutt et al., 2007).

It was not until 1843 that English Common Law included the modern definition of insanity. Daniel M’Naghten shot the Secretary to the British Prime Minister because he was convinced the Tories were trying to kill him. He was convinced that the only way to protect himself was to kill the Prime Minister (Allnutt et al., 2007). It was during this landmark case that the validity of medical professionals retrospectively judging the mental state of the accused was first questioned. It was also when the first laws were laid out that applied to mental disorders in court cases, known as the M’Naghten Rules (Allnutt et al., 2007). The rules stated that unless proven otherwise, everyone was assumed sane, a partial delusion was to be treated as though the

circumstance of the delusion was real and finally in order to establish ground for insanity it had to be proven that there was a defect of reason due to a mental illness whereby the accused did not know they nature or quality of the act or that it was wrong during the time the act was committed (Allnutt et al., 2007).

These rules were applied to any case involving mental disorders in Canada until the 1990s when several important cases forced changes in the Canadian Criminal Code. In 1991, after *R vs. Swain*, the Supreme Court of Canada decided that the “automatic detention in custody of any defendant acquitted by reason of insanity of an indictable offence” (Verdun-Jones, 1994) went against the rights and freedoms of Canadians. It changed the limits on where, for how long and for what purpose people may be detained. As a result of the removal of the law, the verdict of Not Criminally Responsible on Account of Mental Disorder was created (Verdun-Jones, 1994). The second case, *Chaulk vs. The Queen*, resulted in the Criminal Code being changed from insanity to mental disorder. This eliminated the use of the archaic term insanity and created a much broader spectrum of people who could fall into this category (Verdun-Jones, 1994). Since its inception the insanity plea has been ever changing to fit with the times and to maintain the rights and freedoms of all those involved. With medical technology ever evolving, the courts and laws must evolve as well to accommodate the differences. It is essential to the health of mentally ill offenders.

Mental Disorders

The DSM has a long list of mental illnesses however very few of these disorders can be used a defense in criminal court case. The most common disorders that appear in cases with the mental illness defense are schizophrenia and affective disorders. Both of these disorders can result

in dissociations or delusions that render the individual incapable of understanding the consequences of his/her actions (Lymburner & Roesch, 1999). Latimer and Lawrence (2006) found that in 51% of cases that resulted in an NCRMD plea the defendant was diagnosed with schizophrenia. Offenders diagnosed with affective disorders such as depression or bipolar disorder accounted for 27% of NCRMD cases. Other disorders that were commonly diagnosed were personality disorders, delusional disorders and mental retardation. There were also high rates of psychiatric comorbidity being diagnosed, such as psychosis and substance abuse disorder (Lymburner & Roesch, 1999).

There have been many high profile court cases in the last year that involve mental illness, one of the said cases is that of Vincent Li. In the summer of 2008, Vincent Li boarded a Greyhound bus while suffering a delusion in which God was talking to him. Li started experiencing the delusions of voices in his head in 2004, however as a devout Christian believed it to be God and did not seek treatment (Gurney, 2012). Li was convinced that he was the second Jesus and that there was going to be an alien attack on earth, he believed himself to be a part of God's plan to save the planet. Li was travelling around Canada on a bus, armed with a knife, when he believed the attack was happening (Gurney, 2012). The voice in his delusions told Li that the man seated next to him, Tim McLean, was an alien and a threat, so Li proceeded to stab him to death and behead him. Li was diagnosed with schizophrenia and was found to be not criminally responsible. He will remain in a psychiatric hospital in Winnipeg receiving treatment until such a time as the review board deems him to be safe to release (Gurney, 2012).

In recent years there a question has been raised over whether or not psychopaths

should be allowed to plea NCRMD. Currently psychopaths are not eligible for NCRMD because they do not suffer delusions or hallucinations, they can control their actions and they fully understand that their behavior is wrong (Maibon, 2008). Basically, they are not as cognitively impaired as others with mental disorders are, just cognitively lacking and yet the debate remains whether they should be held responsible for their actions. It is a question of moral understanding; psychopaths are impaired in their abilities to understand morals suggesting that they do not recognize their behavior as wrong (Maibon, 2008).

Automatism

It is reasonable to assume that people possess the ability to voluntarily control their thoughts and action. Criminal liability is based on the fact that people can control their behavior and as such are to be held responsible for their actions, especially when a crime has been committed (Rolnick & Parvizi, 2011). The lack of control and awareness is known as automatism. While automatism is a medical condition, it is also used in courts as a legal defense and the two have differing ideas on what constitutes automatism (Rolnick & Parvizi, 2011).

The legal definition of automatism varies widely across the world. The United States views automatism as separate from insanity and for years both Canada and the US viewed it as unconscious behavior that eliminated *mens rea* (Rolnick & Parvizi, 2011). However, the Canadian Supreme Court changed the definition to behavior that the individual has no capacity to control. Canada among other countries has begun recognizing the distinction between sane and insane automatism (Rolnick & Parvizi, 2011).

Sane and insane automatisms are separated by two criteria, whether the behavior was cause by internal or external factors and whether the behavior is likely to

be repeated. Sane automatism is caused by external factors to the individual, for example head trauma. It is unlikely that the behavior caused by sane automatism will be repeated and as such if the defense is accepted it often results in an absolute discharge (Rolnick & Parvizi, 2011). The defense of sane automatism includes dissociation due to physical abuse, emotional abuse or psychological blow (severe stress), intoxication due to alcohol or illegal drugs and many others (McSherry, 1998).

Insane automatism is defined by the courts as an inherent condition of the brain, it is a dissociation caused by internal factors like a mental illness or a disease (Rolnick & Parvizi, 2011). There is a chance that the behavior could be repeated so the verdict will often result in detention in a hospital. Epileptic seizures have often resulted in the use of an insane automatism defense, as well as many different mental disorders (Rolnick & Parvizi, 2011).

The problem with sane and insane automatism is that there are grey areas which can make it difficult to completely separate the two. One such area is hypoglycemia; if the dissociation occurs due to injecting too much insulin then it would be considered a sane automatism (Rolnick & Parvizi, 2011). However, if the high levels of insulin are the result of insulinoma, a tumor that secretes insulin it would be considered an insane automatism. Another area where this occurs is sleepwalking. If sleepwalking occurs it is viewed as a sane automatism unless the accused is known to be a regular sleepwalker in which case it is considered insane automatism (Rolnick & Parvizi, 2011).

Automatism as a defense can vary between cases and may not always yield the same results, depending on the circumstances of the offence. It can also be extremely difficult to prove its occurrence at

the time of the crime and it is therefore not used very often in court cases (Rolnick & Parvizi, 2011).

Unfit to Stand Trial

Being labeled unfit to stand trial is very different from NCRMD. Before the trial begins the mental state of the accused is tested and if he/she is found to be unable to communicate with counsel, to understand the nature of the proceedings or to understand the possible consequences of the proceedings he/she will be labeled as unfit to stand trial (Latimer & Lawrence, 2006). With the label of unfit to stand trial the mental state of the accused at the time of the trial is in question compared to the mental state at the time of the crime as is required for NCRMD. NCRMD also requires a trial whereas if an accused is unfit to stand trial he/she is incapable of competently standing trial. There is also a difference in the possible dispositions available to NCRMD and unfit to stand trial.

The case will be examined by a review board who will decide whether a conditional discharge or detention in a hospital will be most appropriate for the offender until such time when he/she is mentally fit to stand trial (Latimer & Lawrence, 2006). The review board is required to evaluate the case every two years to determine whether the accused can stand trial or if sufficient evidence still exists to bring the offender to trial. If there is not sufficient evidence remaining, the offender is eligible for an acquittal as long as he/she is not a threat to the safety of the public (Latimer & Lawrence, 2006).

Trial

From the very beginning of a criminal case involving someone with a mental illness it is treated differently from other cases. As soon as the act is committed and the offender is apprehended, there are different protocols to follow when it has been established that the offender has a

mental disorder (Sinha, 2009). From the moment mentally ill offenders are arrested, depending on their mental state and whether they are considered a danger to others police will arrest the individual, refer the individual to family or community resources or take no action at all (Sinha, 2009). If action is taken, like any other individual there is a bail hearing where the individual will either be released on bail or if deemed a danger to the public he/she will remain in a mental health facility or custody until the trial (Sinha, 2009).

As previously stated there is a difference between NCRMD and Unfit to Stand Trial, so after the individual has been deemed mentally fit the trial will begin. The trial will occur in either a regular criminal court or in a mental health court, courts which have recently emerged to better help treat offenders with mental illnesses. These specialized courts cater to the legal and mental health needs of those charged with minor criminal offences (Sinha, 2009).

Once the defendant has been cleared for trial, a plea of Not Criminally Responsible on Account of Mental Disorder may only be established once the offender has been found to have committed the criminal act (Vurden-Jones, 1994). Both the defendant and the Crown can plea NCRMD, however according to section 16 of the Canadian Criminal Code, the party that is responsible for raising the claim is also responsible for the burden of proof. There also has to be significant grounds to believe that a mental disorder influenced the accused at the time (Vurden-Jones, 1994).

In order to determine whether or not the NCRMD applies to the case, there must be a psychological evaluation to determine mental health at the time of the offense (Ogloff, Roberts & Roesch, 1993). It can be difficult assessing current mental health, so the assessments have the difficulty of

retroactively determining mental state at the time the offense was committed. The accuracy of these psychological evaluations is questionable due to the fact that there could be extended periods of time between the offense and the court case as well as the possibility of malingering (Ogloff et al., 1993). The assessments are conducted by a court appointed psychiatrist however the final responsibility of determining whether or not the defendant was responsible at the time of the crime falls to the judge or jury. The job of the psychiatrist is to serve as a consultant, and to lay down the facts of what occurred without biasing or influencing the court (Ogloff et al., 1993).

There are five stages to the psychiatric consult that are integral to properly determining whether NCRMD is applicable to the case. The psychiatrist must first establish the clinical-evaluative relationship, developing a rapport with the patient while being clear about whom the client is (either defendant or prosecutor) (Ogloff et al., 1993). Gathering the psychosocial history of the defendant is important to understanding both the patient and his/her patterns. The psychiatrist must then evaluate the present state of mind, while it is not necessary for understanding the mental disorder at the time it can be useful in understanding the defendant (Ogloff et al., 1993). The fourth phase involves inquiring about mental state at the time of the offense, the psychiatrist will gather all the relevant information and then use it to formulate his/her expert opinions which he/she will then present to the court (Ogloff et al., 1993).

After all of the evidence has been compiled and presented to the court it falls on either the judge or jury to make a final decision of whether the plea for NCRMD will be accepted or not. After a decision has been made and the NCRMD plea accepted, the sentence is left to either the judge or a

review board (Latimer & Lawrence, 2006). The review board is a specialized tribunal that consists of a judge and four other individuals, one of whom has to practice psychiatry. It is the responsibility of the board to assess the accused and to determine what the disposition will be; either an absolute discharge, conditional discharge or detention in custody in a hospital (Latimer & Lawrence, 2006, Sinha, 2009).

Dispositions

There is a common misconception among the public that receiving a verdict of NCRMD is the same as an acquittal and that the accused will be set free with no punishment for his/her actions. Less than 10% of all NCRMD and UST cases result in a disposition of absolute discharge crimes (Lawrence & Latimer, 2006). When making the decision of what disposition is appropriate for the individual the Review Board must take into consideration the safety of the public, the needs and mental state of the offender and the reintegration of the offender into society as such they must choose the disposition that is the "least onerous and restrictive to the accused" (Verdun-Jones, 1994).

An absolute discharge is the rarest of the dispositions. If given an absolute discharge the accused is no longer involved with the criminal justice system with regards to the offense he/she committed. There are very few cases that result in absolute discharge and less than 8% of the cases that do are violent crimes (Latimer & Lawrence, 2006).

Conditional discharge results in the accused being supervised within their community by restrictions placed on him/her by the review board. Conditions must be met for the accused to remain in the community such as living in a particular place (for example a group home); avoiding drugs or alcohol, following a specific treatment plan, submitting to urine tests, not possessing a

weapon, regularly reporting to a specific person (for example, a psychiatrist) and any other condition that the review board feels is warranted for the situation (Latimer & Lawrence, 2006).

With over 50 % of NCRMD cases resulting in this discharge, detention in a hospital is the common result. The accused will be placed in the custody of the hospital for the duration of their stay. The hospital administrator may be given the responsibility of the accused and can therefore increase or decrease restrictions. If this occurs, depending on the case and the individual the accused can be given permission to leave the hospital grounds (Latimer & Lawrence, 2006). The Canadian Criminal Code sets a cap on how long the accused can be detained, for example murder or high treason would result in 10 years or maximum imprisonment. The Canadian government, in a bid to keep the public happy, introduced provisions whereby there could be a cap of maximum imprisonment for crimes other than murder (Vurden-Jones, 1994).

The review board is required to examine every case that resulted in a conditional discharge or detention in hospital every 12 months. During these reviews the board can reassign any of the three discharges or change any restrictions that have been placed on the accused (Latimer & Lawrence, 2006; Vurden-Jones, 1994).

Treatment

There has been very little research conducted in regards to the treatment of the offenders who receive NCRMD and who are detained in a hospital. There has been no set length of time the offender is required to remain in the hospital that will provide full treatment. Instead, research has found that the length of detainment is subjective in every case and is influenced by a variety of

different factors (Lymburner & Roesch, 1999). The seriousness of the offense committed has a large impact on the length of time an offender will remain detained. The more serious the crime, the more dangerous the offender is considered to be and therefore the longer the detainment in the mental health facility. In some cases seriousness of the crime was found to be a more important determinant of length of detainment than mental disorder, which suggests that instead of treating the disorder the focus is on punishment (Lymburner & Roesch, 1999).

Once the accused has completed the required time in a hospital or has finished his/her conditional discharge, he/she no longer has access to the specialized forensic mental health services that were available to him/her in the mental health facility (Crocker et al., 2010). The mental health services provided by the Criminal Justice System are not always available or dependant, so once the offender is released from detention he/she may have difficulty maintaining the use of those mental health services. When the accused is finished with his/her responsibilities to the court he/she may not have the means to maintain the treatment that was helping with the mental illness (Crocker et al., 2010).

Recidivism

The issue of recidivism or re-offending is common within the criminal justice system and not just in the cases of mentally ill offenders. The whole idea of the justice system is to prevent or deter the offenders from committing more crime. While there have been many studies concerning recidivism among regular offenders, very little work has been done to look at re-offending after a successful NCRMD plea. It is surprising that there has not been a focus on the problem, especially with the negative attention the use of NCRMD garners from the public. If there

are high rates of recidivism among mentally ill offenders, it will give the media and the public more reason to dislike the defense.

Palton et al. (1980) conducted a study in New York from 1965 to 1971 comparing the recidivism rates of post-hospitalized insanity acquittees and offenders charged and imprisoned for the same crimes. Of the 46 mentally ill offenders 9 (24%) offenders incurred a group total of 30 arrests after being released, while only 10 (27%) of the felons had a total of 15 arrests (as cited in Bieber, Pasewark, Bosten & Steadman, 1988). Other studies in Canada found much lower rates of recidivism among the mentally ill, only 3 out of 56 offenders were arrested after release (Bieber et al., 1988). In their own study Bieber et al. (1988) found that 29% of the post-hospitalized mentally ill offenders commit another crime.

The actual rate of recidivism among mentally ill offenders may be difficult to ascertain however Pasewark et al. (1982) were able to distinguish certain characteristics that help predict whether an offender will commit another crime post-hospitalization. The individual most likely to reoffend will be a younger age at the time he/she was hospitalized for the crime which resulted in the NCRMD and will have more arrests pre-hospitalization (Pasewark et al., 1982). The offense that received NCRMD will be more serious, and the offender will have a higher arrest index, he/she will also have spent more time in prison prior to hospitalization. Finally he/she will have spent less time hospitalized under criminal statues and will have fewer parole days (Pasewark et al., 1982).

What was interesting was that there was no difference in recidivism rates between those who completed their required hospitalization compared to those who escaped from the hospital before finishing their sentence. Those who are deemed to

have completed treatment are equally as likely to reoffend as those who did not receive the full psychiatric treatment, which suggests that the treatment may not be completely valid (Pasewark et al., 1982).

Criticisms

The use of mental disorders as a defense in criminal court cases has long been a controversial topic, many people believe that if someone commits a crime he/she should be held responsible for his/her actions, no matter the mental state. Cases resulting in absolute discharges have led to distrust from the public and as led to the defense being labeled a “legal monstrosity” (Bloechl, Vitacco, Neuman & Erickson, 2007). One of the largest contributors to the public’s negative attitude is the media and coverage of high profile cases involving mental illnesses. Most of the media attention that focused on the mentally ill defendants is negative and increases stigmatization of those with disorders (Hans, 1986). The public gains the majority of their knowledge and misconceptions about the use of NCRMD from the news and media outlets, and as such see it as an attempt to avoid the consequences of the criminal act, a loophole to avoid punishment (Bloechl et al., 2007).

The media also shows an inaccurate portrayal of the success and frequency of the NCRMD plea, it is not as common as they would believe. There is a distinct lack of understanding that causes the public to believe what is seen on the media and to formulate their own ideas about what is and is not eligible for NCRMD (Hans, 1986). Some research has found that people associate the plea not with mental disorders but with brutal murders like those of Charles Manson and believe that offenders will receive an acquittal and no punishment. Not only is this untrue but it increases the stigma associated with NCRMD even more (Hans, 1986).

The main problem surrounding the stigmatization and lack of knowledge is jurors (Bloechl et al., 2007). The belief is that a jury will enter the courtroom with no bias, listen to the evidence presented to them and make their decision based solely on that, no personal ideas or beliefs involved. If an individual with biases towards the mental illness defense is selected to sit on a jury and there is plea for NCRMD, it is unlikely that the juror will be able to make a prejudice free decision (Bloechl et al., 2007; Hans, 1986). Juror bias is extremely important in cases with mental illness because it falls on the jury to make the final decision of whether or not the mental disorder affected their behavior, which can mean a thin line between hospitalization and prison.

Conclusion

The mental illness defense can be very difficult to understand when every case result is different. Factors like the type of mental illness, seriousness of offense and previous offenses all influence whether there will be a plea for NCRMD and if it will be accepted. Add in the extreme difficulty that is associated with accurately determining the mental state of the individual at the time of the crime, and it is not surprising that less than 1% of criminal court cases involve the NCRMD plea (Lymburner & Roesch, 1999).

This is a subject area that is in desperate need of more research, looking into which treatments yield the best response and the length of detainment required for the treatment to take effect. Recidivism rates are still rather unclear but more work needs to be put into eliminating re-offending as much as possible, especially since mentally ill offenders are already the targets of negative media attention (Hans, 1986). Even a hint that the NCRMD defense is not helping to treat mentally ill offenders, and an already disgruntled public will further rebel against the mentally ill defense. This could have negative repercussions for mentally ill

offenders because some governments have already given in to public demand and eliminated the defense all together (Bloechl et al., 2007). The public needs to be educated about mental illness and the relationship between disorders and crime, and not be influenced by the skewed perspective of media and news outlets. The only way to eliminate the distrust, stigmatization and bias associated with the mental illness defense is to debunk the misconceptions that are so prevalent in the public. There are many aspects of the defense that remain unknown and with the ever increasing rates of mental illnesses it is a subject area that requires more attention.

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Psychopathology in Relation to Criminal Behavior: Nature vs. Nurture

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Individuals with psychopathic tendencies are often negative and dangerous people (Viding, 2004). This is generally seen in the media, fictional readings, movies and other sources. Evidence exists showing that an individual with psychopathic tendencies is in fact a result of both internal and external factors (Viding, 2004). The amygdala controls emotions in human beings and is dysfunctional in people with psychopathic tendencies, a finding seen across a variety of research and tests. Research has also shown that the portrayal of psychopathic tendencies is influenced by the way someone has been raised, the environment he/she was raised in, and the type of parental engagement that he/she had received. Because of these factors, it is hard to treat psychopathology, but having a better understanding of individuals with psychopathic tendencies will help in these individuals, and may lead to future research demonstrating what can be done to further help these individuals.

In 2005 Dennis Radar was convicted of murdering ten young women. In his confession, he stated that he was proud to admit that he would first stalk his victims and then bind, torture and kill them (Mann, 2013). Radar was later diagnosed as having a high level of psychopathic tendencies. This shocked the people who knew Radar because of his “normal” way of life. It was noted that Radar attended church regularly, he was church council president, supervisor of animal control, a husband and a father of two children (Mann, 2013). To the average person these crimes seem to be and would be impossible to commit. These crimes would be considered horrendous and terrifying. However, to a person that has high psychopathic tendencies, these murders would be considered an accomplishment (Mann, 2013). The actions of Dennis Radar and many other psychopathic individuals leave most of us with questions such as “how could someone do such a horrific thing?” or “what causes someone to develop psychopathic tendencies?” Both the biological and environmental factors contribute to someone developing psychopathic tendencies and offer explanations as to why these individuals engage in such violent crimes. In fact, there are many identifiable characteristics and

symptoms seen in individuals who are known to be high in psychopathic tendencies.

Personality Traits of Individuals with Psychopathic Tendencies

Individuals who have high levels of psychopathic tendencies have deviant personality traits that include a lack of empathy, a lack of guilt, shallow affect, and the ability to manipulate other people (Viding, 2004). Many different definitions exist in judging who has high psychopathic tendencies, but there are three main factors that need to be considered when looking for these characteristics and similarities. First, it is suggested that these individuals are arrogant and have deceitful personality traits such as charm, self-centeredness, lying, and the ability to manipulate (Farrington, 2005). In other words, an individual with psychopathic tendencies may come off as a kind and confident person, but in the mind of these individuals, these traits make it easy for them to persuade people into trusting them, while having negative intentions to later deceive. They generally show low levels of remorse, little guilt, a weak conscience, low empathy and a failure to take responsibility for actions (Farrington, 2005). Once a person with psychopathic tendencies has manipulated or deceived

someone, he/she does not take consequences for his/her actions. He/she does not show any emotions in response to how he/she makes someone feel nor does he/she care. Finally, individuals who are high in psychopathic tendencies will have an impulsive and irresponsible behaviour style. This includes expressions of boredom, and lack of long-term goals, not thinking before acting, and excitement seeing (Farrington, 2005). Individuals with psychopathic tendencies know what they want and they will take whatever measures necessary to complete their goal. They do not care about the consequences; instead they look forward to the thrill they will receive when behaving in certain ways.

When measuring “The Big Five” personality traits neuroticism, extraversion, openness, agreeableness and conscientiousness are considered. For individuals with a high level of psychopathic tendencies, research has shown that agreeableness was most closely related to his/her personality traits that consisted of arrogance and deceit. In other words, it is suggested that agreeableness measures straightforwardness with deceitfulness being its polar opposite, as well as modesty compared with arrogance and how they too are polar opposites (Farrington, 2005). In other words, individuals with high psychopathic tendencies who have scored high on agreeableness only do so because the personality traits that they possess are found at the negative end of the agreeableness continuum. For example, a person who is easy to get along with will score high on agreeableness in “The Big Five” personality dimension, whereas a person with psychopathic tendencies will also score high in agreeableness, but on the opposite end of that of the average person. It was also found that the personality dimension of conscientiousness was also closely related to psychopathic personality

traits which include low remorse, low guilt and low empathy. In this case conscientiousness is correlated with achievement striving compared to aimlessness, with aimlessness and carelessness at the negative end of the continuum (Farrington, 2005). For example, a person who strives to achieve goals will score high on the trait of conscientiousness, as will a person with high psychopathic tendencies, but, they are found at opposite ends of this personality continuum. Finally it was found that neuroticism was strongly related to both the psychopathic personality traits that include arrogance and deceitfulness as well as low empathy and low guilt. Neuroticism measures vulnerability and self-consciousness, with fearlessness and shamelessness being at the polar opposite end (Farrington, 2005). For example, a person who is very shy will score high on the neuroticism scale. A person with psychopathic tendencies will also score high on the neuroticism scale, but these two individuals will have opposite personality traits and are found at different ends of the continuum. When considering these results, it is noticeable that the three main factors that are found in individuals, who have high psychopathic tendencies, are in fact related to the personality traits in “The Big Five” personality dimensions. However, their scores are correlated with the negative ends of each personality trait compared to the positive end that the average person may score on. This can be one way to distinguish the personality of someone with psychopathology from the personality of an average person. Another way that these personalities can be distinguished is through symptoms and similarities between children and adults with psychopathic tendencies.

Symptoms and Similarities of Psychopathology

The different personality traits seen in those with psychopathic tendencies are

seen at an early age. These characteristics develop just as personalities develop in the average person. There are some signs and symptoms that are found in individuals with psychopathic tendencies that can lead to early detection. One of the main tests used to assess the presence or absence of psychopathic tendencies is known as the "Psychopathy Checklist Revised (PCL-R)" which measures the extreme antisocial behavior and the core personality markers of the disorder. It is the most commonly used test to detect psychopathy in prisons and it has been proven to have good reliability and validity (Viding, 2004). Youth versions of this test have also been developed to help detect the onset of early psychopathology (Viding, 2004). Research using these measures has shown some of the earliest symptoms of psychopathic tendencies, as well as the common symptoms and similarities found across those who have high levels of psychopathic tendencies. Psychopathology shown in childhood is marked by low levels of empathy, therefore making it a core concept of a psychopathic personality. Dadds et al. (2009) have found when looking at psychopathic tendencies in children, no matter the age, the greater someone's psychopathic traits, the lower that person's level of empathy (Dadds et al., 2009). Even as children, those who scored high in psychopathic tendencies showed clear deficits in empathy. In other words, those children who score high in psychopathic tendencies will have lower levels of empathy than those who do not score high in psychopathic tendencies. In this same study it was also found that in contrast to adults, children who had high psychopathic traits showed clear deficits in empathy (Dadds et al., 2009). Dadds et al. (2009) suggest that infants and children are motivated to develop knowledge about other people's emotions because they are emotionally affected by them, but children

who are high in psychopathic tendencies and consequently show lack of emotion do not behave in this manner.

Viding (2004) found that children with psychopathic personality traits show a specific behavioral and cognitive profile that is similar to the behavioral and cognitive profile of that of an adult individual who is high in psychopathic tendencies (Viding, 2004). In other words, the psychopathic traits found in children are the same psychopathic traits found in adults, suggesting that these traits may remain stable over time and a psychopath's personality does not change over time. Compared with normal children and adults, children with psychopathic tendencies show a reduced moral and conventional distinction (Viding, 2004). In other words, children and adults with psychopathic personality traits show less understanding of the emphasis on rules, regulations and control in a certain setting. For example, children are most often taught that they are not allowed to hit someone because it means that person will become hurt (Viding, 2004). Children and adults with psychopathic tendencies do not understand nor do they pay attention to such rules. This suggests that when a rule is put in place to not hit another person no matter the setting that you are in, individuals with psychopathic tendencies will disobey because they do not understand the rule or because they do not care about the consequences of breaking the rule. Overall, children and adults with psychopathic tendencies do not understand that concept and they do not pay attention to control or rules that are put in place. Dadds et al. (2009) have also shown that children and adults who have high levels of psychopathic tendencies cannot detect fearful and sad voices or fearful or sad facial expressions. The average person is able to successfully distinguish these emotions from another person's facial expressions and body

language, and is able to react according to that emotion. However, people with psychopathic tendencies are not able to detect or react to these emotions in themselves or in others. In other words, a child or adult who has psychopathic tendencies cannot recognize another person's emotions and will be less likely to respond to or care about that person's emotions, compared to other children who can understand the emotions of another. The personality traits of a child or adult individual with psychopathic tendencies are in fact stable across their lifespan [unlike normal children in which the antisocial personality trait will eventually disappear with age] (Viding, 2004). Besides the obvious personality differences between these people, people with psychopathic tendencies also differ in the amount of criminal behavior they engage in compared with people who do not have psychopathic tendencies.

Psychopathology and Criminal Behavior

The criminal behaviors that people with psychopathic tendencies engage in differ from those of other criminals. Individuals with psychopathic tendencies form a minority of the prison population, with 15-20% of inmates having high PCL-R scores (Viding, 2004). While this may seem like a small number, these individuals commit 50% more crimes than non-psychopathic criminals. They are also more likely to commit a violent offense, and they commit a more widespread variety of crimes (Viding, 2004). Overall, it can be suggested that people who have high psychopathic tendencies are more likely to engage in criminal behavior and are also more likely to commit many different crimes. This may suggest that these individuals commit these crimes because it is in relation to their personality traits which consist of deceitful behavior and because they have low levels of empathy as well as no sense of

responsibility for their actions. The average age at which an individual with psychopathic tendencies is arrested for a crime is 17.8 years (Viding, 2004). However, these individuals often engage in criminal behaviour at younger ages. Even though they are not arrested, it has been shown that children with psychopathic tendencies show many more conduct problems than those of non-psychopathic children, and they are much more likely to come into contact with police than other children (Viding, 2004). Children with psychopathic tendencies are also much less worried about the consequences of their behavior than are other children and they are less distressed than the average person when they are engaging in negative behaviour (Viding, 2004). The average person who engages in negative or criminal behavior may feel emotions such as guilt or fear. However, this is not the case for an individual who has psychopathic tendencies and who does not care about consequences of his/her actions.

The crimes of psychopaths are often predatory, lack empathy and show signs of high manipulation (Viding, 2004). Even after individuals with psychopathic tendencies are convicted and put in prison for their criminal behaviour or offenses, they are more likely to offend while in prison and upon release (Viding, 2004). For example, once average people have spent time in jail, when they are released most of them will not engage in further criminal behavior because of the possibility of going back to prison. However, a person with psychopathic tendencies is more likely to commit crimes because he/she does not fear the consequences of his/her actions. The differences in behaviour among those with or without psychopathic tendencies should lead us to question why such differences exist. One explanation is a biological, as

well as a cognitive difference in the brains of individuals with psychopathic tendencies.

Influences of Nature on Psychopathology

One of the main structures in the human brain is known as the amygdala, which controls the processing of emotions, including both fear and pleasure responses (Unknown, 2012). The amygdala appears to be damaged in the brain of individuals who have psychopathic tendencies. One of the main sources of evidence for this begins with the Violence Inhibition Mechanism Model (VIM). The VIM states that normally developing children would react negatively when seeing someone else in pain (Viding, 2004). Research has shown that if the amygdala in a person's brain was dysfunctional, pain to oneself or to others would not become a trigger that would cause negative reactions. This can help to explain why individuals with psychopathic tendencies do not react to the pain or emotions of others. It may be caused because of the abnormal functioning of the amygdala in his/her brain (Viding, 2004).

In a research study conducted by Moul et al. (2012) the biological structure of the amygdala was studied and an explanation was given as to why the amygdala can become dysfunctional. First of all Moul et al. (2012) described the amygdala as being divided into two sections. The first section is known as the basolateral amygdala (BLA). This section of the amygdala consists of the cell membrane and separates the interior of a cell from the exterior of a cell (Moul et al, 2012). The second half of the amygdala is known as the central amygdala (CeA). This section of the amygdala contains the central nuclei of the amygdala (Moul et al, 2012). Moul et al. (2012) suggest that these two sections of the amygdala are separated by a set of neurons. This set of neurons is designed to forward information from one section of the amygdala to the other. However, when there

is a dysfunction of the amygdala, there is lower activation from the neurons that carry the emotional response from the BLA to the CeA. In other words, if the amygdala is dysfunctional in the brain, the structures of the amygdala are unable to communicate with each other, which likely cause a person with psychopathic tendencies not to respond to the emotional cues that they are experiencing.

In another research study completed by Viding (2004) it is suggested that because of the dysfunction of the amygdala, people with psychopathic tendencies do not have the ability to form stress cues which can result in difficulty in socialization, leading them to their antisocial behaviour. Likewise, it has been found that there is reduced amygdala performance in people with psychopathic tendencies who are asked to perform memory tasks (Viding, 2004). It appears likely that the feedback loop from the amygdala to other parts of the brain is crucial in emotional and moral processing. When the amygdala is defected or not functioning properly, the information available is unable to reach the crucial structures of the brain causing the rest of the network to become impaired because of the dysfunction of the amygdala (Viding, 2004). Research findings have also shown this when getting a person with psychopathic tendencies to look at something (such as an angry or aggressive face) that would set off the startle reflex compared to the average person. Individuals with psychopathic tendencies do not become as startled as a normal person because of the difference in the amygdala (Viding, 2004). These individuals also show reduced sensitivity to punishment (caused by the amygdala) likely explaining the antisocial behaviour in a person with psychopathic tendencies (Viding, 2004). These explanations provided by amygdala damage partially explain why people with psychopathic tendencies think

and behave the way they do, however, something that also needs to be considered is the way these individuals were raised and the types of environments they were raised in.

Influences of Nurture on Psychopathology

The parenting style and environment someone has been raised in can have a big influence on that person's future behaviors and attitudes towards other people. In a longitudinal study completed by Follan and Minnis (2010), it was found that many affectionless individuals that have psychopathic tendencies had in fact experienced early and prolonged separation from their parents. These children generally encountered multiple moves during the separation with their parents (Follan & Minnis, 2010). Farrington (2005) has stated that when children suffered a prolonged period of separation from their parents in the first five years of their life, they encountered irreversible negative effects such as becoming affectionless.

Another environmental factor that contributes to an individual becoming high in psychopathic tendencies includes having a parent who was antisocial, poor discipline of the child, and poor supervision of the child. These factors may help to develop the negative traits of psychopathology (Farrington, 2005). For example, a child that has poor discipline may often act out in order to get attention from his/her parents. However, if the parent does not respond to the child's actions, it may give him/her further indication to engage in negative behaviour. The child may also become cold and emotionless because he/she is not getting the attention he/she needs from his/her parents. Further research suggested that youths who scored high on the PCL-R test had suffered physical abuse and separation from their parents (Farrington, 2005). Psychopathic prisoners had often experienced parental neglect, poor

supervision, poor discipline, and had often been physically abused (Farrington, 2005). Other findings suggest that these individuals are from broken homes and single parent families, a disrupted family, large family size, a convicted parent, a depressed mother and low family income (Farrington, 2005). It has also been suggested that cold, rejecting parents produce cold children who are incapable of developing warm relationships, have low empathy and are more likely to engage in criminal behavior (Farrington, 2005). Given research findings demonstrating both nature and nurture contribute to someone having high psychopathic tendencies, one may wonder if there is treatment for this kind of personality disorder or if someone can be cured of having psychopathic tendencies. Research clearly shows it is indeed very hard to help a person who has psychopathic tendencies.

Psychopathology and Treatment

People who have physical or mental disorders can be cured or treated using therapy or medication. However, this is not generally the case for someone who has high psychopathic tendencies. Research suggests that it is difficult to treat individuals with psychopathic tendencies because of the extremeness of their disorder. As discussed, it is a persistent disorder that stays stable throughout one's lifespan. There are biological factors and specific personality traits in individuals with high psychopathic tendencies such as lying and manipulation that make them resistant to treatment (Farrington, 2005). It has also been found that individuals with psychopathic tendencies do no benefit from therapeutic treatment and are still more likely to re-offend once out of treatment (Viding, 2004). It has also been suggested that people with psychopathic tendencies who have been treated show higher rates of violence and that the reason for this may be that therapy allowed them to further develop their skills

of manipulation and deceiving other people (Viding, 2004). These findings seem to suggest there is no way to help a person with psychopathic tendencies become a better person. It leaves the questions of what to do when people are considered to be psychopathic. Do we arrest them? Do we take them to mental institutes? Do we put them in treatment? To answer these questions, future researchers may want to study medication and conclude if there is a drug that can help the amygdala to function normally. It may also be beneficial to find out if there is medication that can help individuals with psychopathic tendencies to cope better with their situation or to experience emotional cues so they can better function in society. It is also a good idea to try and discover if there is a problem with the amygdala in the brains of infants once they are born and to find a treatment that will help to stop it or to slow it down before it begins.

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Childhood Obesity: Parental Influences, Consequences and Treatment Interventions

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Childhood obesity rates have tripled in recent years and obesity continues to affect a large number of children. It is believed to have reached epidemic proportions worldwide which has triggered the interest in research pertaining to childhood obesity. Researchers are focused on determining which factors influence early childhood obesity and have found that the primary social force is the environmental influence of parents which includes such factors as parental weight status, food available in the household, parental income and education, parenting style and lack of physical activity. Because childhood development is a critical period, researchers believe that treatment and prevention for childhood obesity needs to occur during the early stages in order to prevent the serious consequences that are associated with obesity. Research assessing childhood obesity and possible treatment options is discussed.

Obesity is a term that is measured through a person's body mass index (BMI) which is based on an individual's weight relative to his/her height. An individual is classified as overweight or obese if his/her BMI is greater than the 85th percentile and is considered morbidly obese if his/her BMI is greater than the 95th percentile (Luzier, Berlin, & Weeks, 2010). In a society that is obsessed with slimness and 'normal' body images, we see a growing concern towards obesity. Individuals who are overweight or obese and do not fit society's standards may be impacted by society's view and consequently pressured to conform to expectations.

Obesity rates worldwide have increased dramatically over the past two decades. Research noted that the greatest increase in obesity was among children which reached epidemic proportions worldwide (Kokkvoll, Jeppesen, Juliusson, Flaegstad, & Njolstad, 2012). Childhood obesity rates have tripled in recent years and play a key role in determining obesity in adulthood. Researchers believe that the risk for obesity begins early on in the stages of child development and can be prevented if early intervention strategies are put in place (Luzier et al., 2010). Targeting early

childhood obesity can therefore decrease the risk of becoming obese as adults.

The increase in childhood obesity has triggered psychological researchers to study the factors that influence obesity, the consequences of obesity, and treatment or intervention programs that can be put in place to decrease the risk for obesity. One of the biggest influences of childhood obesity is the role of the parents. Parental responsibility may be the primary source in encouraging or preventing the early development of obesity, therefore it is important to study how parents contribute to the weight status of their children (Jackson et al., 2005). Children who are overweight or obese may experience biological or psychological consequences which may put them at a greater risk for other health problems. Targeting and preventing childhood obesity must begin at home where it is the parent's responsibility to encourage their children to eat healthy and to engage in daily physical activity.

Childhood obesity is recognized as a complex and chronic condition because it is caused by more than just one or two factors and it requires long-term prevention strategies. Research assessing childhood obesity, consequences of childhood obesity,

and possible treatment options in terms of parental influences will be discussed.

Factors Contributing to Childhood Obesity

It is important to note that while parental influences may be seen as a key reason behind the increase in childhood obesity, they are not the only factor. For example, parents have little control over the biological components of obesity. Research has shown that there are a number of health-related disorders that play a role in potentially increasing the risk of childhood obesity. Such disorders may include fragile X syndrome, attention deficit hyperactivity disorder, autism, depression, and epilepsy (Caksen et al., 2002). Certain biological or psychological disorders diagnosed in patients can also increase weight gain. Results from one study for example, showed short-term weight gain among children who were treated with Valproate, an anticonvulsant used sometimes to treat epilepsy (Caksen, Deda, & Berberoglu, 2002). In these circumstances parents and children cannot control the weight increase and with some disorders children do not have the ability to exercise.

Parental responsibility as a cause or origin of childhood obesity has long been debated (Pratt & Greer, 2012). There are many other outside factors that potentially influence the weight status of children and researchers often feel it is unfair to place responsibility on the parents, however it is quite evident that parents both directly and indirectly influence the weight of their children. Direct parental influence includes factors like the amount of food intake or the types of foods made available to children at home whereas indirect parental influence includes factors like parent's socioeconomic status or education (Gable & Lutz, 2000). According to Skouteris and colleagues (2012), family is the primary social force influencing a child's weight status.

Svensson and colleagues (2011) highlighted the importance of parental influence in particular by noting three crucial periods in which early onset of obesity can occur. The three periods include: 1) the prenatal period (maternal influences during pregnancy); 2) the period of adiposity rebound (early maternal employment and lack of food monitoring as children get older); and 3) adolescence (period when children are exposed to unhealthier foods and lack of encouragement from parents to increase physical activity).

The Prenatal Period

Research on childhood obesity and parental influences has focused predominantly on the mother's weight status. A study by Warin and colleagues (2012) for example looked at how pregnant mothers could potentially increase their child's risk for obesity. Many people excuse the diet or weight status of a pregnant woman because they consider her to be eating for two or excuse weight gain through the simple fact that she is pregnant. This should not be the case as research indicates the weight status of the mother can potentially have detrimental consequences on the health of the child.

Several studies have examined the role of the mother's weight and how it may increase early obesity in childhood and have found a significant relationship between mothers who were overweight and underweight and the increase in the child's later weight (Coley & Lombardi, 2012; Warin et al., 2012; Water, 2011). During the prenatal period the child consumes the same foods as the mother. Women who are overweight and consume large portions of nutrient-poor foods can alter the fetus' metabolism, influencing growth, fat deposition, and insulin regulation (Warin et al., 2012). These factors can potentially increase the weight of the fetus and create problems with delivery, increased risk of

infections, and increased risks of diabetes, obesity, and heart disease among the newborn infants (Warin et al., 2012). Coley and Lombardi (2012) noted that an alteration in metabolism, fat deposition, and insulin regulation may also increase the earlier onset of diabetes, liver failure, heart disease, and respiratory problems among infants.

Women who are severely underweight during pregnancy can also increase the chances of obesity among their offspring (Water, 2011). In the prenatal environment of an underweight woman, the fetus may be lacking the required nutrients for growth. The problem with a child born to a woman who is severely underweight becomes visible after the child is born. After birth infants are exposed to an environment where there is a change in their regulation of appetite, meaning they are consuming more food in the postnatal environment than they were in the prenatal environment.

The Period of Adiposity Rebound

As mentioned previously early maternal employment, lack of food monitoring from the parents, and lack of physical activity can increase the risk of childhood obesity (Svensson et al., 2011). The period of adiposity rebound begins directly after birth when the mother chooses to either breastfeed or formula feed her child. Mothers who choose to breast feed can decrease the chances of weight gain because breast milk contains hormones that regulate long-term appetite control. Thus breast fed children may be less likely to consume more food (Water, 2011). Infants who are formula-fed may experience rapid weight gain (Water, 2011). Rapid weight gain during infancy may also be associated with an earlier adiposity rebound and increased risk for obesity later in life (Water, 2011).

Mothers who return to work early may also be at risk for developing an

insecure versus a secure attachment with their child (Anderson et al., 2011). Anderson and colleagues (2011) suggested that children who have an insecure attachment to their mothers may choose food as a source of comfort when experiencing a stressful situation. Children who have a secure attachment with their mothers seem more likely to seek comfort from their mothers when the mother is present rather than seeking other means of comforting (Anderson et al., 2011).

Effective parenting is another influential factor in childhood obesity because it is important that parents encourage healthier eating habits and increased physical activity (Brotman et al., 2012). According to Brotman and colleagues (2012), there are two components of effective parenting: 1) responsiveness and 2) control. It is important for parents to respond to their child's needs with warmth, sensitivity and involvement, but it is also important that they establish a set of expectations that allows a sense of self-control for the child and that they include parental discipline (Brotman et al., 2012). For instance, children who are exposed to unhealthy foods and increased television viewing are more likely to be obese. Therefore, it is the parents' job to demonstrate their sense of involvement by teaching children that it is not okay to indulge in unhealthy foods while sitting in front of the television or computer for long periods of time and by encouraging physical activity. Demonstrating parental control would mean cutting back on the amount of screen time a child experiences and requiring a certain amount of exercise per day for the child.

Ineffective parenting can increase the risk of child behaviour problems which can lead to obesity (Brotman et al., 2012). Child behaviour problems include impulsivity and if parents lack a sense of control and

responsiveness, children may engage in impulsive eating. Impulsive eating is considered a type of eating disorder in which individuals consume large amounts of food within a short time frame. Parents who lack control over children's eating behaviours are more likely to have children who will experience rapid weight gain as a result of impulsive eating (Brotman et al., 2012).

Skouteris and colleagues (2012) found that parents who display a lack of parental control or extreme parental control are more likely to have overweight or obese children. A lack of parental control is often associated with more permissive feeding strategies meaning that parents let their children make food decisions for themselves (Gable & Lutz, 2000). This is problematic because young children do not have the ability to differentiate between what is healthy and unhealthy. Too much parental control is also problematic because parents are placing too much emphasis on healthy eating which can cause children to engage in "sneak eating," where they consume unhealthy amounts of nutrient-poor foods behind their parents' backs (Skouteris et al., 2012).

Parental education influences parental income, which influences the types of food that are available in the home and eventually influences whether or not a child is at an increased risk of becoming overweight or obese. The level of education that parents have is linked to the average amount of income the parents receive. Thus, parents who have a lower level of education are more likely to have a lower income. Because healthier foods, like fruits and vegetables are costly, parents who have a lower income may be unable to provide the family with healthier foods. A study by Moraeus and colleagues (2012), examined the health status of children in terms of parents' socioeconomic status. They found that parents who received a lower education

had a lower annual income, which increased the risk of obesity among individuals in the household, especially among children. Researchers have also noted that children from higher educated and higher income families are more likely to participate in organized sports as than those with a lower educational level and lower income (Moraeus et al., 2012). An explanation for this may be that children of lower income families are unable to pay to participate in organized sports and are more likely to depend on other means of physical activity that are free (Moraeus et al., 2012). Again, this is problematic because some parents are not encouraging their children to engage in physical activity because they are preoccupied with work (Skouteris et al., 2012).

Children of low-income families are also limited geographically (Pratt & Greer, 2012). Parents with lower incomes are more likely to live in areas of town that may be unfavourable or unsafe and may be distant from bigger grocery centres that carry a wider variety of healthy foods (Pratt & Greer, 2012). Children growing up in unsafe environments are also less likely to engage in outdoor activities because their safety may be questionable (Luzier et al., 2010). As a result then, children spend more of their time indoors in front of the television or computer, while consuming nutrient-poor foods (Tremblay & Willms, 2003).

Food Availability in the Household and Lack of Physical Activity

Several studies have shown that children and adolescents who are exposed to and who consume energy-dense, nutrient poor foods, and sugar-sweetened beverages are at an increased risk of becoming obese and remaining obese throughout adulthood (Jackson et al., 2005; Johnson et al., 2012; Luzier et al., 2010). With young children and adolescents being constantly exposed to

unhealthy foods, there needs to be a balance between the foods consumed and the amount of activity a child engages in per day (Luzier et al., 2010). Parents who are providing their children with “junk” foods need to develop a plan that allows their children to be actively involved in physical activity. The problem here is that children who are constantly exposed to these types of foods are more likely to already be obese, and thus are less likely to engage in physical activity because they do not enjoy it. As one study shows, children who are obese are more likely to report less enjoyment in sports and have difficulty or lack of interest in sport activities, such as running, swimming, and walking (Warschburger, 2005).

Consequences of Childhood

Obesity

There are a wide range of consequences that occur as a result of obesity. We cannot say that the above factors directly cause childhood obesity but as research suggests it can potentially increase the risk. In terms of the consequences, children who are obese are at an increased risk of being diagnosed with or suffering from one or more of these disorders. Research also states that while there are relationships between childhood obesity and biological and psychological consequences, we cannot say that the consequences are a direct result of obesity. There are a number of factors that come into play when assessing the risk for childhood obesity and when studying the problems obese children experience. Obesity affects all individuals differently, which is why the consequences of obesity can be broken down into two categories: 1) biological consequences and 2) psychological/psychosocial consequences (Allen & Fost, 2012).

Biological Consequences

The majority of children who are obese are at a higher risk for biological

disorders that can result in other health-related diseases and even premature death (Allen & Fost, 2012). Children who are obese are more likely to be at risk for many health-related diseases that were uncommon among children a couple of decades ago (Luzier et al., 2010; Steele, Steele & Cushing, 2012). For example, children are being diagnosed with diabetes or heart disease at earlier ages.

Some of the most common biological problems that children today experience as a result of increased weight gain include, respiratory failure, liver failure, diabetes, cardiovascular disease and sleep apnea (Allen & Fost, 2012). Children who are overweight or obese have difficulty breathing because their bodies are working twice as hard and consequently they are more likely to suffer from respiratory failure (Warschburger, 2005). Associated with difficulty breathing, obese children are more likely to be diagnosed with asthma than non-obese children (Pratt & Greer, 2012). Children may also experience sleep apnea, the abnormal pausing of breathing during sleep, as a result obesity (Allen & Fost, 2012; Pakalnis & Kring, 2012; Pratt & Greer, 2012).

Cardiovascular disease is typically common among the aging population and is considered to be one of the leading causes of death worldwide. Younger children who suffer from cardiovascular disease generally have an increased body weight, lack of physical activity, and a poor diet (Pratt & Greer, 2012).

Liver failure is common among younger obese children because the liver is unable to digest food properly and decreases metabolism due to excessive fat storage in the body (Allen & Fost, 2012). Liver failure is often associated with problems with metabolism, early onset of diabetes, high blood pressure, and high cholesterol. Thus, children who are obese and who suffer from

liver failure are more likely to also suffer from diabetes and vice versa.

Obese children are at an increased risk for diabetes because of their increased consumption of sugar-sweetened beverages and foods (Pakalnis & Kring, 2012). Children who suffer from diabetes are also more likely to suffer from emotional problems, such as depression, anxiety and some eating disorders (O'Dell & DuPaul, 2012). This is particularly important because it shows a link between biological symptoms of obesity and psychological and psychosocial symptoms.

Although biological consequences of obesity may be the most commonly talked about, obesity is also believed to be highly correlated with psychological and psychosocial disorders. Research continues to assess whether obesity leads to the diagnosis of certain psychological and psychosocial disorders or whether the diagnosis of these disorders leads to obesity (Luzier et al., 2010; Phillips et al., 2012). Whatever the initial cause, researchers have concluded that obesity is linked to both psychological and psychosocial disorders.

Psychological/Psychosocial Consequences

The most common psychological and psychosocial effects that are associated with childhood obesity include eating disorders, anxiety disorders, depression, negative self-esteem, poor body image, increased feelings of sadness, increased aggressive behaviours, and substance abuse in adolescence and adulthood (Bell et al., 2011; Phillips et al., 2012; Pratt & Greer, 2012; Warschburger, 2005). Children who are obese are also more likely to be targets of early systematic discrimination, teasing, ridicule, and bullying (Dietz, 1998; Ferguson et al., 2009; Jackson et al., 2005; Warschburger, 2005). It is because of these numerous consequences that psychological research has placed great emphasis on the study of childhood obesity.

Eating disorders. Often times when people think about eating disorders they think about individuals who have developed a fear of gaining weight and have turned to extreme methods to decrease weight gain. Eating behaviours in terms of obesity include increasing portion sizes and a greater consumption of sweetened beverages (Carter & Jansen, 2012). Fast food restaurants have increased the portion sizes of their meals. Thus children who eat out frequently are subjected to consuming larger quantities of unhealthy foods. Impulsive eating is typically seen when parents demonstrate permissive feeding strategies and allow children to make food decisions on their own. Parents who do not monitor the types or the amounts of foods their children are consuming are putting their children at an increased risk of becoming obese (Carter & Jensen, 2012).

Another common finding among obese children is the parents' role in forcing diet upon their child. When parents are forcing their child to exercise and diet, they are not only placing their child at an increased risk of relapse, but they are also increasing their child's risk of developing binge eating disorder (Carter & Jansen, 2012; Thompson, Rafiroiu & Sargent, 2003). Obese children who experience too much parental control over their eating habits tend to go behind their parents' backs and consume large quantities of foods that their parents no longer allow them to eat (Thompson et al., 2003).

Anxiety, depression, self-esteem, and body image. Anxiety, depression, self-esteem and body image are closely linked to one another. For example, an obese child who experiences high levels of anxiety may be depressed or have a higher risk of becoming depressed, have a lower self-esteem and tend to have negative reactions towards his/her body image (Strauss, 2000).

Anxiety disorders are one of the most common psychological/psychosocial disorders present among obese children, with obese children being four times more likely to suffer from social anxiety than non-obese children (Warschburger, 2005). Children who are obese are less likely to engage in age-related events, such as dating during adolescence, participating in sports, or attending school or community dances (Jackson et al., 2005). Perhaps as a result of anxiety disorders, these children spend most of their time at home in front of the television or computer or playing video games and may experience increased fear of going out in public. As well, children who suffer from anxiety disorders may also experience an increased risk of becoming depressed. An explanation for this may be because children who are obese are ranked lower in terms of being seen as potential friends by their peers (Luzier et al., 2010).

Problems with self-esteem and body image are also common among obese children. Obese children are shown to have a low self-esteem, a low life satisfaction (Phillips et al., 2012), and a low self-worth (Pratt & Greer, 2012). Obese children often do not feel good about themselves or the way they look, which may potentially explain the decreased willingness to socialize or to attend public events (Strauss, 2000). Obese children with decreased levels of self-esteem also report elevated levels of loneliness and sadness (Strauss, 2000).

Substance abuse. These increased levels of sadness and loneliness, and the decreased levels of self-esteem among obese children have been further associated with engagement in high-risk behaviours during adolescence. Obese children were more likely to report smoking, consumption of alcohol, drug addiction, and even attempts of suicide (Pratt & Greer, 2012; Strauss, 2000). Similarly Phillips and colleagues (2012) showed that obese children were

more likely to be depressed, to have a lower self-esteem and lower life satisfaction, and in turn were more likely to report thoughts of suicide.

Systematic discrimination and bullying. Children who are obese are more likely to be victims of bullying, teasing and ridicule early in development (Dietz, 1998; Warschburger, 2005) and are three times more likely to be teased than normal weight children (Warschburger, 2005). Warschburger (2005) showed that obese children were more likely to report direct and indirect comments and feelings of rejection because of their weight by their peers. Unwanted comments regarding weight came from strangers and even family members (Jackson et al., 2005).

Treatment and Intervention Strategies for Obese Children

Evidence suggests that early treatment of obesity is more effective than treatment that starts at a later age. Because parents are role models it is believed that parents are responsible for decreasing obesity rates in children (Wen et al., 2012). Parents play a large part in the development of their children and are often blamed for their children's increased weight gain. Although parents may be to blame, their responsibility may be due to a lack of education in effective techniques for reducing weight gain. While some parents may feel placing their child on a diet and increasing physical activity is sufficient, some research has shown that parents are required to take a step further in order to effectively prevent or treat their children's obesity (Luzier et al., 2010).

As previously mentioned, the increased risk for obesity is believed to begin as early as the prenatal period (Coley & Lombardi, 2012). Women who are pregnant should monitor the types of foods they consume and make sure that the choices are healthy for both the mother and the baby.

Women who are planning to become pregnant should maintain a healthy and normal weight and decrease the chances of becoming obese.

Early prevention of childhood obesity should target the entire family (Taveras et al., 2012). During the prenatal period, mothers alone may be placing their child at a risk for obesity if they do not engage in healthy eating and exercising behaviours. However after the baby is born, the role becomes divided between both parents. It is then the responsibility of both the mother and the father to ensure that children have access to healthy foods, are engaged in a sufficient amount of physical activity (at least 30 minutes/day), and are limited in the amount of time spent watching television, on the computer or playing video games (Anderson et al., 2011).

During their home observations, Taveras and colleagues (2012) found an increase in the number of media devices available to children. Children were frequently eating their meals in front of the television and children were not receiving the recommended number of hours of sleep. It is suggested that parents should limit the number of media devices in the household, limit the number of hours children spend in front of the television, and increase the number of hours of sleep (Taveras et al., 2012). For example, for children between the ages of 2 and 5 years, it is recommended they be exposed to the television for less than two hours per day and receive between 11 and 13 hours of sleep per day (Taveras et al., 2012).

Parents should also be aware that singling out the obese child may pose more danger to the child (Jackson et al., 2005). Therefore, if parents want to avoid turning their home into another negative environment for their children, the most effective strategy would be to include the whole family rather than singling out the

overweight or obese child (Jackson et al., 2005). Parents can stop bringing in or consuming sweets in the household and increase physical activity for the whole family (Jackson et al., 2005). This is important to consider because by doing this, the parent or parents are caring for the child's feelings and self-esteem, but are also promoting a healthier lifestyle (Schawrtz & Henderson, 2009).

By promoting a healthier lifestyle, parents are also being positive role models for their children. If parents are consistently engaging in daily physical activity, are eating regularly and are eating healthy, children are more likely to behave similarly, which can reduce obesity (Schawrtz & Henderson, 2009).

The family intervention is probably one of the key components to decreasing the risk for obesity in children. However, family intervention is only effective if more than one member of the family is targeted in the treatment, if parents are positive role models, and if parents are both encouraging and supportive of their child's feelings (Luzier et al., 2010). Children with obesity can disrupt family life and can cause parental stress, but the key component is to have family members work together (Luzier et al., 2010). This will not only reduce parental stress levels but can also decrease the risk for obesity.

Parents are often unable to cope with the stress and are unable to provide their child with effective coping strategies so they may turn to medical health professionals for help. While it is not uncommon for parents to seek professional help, the time parents wait before doing so often means it is too late for early intervention (Willis et al., 2012).

Medical health professionals work with the obese child and his/her family to discuss interventions that can reduce weight gain. Medical health professionals may turn

to cognitive-behavioural treatments as a means of prevention (Bennett, 1988). Through cognitive-behavioural treatments, health professionals teach both the parents and the child how to make changes in patterns of behaviour that support weight control, eating behaviours, and physical activity (Bennett, 1988). Teaching parents and children how to increase self-control can enhance weight loss and enhance the stability of that loss (Bennett, 1988). By changing the child's behaviour regarding weight, decreases may also be seen in feelings of depression and increases in levels of self-esteem (Tremblay & Willms, 2003). Health professionals must ensure a health reform plan in which obese individuals are able to maintain a 5% to 10% weight loss (Ferguson et al., 2009).

Health professionals who use cognitive-based therapy as a means of reducing the risk for obesity teach families and children to identify triggers that cause them to develop unhealthy eating habits and to engage in sedentary behaviours (Luzier et al., 2010). Cognitive-based therapy for children focuses on changing the dysfunctional thoughts pertaining to their eating behaviours (Luzier et al., 2010). Luzier and colleagues (2010) found children who were treated by cognitive-based therapy were more likely to express more effective concerns about shape, weight and eating, and were more likely to report an increase in restraint against unhealthy eating habits and an increase in self-esteem. Cognitive-based therapy for parents includes teaching parents how to monitor and recognize their child's negative thoughts, how to empathize with their child's feelings, and how to restructure negative thoughts (Luzier et al., 2010).

Behaviour-based therapy is probably the most common type of therapy used by health professionals to treat and prevent childhood obesity. The goal of behaviour-based therapy is to teach both children and

parents how to establish self-control and how to change the child's eating and exercise behaviours (Luzier et al., 2010). The behaviour-based therapy involves four main steps: 1) stimulus control, 2) self-monitoring, 3) reinforcement, and 4) modeling.

Stimulus control refers to introducing desirable behaviours to encourage children to eat healthier and to exercise (Luzier et al., 2010). For example, parents may structure the home environment so that healthy foods, such as fruits, are easily accessible and less healthy foods are stored in difficult-to-open containers on a shelf inside a cabinet (Luzier et al., 2010). Self-monitoring involves children recording their thoughts and behaviours surrounding food and exercise (Luzier et al., 2010). Reinforcement refers to encouraging children to increase healthy behaviours by using incentives (Luzier et al., 2010). Finally, modeling refers to the idea that parents should demonstrate healthy eating and exercise behaviours and attitudes for the child (Luzier et al., 2010).

Behaviour-based therapy is most effective in that it is designed to target both the parents and the obese child (Luzier et al., 2010). In a study in which children were exposed to behaviour-based therapy, researchers found that children were able to adapt a more healthy and regular eating pattern and were more effective in reducing weight (Luzier et al., 2010).

Behaviour-based therapies are also more likely to be used among severely obese children (Luzier et al., 2010). For children who are morbidly obese, there are certain behavioural strategies that health professionals include in the treatment. For instance, health professionals are more likely to include social assertion training, to role playing difficult situations, and to address long-term and relapse prevention (Luzier et al., 2010). This is important

because extremely obese children are at a higher risk of social discrimination, and providing them with social assertion training will teach these children how to cope when faced with particular situations. Role playing will also teach children how to handle themselves if they are presented with a difficult situation. And finally, because obesity is defined as a long-term issue, those who are severely obese are at higher rates of risk for relapse, thus it is extremely important that children and families be taught how to prevent the risk of relapse (Luzier et al., 2010).

Conclusion

In order to effectively prevent and correct obesity, it is important to be aware of the possible causes of obesity. It is also important that both the families and the children are cooperative and are willing to work together and with health professionals to decrease rates of childhood obesity. If treatment strategies are not effective, obesity rates will continue to rise (Moraeus et al., 2012). If childhood obesity rates continue to increase, affected children will face serious consequences, as children who suffer from obesity are at higher risk for a number of health-related diseases and for premature death (Allen & Fost, 2012).

Although certain medical conditions are associated with obesity, these conditions do not explain the majority of childhood obesity. It is important that parents, health professionals, schools, media, and members of the general public work together as a whole to promote healthier lifestyles instead of constantly advertising fast food restaurants and introducing new media devices. Research indicates if effective measures are not taken to reduce childhood obesity, obesity will eventually become the number one leading cause of death worldwide (Gable & Lutz, 2000). Obesity rates have already reached epidemic proportions and without recognizing obesity

as a chronic condition that is associated with serious biological, psychological and psychosocial effects, childhood obesity will continue to increase.

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Work Hard, Play Harder: The Role of Play in Child Development

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Play is an important part of a child's development. Children learn many different skills when engaging in different types of play such as pretend play, structured play and child initiated play. For example, children learn how to interact socially with their peers which helps them develop social skills, and they learn about conflict escalation and resolution, moral reasoning, and emotional regulation. Parents, caregivers, and cultural influences play an important role in helping children learn these skills because they influence opportunities children have. Interactions with playmates help children develop into strong independent people.

Play is the basic developmental milestone to a child's development (Cote & Bornstein, 2009). Play is more than just a creative urge, it also functions as a model of learning, through which children create new experiences that help them acquire social, emotional, and intellectual skills (Elkind, 2008). Play also allows for the expression and experiencing of important creativity (Hoffmann & Russ, 2012). This is shown when children play with something or someone which in turn provides opportunity for development of cognitive innovation and allows children to practice newly developed behaviours and strategies (Bateson, 2005 as cited in Hirose, Kida & Minami, 2012). For example, children aged three to five begin to create playful associations with objects, children may hold up a feather and say "look it's a butterfly" (Ramani, 2012).

A child's early development is influenced by the parent-child relationship and the environment in which the child develops. Children who have negative interactions with their parents may develop negative behaviours; the opposite is seen for children who have positive interactions with their parents (Stack et al., 2001). It has also been suggested that the development of these skills can be influenced by the reaction parents show in their response to their children's emotional reactions (Stack et al., 2001).

Cultural influences on child development can also be observed through the activities in which mothers and children engage (Cote & Bornstein, 2009). Cultural specific practices have been integrated into the environment in which children's social interactions and play activities take place (Bornstein et al., 1999 as cited in Cote & Bornstein, 2009). For example, European mothers socialize their children to be independent and to make their own decisions. Japanese mothers on the other hand socialize their children to interact with others to develop proper skills such as being able to empathically and appropriately relate to others (DeVos, 1993 as cited in Cote & Bornstein, 2009).

Children engage in different forms of play such as pretend play, structured or caregiver directed play, and child directed or free play (Gmitrova et al., 2009). Pretend play is defined as children pretending to be something or somebody, and is generated from a child's impression of the nearest social environment or family environment (Gmitrova et al., 2009) (e.g., pretending to be different types of animals or pretending to be the mother while playing house) (Lillard et al, 2013). Pretend play allows children to think about positive and negative situations, allows them to access memories and allows them to develop problem solving

skills (Hoffmann & Russ, 2012). Structured or caregiver directed play is defined as a play experience in which the caregiver has more input through initiating the play, controlling the materials and making sure that all children engage in the activity such as physical activity, completing puzzles or doing pen on paper activities (Gmitrova et al., 2009). Gmitrova et al. (2009) suggest caregiver directed activities are used to foster language and social skills which help children during pretend play and constructive play. Finally, child directed play or free play refers to play experiences in which the children are encouraged to take part with little influence from the caregiver (e.g., a child decides that s/he wants to be a police officer) (Gmitrova et al., 2009). Gmitrova et al. (2009) suggest that this type of play increases a child's ability to develop the play episode which helps him/her improvise in new situations that are closer to real life.

The world in which children live requires them to develop skills that will help them become successful; this includes self-regulation and emotional control (Hoffmann & Russ, 2012). Children also show an increase in cognitive skills and language skills through interactions with other children in their preschool years (Naerland & Martinsen, 2011). Likewise, it is also noticed that in their preschool years, children become more interested in playing with peers who help them focus on what others are saying and doing. These interactions provide children with the opportunities to learn and develop (Ramani, 2012). How children interact with each other influences development of social and regulatory skills that promote learning, motivation, and attention (Shearer et al., 2011).

In childcare settings where children are interacting with one another it is natural for conflicts to arise. These conflicts are

important as they teach children about social relations, social rules, and the effects of conflict strategies (Singer, Hoogdalem, Hann, & Bekkema, 2012). Emotional regulation is the ability to manage emotional experiences, to incorporate appropriate emotions within daily life, and to distinguish between different emotions we all experience (Hoffmann & Russ, 2012). Having the ability to recognize and understand emotions is critical for children while they are forming peer relationships, developing self-confidence, and acquiring the ability to cope with stressful situations (Stack et al. 2010).

Peer conflict is seen as being a contributor to moral, social, and cognitive development (Chen et al., 2001). Children are capable of resolving their conflicts through social interaction (Bradhead, 2009). Moral development plays an important role in allowing a child to act in a way that shows he/she knows what is right and what is wrong. Moral development includes cognitive as well as affective components such as emotional stability (Gibbs, 2003 as cited in Gasser & Malti, 2012).

When children are developing cognitively, socially, and emotionally, it is important for them to interact with both parents and peers. Children need to explore their world and one way in which children can do this is through play. Whether children are using pretend play, free play or structured play, they are learning different skills such as building strong peer relationships, problem-solving, and regulating their emotions.

Parental/Teacher Influence

Parents are considered to be the primary influence in how a child learns to socialize (Taylor, Clayton, & Rowley, 2004). They are the ones who shape children's behaviours, attitudes, and social skills so that they will be able to function in society (Taylor et al., 2004). Parenting can

influence the development of emotional competence both positively and negatively as well as help with emotional development (Stack et al., 2010). Mothers and fathers are instrumental in instructing and teaching children the skills necessary to become emotionally competent (Stack et al., 2010). When mothers interact with their children for example, children learn the values and norms of their own culture (Cote & Bornstein, 2009).

Child-parent interaction demonstrates how to communicate, regulate, and understand the difference between the child's emotions as well as the emotions of others (Stack et al., 2010). Children who have play materials available to them and who have parents who understand how important it is to play with and interact with their children are shown to be better prepared for preschool (Taylor et al., 2004).

Another key feature to shaping a child's developmental outcome is the communication style that parents use with their children (Taylor et al., 2004). Communication styles play a critical role in a child's social competence. A positive home environment and positive communication style (e.g., reinforcing good behaviour, listening to your child, eliminating bad behaviour) help children transition well into preschool and also into elementary school (Taylor et al., 2004).

Parents who had a negative childhood may take an active role in trying to prevent their children from experiencing the same negative relationships they experienced such as social rejection (Taylor et al., 2004). Children whose parents had negative peer relationships and were socially rejected and less socially competent unfortunately socialize their children in a manner that makes their children less socially competent as well (Taylor et al., 2004).

Interactions with caregivers in a preschool setting also influence children's development as these interactions may influence the types of activities in which children engage (Goble et al., 2012). Preschool teachers tend to be predominantly female. Therefore, children may be influenced in a way that leads them to engage in more feminine activities such as reading or writing. Goble et al. (2012) found that children will also engage in activities in the location where the preschool teacher can be found for example sitting with him/her drawing at a table. Preschool teachers generally encourage boys to engage in activities that are associated with skill development in other areas away from constructive play (Goble et al., 2012). This shows that there are other activities that help boys with the development of new skills.

Cultural Influences

Some cultures perceive play as something that has to be sophisticated. European- American mothers encourage this type of play by demonstrating a sophisticated style of play to their children (Cote & Bornstein, 2009). When children initiate play episodes, the mother will follow the child's lead and interests, helping the child foster and grow (Harkness et al., 1992 as cited in Cote & Bornstein, 2009). Parents in South America believe that children need to learn obedience from the caregiver. They think that correcting the child's actions helps the child's development (Cote & Bornstein, 2009). Japanese mothers are found to change their children's focus of attention and keep them on task, fostering independence (Cote & Bornstein, 2009). European- American mothers stress the importance of verbal interactions and Japanese mothers focus more on the expectations of their child (Cote & Bornstein, 2009).

For those in a Chinese culture it is very important for the mother and child to

bond emotionally and play is used to encourage this. It has also been reported that the mother is the most important teacher as she is the one responsible for socializing the child and showing the child how to adopt a cooperative attitude towards peers (Lancy, 2007). Mothers are also responsible for making sure that their child is successful in school.

In other cultures where foraging is the central lifestyle, the mother is not expected to stimulate the mental development of the child through play or any other form of parent-child interaction, instead the children are expected to develop unaided (Lancy, 2007). It is believed that the mother would hinder the development of her child and that the child should learn skills from older siblings. Very few of these societies focus on the fathers' interaction with the children, but in societies that do, the father is expected to be involved in child care such as playing with and entertaining children (Lancy, 2007).

Social Skills/Interactions

During the preschool years children become focused on playing with their peers (Naerland & Martinsen, 2009). The activities in which children choose to interact with their peers are very important because certain social situations occur more frequently (Goble et al., 2012). Positive peer interactions through social situations have been found to reduce the behaviours that interfere with learning less desirable traits such as aggression (Shearer et al., 2011).

During joint play with peers children learn social skills and language abilities and also develop cognitive skills (Ramani, 2012). Children learn to communicate either verbally or nonverbally with each other in cooperative play. This helps children establish goals and rules during the interaction and helps them work through any disagreements (Ramani, 2012). When children play together they define the goals,

plan, and adopt reciprocal roles. For example, when children are involved in pretend play and they decide to play house, one child will take the role of the mother and the other child will take the role of the father and they will engage in naturally occurring cooperative play. This helps children negotiate through the roles that they have taken on and work through problems thus sustaining the play episode (Ramani, 2012).

Play with conventional toys such as play telephones, dolls or toy cars helps with the development of social skills (McAloney & Stagnitti, 2009). Such toys provide opportunities for children to interact with each other in using the toy which allows them to communicate how the play episode should proceed (McAloney & Stagnitti, 2009). It has also been found that children use more narrative language when they play with conventional toys, or make up stories and characters (McAloney & Stagnitti, 2009).

Ramani (2012) reported that children who were involved in child initiated or free play engaged in more positive communication than children who were involved in more structured play. It was also noted that in child initiated play children had more control over the interaction with peers and created their own goals to complete a task more than children in structured play (Ramani, 2012). Interaction with peers helps children gain knowledge about different tasks (e.g., building a tower and out of blocks and preventing it from falling) which promotes problem solving skills (Ramani, 2012).

Social acceptance, social behaviour and understanding are important aspects of social competence (McAloney & Stagnitti, 2009). Children have a large impact on each other and social acceptance is established early in a relationship (Naerland & Martinsen, 2009). As children strengthen their understanding by participating in play,

this helps them to become more socially competent with their peers (McAloney & Stagnitti, 2009).

A child's ability to play and interact with other children when using conventional toys has a positive effect on social relationships (McAloney & Stagnitti, 2009). When children interact in a play-like setting they show that they are able to demonstrate cooperative behaviours and increase joint communication about a play episode and about how to achieve a common goal in that episode (Ramani, 2009). It has been shown that there are links between children's social behaviour and peer interaction. Friends imitate the social actions of each other such as rejecting the new children who come into the preschool setting helping to maintain the already established friendships (Gasser & Malti, 2012).

Conflict Escalation and/Resolution

Peer conflicts are frequently occurring events that are present in the lives of young children (Chen, Fein, Killen & Tam, 2001). The most common type of conflict among preschool children is children not getting a turn during a play episode or not sharing toys with other children (Chen et al., 2001). The behaviour that comes along with conflict are things such as physical and verbal aggression (Chen et al., 2001). The physical aggression involves hitting and kicking. Verbal aggression involves such things as telling a child that he/she is mean or tattling (Chen et al., 2001; Singer et al. 2012). Verbal conflicts are very important for children as conflict teaches children to use communication skills to work out an issue and if that does not work then an adult has to intervene (Singer et al., 2012).

Peer conflicts provide opportunities for children to develop conflict resolution skills which in turn teach them to listen to and to accept other children's views (Chen et al., 2001). There are conflict resolution

programs being developed but these are sometimes not the most effective way of teaching children problem solving skills or promoting learning. As children learn these skills they learn to understand mental states, feelings, and beliefs in themselves and in others (Singer et al., 2012). Their communication abilities in language help them with impulse control as well (Eisenberg & Fabes, 1998 as cited in Singer et al., 2012).

Conflicts among children are important for maintaining friendships so that children are able to learn how to overcome their differences with the use of communication (Broadhead, 2009). The more children engage in child initiated play or free play episodes the greater the possibility of decreasing heightened conflicts (Broadhead, 2009). As children interact more with their peers they negotiate strategies which help with negative behaviours (Chen et al., 2001).

Singer et al. (2012) suggest that children who are under the age of three use more unilateral strategies which means that the behaviour in which they engage only affects one person; such behaviour could be hitting, or kicking. Singer et al. (2012) suggest that children aged three and up use more bilateral strategies where the behaviour they engage in affects everyone who is involved so they are more likely to communicate to resolve their issues. Older children have more of an interest in playing with peers and they accept the fact that even if they communicate with each other about ways to solve a conflict it may not work so they just move past the conflict to maintain the social interaction (Singer et al., 2012).

Emotional Regulation

Emotional regulation is used to explain how and why emotions promote or hinder development in many areas of functioning (Stack, Serbin, Enns, Ruttle & Barrieau, 2010). This development includes

changes in emotional expression, understanding, and regulation (Carlson & Wang, 2007). Emotional competence helps children understand their own emotions and the emotions of others, shows how to be empathic and sympathetic, allows them to understand the difference between emotions and behaviours, and shows them how to cope in a stressful environment (Stack et al., 2010). These are important skills to learn because a child needs to learn the ability to regulate his or her own emotional state when attempting to form peer relationships. Emotional regulation is related to the social functioning of preschoolers which includes social competence and popularity with other children and caregivers (Carlson & Wang, 2007). Emotional regulation develops throughout childhood and it includes internal self-regulation and environmental factors such as cultural display rules which dictate how emotions are expressed (Hoffman & Russ, 2011). Six-year-olds for example may openly display negative expressions when given an undesirable gift and they will blurt out “I don’t want this” (Carlson & Wang, 2007). Older children are found to be less negative in their expression (e.g., biting lip, exaggerated smile) and give the opposite response to younger children even though they too feel disappointed (Hoffman & Russ, 2011). Another way in which these are related is that better emotional coping frees up cognitive resources which help with problem solving skills for the task at hand (Carlson & Wang, 2007).

Play episodes allow children to act out emotional experiences which help them build emotional regulatory skills by learning about emotional events (Hoffmann & Russ, 2011). Peer interaction and emotional regulation help children experiment with and control negative affect (Hoffmann & Russ, 2011). Children who are able to manage their emotions are more comfortable engaging in play tasks and are more

imaginative when engaged in a play episode; these children are also seen as having better emotional regulation (Hoffmann & Russ, 2011). Hoffmann and Russ (2011) have also suggested that emotional regulation is related to divergent thinking which is the ability to take an idea and go in several directions with it to lead to new ideas. Emotional regulation skills help children create and modify play episodes that are high in emotional content (Hoffmann & Russ, 2011).

Children who engage in play episodes with parents are able to regulate their emotions better and they also have a better understanding of emotions (Hoffmann & Russ, 2011). Research has suggested pretend play episodes also contribute to the development of self-regulation, and conflict resolution in preschoolers (Fantuzza et al., 2004 as cited in Huffmann & Russ, 2011).

Moral Reasoning

Peer interactions help children learn to reflect on their own moral development and find solutions to dilemmas through discussion (Gasser & Malti, 2012). Peer interactions provide appropriate experiences that help with moral development because they are important for the cooperative nature of relationships (Walker & Henning, 1999). This is learned through understanding other peers’ points of view (DeVries, Hildebrandt & Zan, 2000). Children’s friendships may have a positive effect on their moral development when some of their peers have good moral development (Gasser & Malti, 2012).

Caregivers also promote the construction of moral development by developing situations in which children can experience sympathy as well as learn to clash with others so that they are able to construct their own ideas (DeVries, Hildebrandt & Zan, 2000). Parenting also helps with moral development in children (Walker & Henning, 1999). It is important

when parents are interacting with their children to use real life moral dilemmas to help improve children's moral development (Walker & Henning, 1999). Moral development is important for children to act in moral ways, to understand what is right or wrong and to react emotionally (Gasser & Malti, 2012).

A child's moral development could be related to his/her social status. Low or no social status among peers shows that aggressive behaviour is related to the acceptance of moral transgressions such as disobeying the law (Gasser & Malti, 2012). Peer socialization could possibly influence social behaviour in children due to the imitating of social actions during socialization (Gasser & Malti, 2012). Gasser and Malti (2012) suggest that friends' roles in moral reasoning indicate that negative behaviour may cause low moral competence in friends.

Gender Differences

Preschool classrooms provide various opportunities for children to move from solitary play to interacting with peers of the same or opposite sex as well as in mixed sex groups. (Goble et al., 2012). Girls tend to prefer feminine activities such as playing with dolls or dress up and boys tend to prefer masculine activities such as playing with blocks (Goble et al., 2012). Preschool children's gendered activities may vary across different social situations that they encounter in the preschool setting (Goble et al., 2012).

Girls are more interested in pretend play while boys are more interested in constructive play (Gmitrova et al., 2009). Pretend play helps girls develop their sociemotional and expressive skills; they spend more time in play episodes that portray family life (Gmitrova et al., 2009). They are also observed describing and planning out their play and they show

interest in playing as a group when it comes to pretend play (Gmitrova et al., 2009).

Boys who engage in constructive play tend to develop more task oriented and problem solving skills and appear to be more likely to generate pretend themes that are not related to any of the toys in a preschool room (Gmitrova et al., 2009). They are also more concerned with pursuing their own interests when it comes to play.

Girls and boys vary in their interaction styles depending on the type of play activity they are engaged in. For example, girls are more likely to agree with each other while playing with same sex peers, but boys are more disagreeable when playing with same sex peers. However, when in mixed group play episode boys are more agreeable than girls (Goble et al., 2012). The selection of play themes is very important as it helps boys and girls choose play that they favor (Gmitrova et al., 2009). The stability of gender type activities remains strong over early childhood (Goble et al., 2012). Girls will engage in neutral typed activities as often as boys (Goble et al., 2009). Girls and boys show a strong preference for engaging in social interactions with same sex peers and they tend to use gender specific toys (Goble et al., 2009).

Conclusion

Play is an important part of a child's development. Children are encouraged to interact with peers and to explore their worlds as tools to help in their cognitive development. Through interacting with peers children learn social skills that help them build strong peer relationships, they learn different techniques to deal with conflict, and they learn the difference between right and wrong.

Through play children also learn what types of activities they enjoy engaging in whether it is pretend play, structured play or child initiated free play. Girls and boys

tend to enjoy different play episodes that are more specific to gender roles such as family life for girls and constructive play for boys. Likewise, it is demonstrated that during structured play children engage in play that enhances their skill development such as reading or writing. Play does have a role in child development. With the freedom to explore their world and interact with others cognitive skills become stronger and help the preschool child develop into a strong independent person.

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Sexually Explicit Material and Permissive Sexual Norms in Young Adults

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Much of the research in the formation of sexual attitudes among young adults tends to focus on internet exposure and neglects the fairly new advances in technology such as cell phones. Given this lack of research as well as the lack of recognition of internet *and* cell phone usage among young adults, an examination of young adults' exposure to sexually explicit material via internet and cell phones and how this exposure affects their attitudes was conducted. Frequency of exposure to sexting and online pornography were assessed, along with young adults' attitudes towards a fabricated scenario that depicted sexting or anal sex behaviours among minors. Each scenario included a male or female initiator of these sexual behaviours. A sample of 126 participants (34 males, 92 females) was surveyed. Results demonstrated that frequency of exposure is related to sexually permissive norms and that participants justified anal sex in the scenarios as exploring one's sexual preferences. Gender of initiator did not influence participant's perceptions of the scenarios.

The mass media and ever-changing advances in technology play an important role in the socialization of youth (Braun-Courville & Rojas, 2009; Henderson, 2011). These advances have been shown to affect a range of adolescent behaviours and attitudes including: violence, eating disorders, and tobacco and alcohol use (Braun-Courville & Rojas, 2009). In addition, adolescents are consistently citing the mass media as an important source of sexual health information, however, many fail to recognize that some material may be distorted and potentially harmful to their sexual well-being (Braun-Courville & Rojas, 2009).

Research shows that many youth spend one-third of their day with some form of mass media (Braun-Courville & Rojas, 2009). Television, video games, music and computers are all forms of the mass media; however, an emerging interest involves the Internet. More than any other medium, the Internet has become a sexual medium (Peter & Valkenburg, 2008) providing adolescents with a wide range of sexual content, including pornography. In many cases online pornography can be easily accessed and provides anonymity with use of online

sexually explicit material (Peter & Valkenburg, 2008). With adolescents possessing a natural curiosity about their sexuality, sexual stimulation via the internet has not only become a form of gratification, but an educator in sexual socialization (Peter & Valkenburg, 2008).

In an era of social networking and technological change, sexual identity expression has not only been impacted by the internet, but also by a new topic of interest: sexting (Henderson, 2011). Sexting is known as distributing nude or semi-nude photos of oneself or sexually suggestive text messages through cell phones (Henderson, 2011). Although sexting may be a new technique used to express sexuality, it is not a new subject matter. Similar to the internet and other forms of mass media, sexting is just another method in which nude or semi-nude photos can be viewed. Young adults who desire sexual exploration may do so through the convenience of electronic handheld devices which enhances their exposure to sexually explicit material on a personal level (Henderson, 2011).

In a world where the line between pop culture and porn culture are becoming increasingly blurred, the detrimental effects

of a hyper-sexualized culture are becoming more apparent in youth today. Recent media headlines have illustrated the devastating consequences of sexually explicit material on youth and how the pressure to be sexy is changing teen sexual behavior in alarming ways (CBC, 2012). In a 2012 CBC documentary titled: “*Sext Up Kids*”, it was reported that 22% of teenage girls reported having anal sex in the last 60 days and it suggested by the time boys are eighteen, 80% of them will already be watching pornography online. In addition, the documentary reported that one-third of teens admit to sending a naked or near naked picture to their 'crush' via cell phone technology.

Recent reports like this CBC documentary that showcase the emergence of risky sexual behaviours among youth are alarming. In fact, the influence of sexually explicit material may not only affect the sexual behaviours that youth engage in, but also influence the formation of attitudes in youth that presumably lead to this behaviour. For example, cross-sectional studies have shown that prolonged exposure to internet pornography can lead to exaggerated beliefs of sexual activity among peers as well as sexually permissive attitudes among youth (Braun-Courville & Rojas, 2009). Just like this example, however, much of the research in the formation of sexual attitudes tends to focus on internet exposure and neglects the fairly new advances in technology such as cell phones. As mentioned before, sexual identity expression has not only been impacted by the internet, but also by a new topic of interest: sexting (Henderson, 2011). Given a lack of research as well as the lack of recognition of internet and cell phone usage among young adults, an examination of young adult's exposure to sexually explicit material via these mediums and how it affects their attitudes is necessary.

Sexually Explicit Media

Brown and L'Engle (2009) use sexually explicit media as a way to distinguish visually explicit sexual content from most mainstream sexual content that does not include descriptions or illustrations of genitals or genital contact (pp. 130). As young people grow more curious about sex and their own bodies mature sexually throughout adolescence, visually sexually explicit media such as pornography and erotica are becoming more available and may become a source of sexual information and sexual norms for young people (Brown & L'Engle, 2009).

In a longitudinal study by Brown and L'Engle (2009), patterns of sexually explicit media use among adolescents in the United States were described and the relationships between early exposure to sexual media and sexual attitudes were investigated over a two year period. It was hypothesized that exposure to sexually explicit material in early adolescence would predict more permissive sexual norms and less progressive gender roles attitudes in later adolescence. Sexual attitudes and behaviours were predicted by exposure to sexually explicit content and were examined in a prospective survey of adolescents. The sexually explicit mediums Brown and L'Engle (2009) explored included: pornography in adult magazines, X-rated movies, and the internet.

Congruent with Brown and L'Engle's (2009) hypothesis, exposure to sexually explicit media was found to be related to more permissive sexual norms and gender role attitudes, as well as to early sexual behaviour. The results of the study suggest that by the end of middle school, many young people have already been exposed to sexually explicit content via the internet, X-rated movies, or in magazines. An early exposure to these materials is related to subsequent attitudes about gender

roles, permissive sexual norms, sexual harassment, and sexual behaviours. This finding was more prominent in males than in females.

Males were also found to have seen sexually explicit media more than females, and by the age of 14, over two-thirds of males and more than one-third of females reported having seen at least one form of sexually explicit media within the past year (Brown & L'Engle, 2009). Brown and L'Engle's (2009) study indicated that males viewed sexually explicit material over the internet more so than in mainstream mediums like magazines or movies, whereas females were more likely to view sexually explicit material through mainstream, X-rated movies.

Internet Pornography

Another form of sexually explicit media that has often been explored is that of the internet. According to Peter and Valkenburg (2008), "sexually explicit internet material is known as the visual or audio content on and from the internet that depicts sexual activities in uncensored ways, often with clearly exposed genitals and of oral, anal, and vaginal penetration" (pp. 580). Previous research shows that males are more likely to access sexually explicit internet material, but the question remains as to whether males are able to put into perspective the sexual and social reality depicted in such material (Peter & Valkenburg, 2008).

In a study by Peter and Valkenburg (2008), the link between adolescents' exposure to sexual media content, specifically, sexually explicit internet material, and adolescents' sexual socialization from an identity development framework were investigated. Two characteristics of adolescents' sexual self were suggested: sexual uncertainty and attitudes toward sexual exploration. These characteristics were investigated as potential

correlates of adolescent's exposure to sexually explicit internet material. It was hypothesized that more frequent exposure to sexually explicit internet material would lead to a greater degree of sexual uncertainty, and that greater exposure would be related to more positive attitudes toward uncommitted sexual exploration. Interestingly, the authors of the study found that more frequent exposure to sexually explicit internet material was associated with greater sexual uncertainty and more positive attitudes toward uncommitted sexual exploration.

What impact does this exposure have on our youth exactly? According to Braun-Courville and Rojas (2009), cross-sectional studies suggest that prolonged exposure to internet pornography can lead to exaggerated beliefs of sexual activity among peers, sexually permissive attitudes, and sexual callousness, including negative attitudes toward sexual partners. Pornographic influence may not only affect the formation of attitudes in youth, but also the sexual behaviours that youth engage in. For example, in a study by Rogala and Tydén (2002), a sample of 1000 young women in Sweden were surveyed about their sexual behaviour and about whether they had seen pornography. Four out of five women were found to have viewed pornography, and one-third of these women believed that watching pornography had impacted their sexual behaviour. Of the women who had viewed pornography, an association was found between pornography and having practiced anal intercourse with 47% of the women reporting experience with anal intercourse, an experience they regarded as a negative experience.

Sexting

According to Henderson (2011), the topic of sexting has become a national issue as more and more teens and young adults are increasingly engaging in this behaviour.

Since the beginning of the current technological phase, negative consequences associated with sexting have surfaced including: charges and arrests for possession of child pornography and suicide attempts from ridicule and bullying (Henderson, 2011). Given these negative consequences, there have been few mass media research studies conducted on sexting. In fact, there is little systematic research on the relationship between the behaviours, attitudes, and beliefs, associated with sexting and sexual behaviours (Gordan-Messer, Bauermeister, Grodzinski, & Zimmerman, 2012; Henderson, 2011).

In a study by Henderson (2011), young adults' beliefs, attitudes, and behaviours in relation to sexting were examined. Henderson hypothesized that there are significant differences with females feeling more pressure to send sext messages than their male counterparts and with males and females engaging in sexting to initiate sexual activity. Results showed no considerable differences in the frequency at which females and males are sending sext messages. The study did reveal, however, that sext messages were primarily sent from males and females to enhance or maintain the current sexual relationship with a boyfriend or girlfriend. Henderson also noted, that approximately one-fourth of participants reported sending messages to someone they were interested in dating and about 15% of these individuals had sent sext messages to someone they had just met; male participants were more likely to do this.

In a similar study, Gordan-Messer et al. (2012), examined the association between sexting and sexual behaviours and young adults' psychological well-being. The results of this study indicated that sexting is a prevalent sexual behaviour among young adults and rates of sending and receiving sexts are higher than most other research

indicates. Overall, it was found that 30% of the young adults in the sample had sent a sext and 41% had received a sext. In fact, Gordan-Messer et al. (2012) suggest, sending photos and videos via cell phones increased throughout 2010-2011 (36%-54%) and it is likely that this trend will continue to increase. Therefore, longitudinal data and research on sexting and the possible effects it may have on young adults are crucial.

The Current Study

Based on the above research, it seems fair to suggest that sexually explicit material in general does have an effect on attitude formation, specifically in young adults. As previously stated, much of the research on the formation of sexual attitudes tends to focus on internet exposure and neglects the fairly new advances in technology such as cell phones. In fact, there is little systematic research on the relationship between the behaviours, attitudes, and beliefs, associated with cell phone usage, more specifically, sexting (Gordan-Messer et al., 2012; Henderson, 2011).

The present study examined trends in sexually explicit material via the internet and cell phone usage and investigated whether or not exposure to these mediums can lead to sexually permissive attitudes or norms in sexting and anal sex activity. Frequency of exposure to sexting and online pornography were assessed, along with the young adults' attitudes regarding a fabricated scenario that depicted sexting or anal sex among minors. Each scenario included a male or female initiator of these sexual behaviours. Participants were asked to assess the seriousness of situation, whether or not they believed the behaviour would maintain the relationship, whether they thought the initiator believed the behaviour was appropriate, the appropriateness of the behaviour based on relationship status, the healthiness of

behaviour, whether the behaviour was just a sexual preference, perceived degree of consent, and perceived age appropriateness. Participants indicated their perceptions as well as the frequency of their exposure to sexting and online pornography.

The following hypotheses were proposed:

1. Given the research on young adult's high exposure to sexually explicit material, it was predicted that young adults would possess a more permissive attitude towards anal sex and sexting in a given scenario.

2. Based on cultural stereotypes that men are more eager for sex and females are more likely to set limits on such activity (Clark & Hatfield, 1989), it was predicted that participants would view sexting and anal sex as consensual and healthy for the relationship when a female was initiating the given behaviour. In contrast, it was predicted that participants would view these behaviours as less consensual and less healthy for the relationship when a male initiated the behaviour in a given scenario

3. According to the Justice Laws Website under Section 159 of the Criminal Code, it is stated that:

Every person who engages in an act of anal intercourse is guilty of an indictable offence and liable to imprisonment for a term not exceeding ten years or is guilty of an offence punishable on summary conviction (Government of Canada, 2013).

Age of consent for having anal intercourse is 18 years-old, and this behaviour is not a crime if both individuals are married to each other or if both individuals consent to the act (Government of Canada, 2013). In this study, it was assumed that young adults would not be aware of the laws regarding anal sex among minors and would justify the behaviour as exploring one's sexual preferences.

Method

Participants

A convenience sample of 126 participants (34 males, 92 females) volunteered to complete the study. Male participants ranged in age from 18-32 ($M = 21.74$, $SD = 3.06$) and female participants ranged in age from 18-36 ($M = 21.29$, $SD = 3.28$). Seven participants were excluded from this mean because they did not indicate their age. The majority of participants identified themselves as in a relationship ($n = 80$, 60.2%), with others saying they were single and not currently dating ($n = 42$, 31.6%), or casually dating ($n = 11$, 8.3%).

Materials

A survey was designed using Survey Monkey and was distributed to participants via Facebook. Information was provided stating the harms and benefits, and the names and contact information of the researchers in case participants had any questions or concerns regarding the study. Participants were assured that IP addresses were not collected with the online survey. As parental consent could not be confirmed for this type of study, only those who were over the age of sixteen were asked to participate. A copy of the briefing statement is included in Appendix A.

After reading the briefing statement, participants were asked to complete a demographics sheet which asked for their age, sex, and relationship status. The demographics sheet was followed by a questionnaire designed to assess the frequency of the participants' exposure to sexually explicit material. This questionnaire included questions by Peter and Valkenburg (2006), which have been shown to be valid and reliable for measuring exposure to sexually explicit internet material. In addition, some of the statements were tailored to measure exposure to sexting behaviors and filler questions assessing nonsexual viewing habits were included to

eliminate participants' awareness of the issue being explored.

Congruent with Peter and Valkenburg's (2008) questionnaire, participants were asked to indicate their average viewing habits in the last six months. Statements assessed the viewing of: (a) pictures on the internet with clearly exposed genitals, (b) movies on the internet with clearly exposed genitals, (c) pictures in a text message in which people are having sex, and (d) pictures in a text message with clearly exposed genitals. Responses were assessed on a Likert scale ranging from 1 (never) to 7 (several times a day). A copy of the demographics sheet and the viewing behaviour questionnaire can be found in Appendices B and C.

Once participants reported their viewing habits they were presented with one of four scenarios. Each scenario included a 14-year-old male and a 14-year-old female who were involved in an exclusive relationship with each other. In two of the scenarios (male vs. female initiator), one of the partners coerces the other into sending a nude photo of him/herself. In the other two scenarios (male vs. female initiator), one of the partners coerces the other into anal sex after viewing online pornography. In order to examine gender stereotypes of sexual offers, each scenario was tailored to a male versus female initiator as well as a male versus female receiver.

After reading the scenario, participants were asked to complete an additional questionnaire by rating their own thoughts about the experience using a Likert scale. The Likert scale ranged from 0 (not at all) to 10 (definitely). The questions assessed: (1) seriousness of the situation, (2) whether the participant believed the behaviour would help maintain the relationship, (3) whether the participant perceived the initiator as believing the behaviour was appropriate, (4) perceived

appropriateness of behaviour based on the relationship status in the scenario, (5) whether the participant thought the behaviour was healthy for the relationship, (6) whether the couple in the scenario were just exploring their sexual preferences, (7) perceived consent of participation, and (8) perceived age appropriateness. A copy of the scenarios and the questionnaire are included in Appendix D.

Once participants rated their thoughts on the scenario, they were presented with a debriefing statement which thanked them for their contribution to the study and told them what was being explored. Contact information for the researchers and for the Canadian Mental Health Association (CMHA) was provided in case the study evoked any negative memories for the participants.

Procedure

An invitation to participate was sent via mass email to the Grenfell Campus student body and it was posted on Facebook for individuals over the age of 16 to volunteer to participate in the study. All participants were provided with a briefing statement and then proceeded to the next section of the study. Participants rated several statements pertaining to their viewing habits within the last 6 months and were then presented with one of four scenarios. Once the given scenario was read, participants rated their thoughts on the scenario. Participants were then presented with the debriefing statement.

Results

Influence of Sexual Behaviour and Gender of the Participant on Participants' Perceptions

Table 1 illustrates the means and standard deviations for perceptions of the scenario based on the gender of the initiator and the sexual behaviour portrayed. A 2 (gender of initiator: male vs. female) x 2 (gender of participant: male vs. female) x 2

(sexual behaviour: anal sex vs. sexting) MANOVA was completed to assess perceptions of the scenario. The analysis indicated an overall significant difference according to the sexual behaviour portrayed, $F(8, 112) = 2.75, p = .008$; Wilk's $\Lambda = 0.836, \eta^2 = .16$, as well as a significant difference due to gender $F(8, 112) = 2.05, p = .047$; Wilk's $\Lambda = 0.872, \eta^2 = .13$. In order to determine the questions on which sexual behaviour (sexting vs. anal sex) was viewed differently, follow-up tests were performed across all questions pertaining to the scenario. A one-way ANOVA determined an effect of behaviour on question 3: "Do you think the person initiating the behaviour thinks the behaviour is appropriate?" $F(1, 119) = 7.16, p = .008, \eta^2 = .06$. The sexting condition ($M = 7.41$) was seen as more appropriate than the anal sex condition ($M = 6.02$).

There was also an effect of behaviour on question 6: "Do you think Jeremy and Katie are just exploring their sexual preferences?" $F(1, 119) = 5.34, p = .023, \eta^2 = .04$. Participants were more likely to believe that Katie and Jeremy were exploring their sexual preferences in the anal sex condition ($M = 5.52$) than in the sexting condition ($M = 4.17$).

In order to determine where gender differences existed, follow-up tests were also performed across all questions pertaining to the scenario that was presented. A one-way ANOVA determined an effect of gender on question 2: "Do you think this behaviour will maintain the relationship?" $F(1, 119) = 12.30, p = .001, \eta^2 = .09$. Pairwise comparisons indicated that male participants ($M = 2.84$) were more likely to see the behaviour as helping to maintain the relationship than female participants ($M = 1.43$).

There was also an effect of gender on question 5: "Do you think this behaviour is healthy for their relationship?" $F(1, 119) =$

$8.72, p = .004, \eta^2 = .07$. Male participants ($M = 3.96$) were more likely to see the behaviour as healthy for the relationship than female participants ($M = 2.43$).

Gender of the initiator was not a significant factor in the MANOVA. However, given it was one of the main factors of interest in the study, one-way ANOVAs were completed to assess the potential differences in perception according to the gender of the initiator for the various questions asked regarding the scenarios. There was an effect of gender of initiator on question 1: "How serious do you believe the situation to be?" $F(1, 119) = 5.80, p = .018, \eta^2 = .05$. The situation was seen as more serious if there was a male initiator ($M = 6.52$) than if there was a female initiator ($M = 5.23$).

A one-way ANOVA also determined an effect of gender of initiator on question 6: "Do you think Jeremy and Katie are just exploring their sexual preferences?" $F(1, 119) = 7.24, p = .008, \eta^2 = .06$. This was seen as more likely if there was a female initiator ($M = 5.63$) than if there was a male initiator ($M = 4.06$).

Frequency of Exposure to Sexually Explicit Material and Overall Sexual Attitudes

In order to examine the effect of exposure to sexually explicit material on young adults' overall sexual attitudes, a correlational analysis was conducted to assess the relationship between the frequency of exposure and participants' perceptions of the scenarios. Table 2 shows the correlations among participants' exposure to the sexually explicit material and their overall thoughts regarding the scenarios.

With the exception of viewing pictures in a text message in which people were having sex, participant's viewing habits were all found to be negatively correlated with perceived seriousness of the

situation. In summary, the more exposure the participants had to these materials, the less likely they were to see the given scenario as serious. Also, with the exception of participants viewing of pictures on the internet with clearly exposed genitals, participants' viewing habits were all found to be positively correlated with seeing the behaviour as helping to maintain the relationship. Therefore, the more participants viewed these materials, the more likely they were to perceive the behaviour as helping to maintain the relationship.

Perceived appropriateness based on the relationship status in the scenario was consistently associated with viewing habits as well. The more participants viewed these materials, the more they thought the behaviour was appropriate. Similarly, viewing habits were positively correlated with perceived healthiness of behaviour. The more participants viewed these materials, the more likely they were to perceive the behaviour as healthy for the relationship.

With the exception of viewing pictures of people having sex via the internet and viewing pictures of clearly exposed genitals via the internet, participants' viewing habits were positively correlated with the belief that the individuals in the scenario were exploring their sexual preferences. The more participants viewed sexually explicit materials, the more they justified the behaviour in the scenario as exploring one's sexual preferences.

A positive relationship was found between participants' exposure to movies on the internet in which people were having sex and their perception that consent was given in the scenario. The more participant's viewed these movies, the more likely they were to perceive the act in the scenario as consensual.

Finally, the correlational analysis indicated a negative association between the

participants' perception of age appropriateness and participants' viewing pictures on the internet with people having sex and movies on the internet with people having sex. The more participants viewed pictures and movies of people having sex online, the less likely they were to think Katie and Jeremy were too young to be engaging in the behaviour.

Frequency of Exposure to Sexually Explicit Material and Attitudes on Sexting

In order to examine whether exposure to sexually explicit material differed depending on whether anal sex or sexting was portrayed in the scenario, separate correlational analyses were completed. Table 3 shows the correlations among participant's exposure to sexually explicit material and their thoughts regarding the sexting scenarios.

With the exception of viewing movies on the internet in which people were having sex, and viewing pictures in a text message in which people were having sex, participants viewing habits were all found to be negatively correlated with perceived seriousness of the situation. The more exposure the participants had to these materials, the less likely they were to see the given scenario as serious.

When the viewing of pictures on the internet with clearly exposed genitals, movies on the internet with clearly exposed genitals, and movies on the internet in which people were having sex were considered, all were found to be positively correlated with believing the sexting behaviour would help in maintaining the relationship. The more participants viewed these materials; the more likely they believed sexting would help maintain the relationship. A positive correlation was also found between viewing movies on the internet in which people were having sex and participants' thoughts as to whether the initiator believed the behaviour

was appropriate. The more participants viewed movies on the internet in which people were having sex, the more participants believed the initiator thought sexting was appropriate in the scenario.

With the exception of viewing pictures in a text message in which people were having sex, perceived appropriateness of the individuals' behaviour in the scenario was found to be positively correlated with viewing habits. The more participants viewed these materials, the more they believed sexting was appropriate given the exclusive nature of the relationship.

The analysis also showed a consistent positive relationship between viewing habits and perceived healthiness of the sexting behaviour. The higher participants' exposure to these materials, the more likely they were to believe sexting was healthy for Katie and Jeremy's relationship. A positive relationship was also found between viewing pictures in a text message with clearly exposed genitals and participants' perceptions of consent in the sexting scenario.

Frequency of Exposure to Sexually Explicit Material and Attitudes on Anal Sex

In order to examine the effect of exposure to sexually explicit material on young adults' attitudes towards the anal sex scenarios, a final correlational analysis was conducted. Table 4 shows the correlations among participants' exposure to sexually explicit material and their thoughts regarding the anal sex scenarios.

There was a positive relationship across participant's viewing habits and whether they believed anal sex would help maintain the relationship. The more participants viewed sexually explicit materials, the more likely they were to believe that anal sex was maintaining Katie and Jeremy's relationship.

There was also a positive relationship between viewing movies on the internet in which people were having sex and the perceived appropriateness of the behaviour. The more participants viewed movies on the internet in which people were having sex, the more likely they were to believe anal sex was appropriate.

With the exception of viewing pictures in a text message with clearly exposed genitals, perceived healthiness of the behaviour was found to be positively correlated with participants' viewing habits. The more participants viewed these materials, the more they felt anal sex was a healthy part of the relationship. There was also a positive correlation between viewing movies on the internet in which people were having sex and the perception that the behaviour was consensual. The more participants viewed movies on the internet in which people were having sex, the more they believed anal sex was consensual.

Finally, the analysis indicated a negative relationship between participants' perceived age appropriateness of the behaviour and participants' viewing pictures on the internet in which people were having sex or pictures on the internet with clearly exposed genitals. The more participants viewed these pictures, the more likely they were to believe that Katie and Jeremy were not too young to be engaging in anal sex.

Discussion

The purpose of the current study was to examine trends in sexually explicit material via the internet and cell phone usage and to investigate whether or not exposure to these mediums can lead to sexually permissive attitudes or norms when it comes to sexting and anal sex. Frequency of exposure to sexting and online pornography were assessed, along with the young adults' attitudes regarding a fabricated scenario that depicted sexting or anal sex among minors. As previously

stated, much of the research assessing the formation of sexual attitudes tends to focus on internet exposure and neglects the fairly new advances in technology such as cell phones. In fact, there is little systematic research on the relationship between the behaviours, attitudes, and beliefs, associated with cell phone usage, more specifically, sexting (Gordan-Messer et al., 2012; Henderson, 2011). Given this lack of recognition, it was important to assess young adults' perceptions of sexting and anal sex and whether or not their attitude was influenced by their exposure to sexually explicit materials via cell phones and the internet.

The sexual behaviour in the scenario as well as the gender of the participant influenced participants' attitudes toward the given scenario. Participants believed the person initiating the behaviour thought sexting was more appropriate in the situation compared to anal sex. Participants were also found to have justified anal sex in Katie and Jeremy's relationship as exploring their sexual preferences. This finding supports the third hypothesis by suggesting that young adults are not aware of the laws regarding anal sex among minors; and justify the behaviour as exploring one's sexual preferences.

Male participants viewed the behaviours presented as a way of maintaining Katie and Jeremy's relationship. Male participants were also found to see the given behaviours as healthy for the relationship. These findings are consistent with Brown and L'Engle's (2009) study which indicated a higher frequency of permissive sexual norms in males perhaps due to their higher exposure to sexually explicit material.

Participant's viewed the scenarios as more serious if Jeremy initiated the behaviour than if Katie initiated the behaviour. Participants were also more

likely to justify the behaviour in the given scenario as exploring one's sexual preferences when Katie initiated the behaviour than when Jeremy initiated the behaviour. This finding supports the second hypothesis: participants viewed the given behaviour as acceptable for the relationship when a female was initiating the behaviour compared to when the male was initiating the behaviour. This finding should be replicated in future research given gender of initiator was not significant in the overall MANOVA.

According to Clark and Hatfield (1989), we often possess a cultural stereotype that men are more eager for sex and that females are more likely to set limits on such sexual activity. Although many theorists tend to disagree with why such gender differences exist, it could be suggested that many of us possess a sociobiological perspective when it comes to sexual activity among males and females (Clark & Hatfield, 1989). This perspective stems from a biological determinist standpoint, which entails that sexual activities are primarily determined by genes, anatomy, and hormones. Sociobiologists assume that men and women are programmed differently when it comes to sexual experience or sexual restraint (Clark & Hatfield, 1989). Among the differences, it is suggested that men desire a variety of sexual partners, whereas women do not; men are also thought of as having every reason to actively pursue a woman since they are genetically programmed to "impregnate as many women as possible" (pp. 41). Evidently, it is unclear why the participants in this study chose to view the behaviour as more appropriate when the female in the scenario initiated the behaviour, but linking this perspective to the finding may provide an explanation of this finding.

Various viewing habits were negatively correlated with perceived

seriousness of the situation and positively correlated with maintaining the relationship. The more exposure the participants had to these materials, the less likely they were to see the given scenario as serious and the more likely they were to perceive the behaviour as helping to maintain the relationship. This may be in congruence with Henderson's (2011) study which found that sext messages exchanged between males and females were sent with the purpose of enhancing or maintaining the current sexual relationship with a boyfriend or girlfriend. Similarly, CBC (2012) reported that one-third of teens admit to sending a naked or near naked picture to their 'crush' via cell phone technology.

Perceived appropriateness of the behaviour given based on the relationship status in the scenario and consistently associated with viewing habits. It was found that the more participants viewed these materials, the more they thought the behaviour was appropriate. Similarly, viewing habits consistently correlated with perceived healthiness of the behaviour. The more participants viewed these materials, the more likely they were to perceive the behaviour as healthy for the relationship.

With the exception of viewing pictures of people having sex via the internet and viewing pictures of clearly exposed genitals via the internet, participants' viewing habits were positively associated with the belief that the individuals in the scenario were exploring their sexual preferences. The more participants viewed sexually explicit materials, the more they justified the behaviour in the scenario as exploring one's sexual preferences. Likewise, the more participants viewed movies on the internet in which people were having sex, the more likely they were to perceive the participation in the scenario as consensual.

Finally, the correlational analysis indicated a negative association between the participants' perception of appropriateness and participants' viewing of pictures and movies on the internet with people having sex. The more participants viewed pictures and movies of people having sex online, the less likely they were to think Katie and Jeremy were too young to be engaging in the behaviour. These findings confirm the first hypothesis, which predicted that young adults' exposure to sexually explicit material can be linked with a more permissive attitude when it came to sexting and anal sex.

When it came to the participant's thoughts on the sexting scenarios and their correlations with viewing habits, participants' viewing habits were all found to be negatively correlated with perceived seriousness of sexting situations. Viewing habits were found to be positively correlated with: sexting would maintain the relationship; the initiator thought sexting was appropriate in the scenario; sexting was appropriate given the exclusive nature of the relationship; sexting is healthy for Katie and Jeremy's relationship; as well as perceiving the sexting scenario as consensual.

In regards to anal sex scenarios, viewing habits were positively correlated with: maintaining Katie and Jeremy's relationship, appropriateness, healthiness, as well as perceiving anal sex to be consensual. In addition, viewing habits were found to be negatively correlated with perceived age appropriateness of the behaviour.

Limitations and Future Research

Given this study is the first known study to assess trends in sexually explicit material via the internet and cell phones and to investigate whether or not exposure to these mediums can lead to sexually permissive attitudes or norms when it comes to sexting and anal sex, it is not surprising that there are limitations. As mentioned

before, this study used a questionnaire that was designed by Peter and Valkenburg (2008) to collect the frequency of exposure to sexually explicit material. Although this questionnaire was shown to be reliable in their study, indicating viewing habits of specific materials within the last 6 months might have been hard for participants to remember. Whether or not this factor had an effect on the reporting of viewing habits is unknown, but future studies could indicate a shorter time frame of perhaps 3-4 months.

Another limitation may be the definition of “healthy sexual behaviour”. This study implied that sexting and anal sex among minors are in fact unhealthy, but in some cases, these behaviours might be just another way that youth are expressing themselves. This may be evident in the case of homosexual couples engaging in anal sex. Future research could look at participant’s perceptions of a fabricated homosexual couple engaging in sexting or anal sex and compare the results with a heterosexual couple engaging in the same behaviours. Finally, it can also be assumed that participants believed anal sex to be administered by the male in the scenario, regardless of who initiated or suggested the behaviour. Future research could also examine scenarios with the female actually administering the behaviour on the male and measure participants’ perceptions of those scenarios as well.

Conclusion

The mass media can play a significant role in the sexual socialization of youth and young adults. Given technology’s expanding nature and accessibility, the internet and now cell phones may be at the forefront of this education (Braun-Courville & Rojas, 2009). The current study provides insight into the association between exposure to sexually explicit internet and cell phone materials and young adults’ sexual attitudes. Although it is difficult to

interpret whether or not the results of this study are any indication of the participants’ behaviour, it can be suggested that sexually permissive attitudes are more likely to lead to sexually permissive behaviours (Braun-Courville & Rojas 2009).

The results of this study will hopefully serve as an important sexual source for teens, parents, and researchers and may be instrumental in developing sexual education around current trends in sexuality. Without precise sexual awareness, the dangers and consequences of sexual exploration such as sexting and anal sex may alter the understanding of sex and sexuality issues (Henderson, 2011). As more young people explore their sexual urges, it is important to keep in mind that sexual interaction among young adults may be significantly impacted by the way they perceive the events leading up to intercourse including the acts of sexting and anal sex (Henderson, 2011). Informing young people about how media stories are produced and advertised while providing them with necessary critical thinking skills may encourage closer consideration of information viewed in mass literacy and encourage responsible sexual behaviour. In turn, young adults would not only be healthier in their sexual socialization attitudes and behaviours, but also in their overall quality of life.

Table 1

Means and Standard Deviations of Participant Perceptions based on the Gender of the Initiator and the Sexual Behaviour Portrayed

Behaviour	Gender of Initiator			
	Male		Female	
	Sexting	Anal Sex	Sexting	Anal Sex
Seriousness	6.97 (2.40)	6.72 (2.34)	6.32 (3.05)	4.82 (2.87)
Maintain	1.69 (1.97)	1.60 (2.22)	1.44 (1.47)	2.39 (2.18)
Appropriateness Initiator	7.13 (2.58)	6.49 (2.73)	7.56 (2.38)	6.00 (2.53)
Appropriateness Behaviour	3.53 (3.00)	3.65 (3.05)	3.44 (2.99)	5.30 (3.22)
Healthiness	2.50 (2.38)	2.56 (2.36)	2.52 (2.60)	3.70 (2.98)
Exploring Sexual Preferences	3.41 (2.58)	4.40 (2.67)	4.54 (3.37)	6.10 (2.81)
Perceived Consent	1.97 (2.31)	3.21 (2.98)	2.79 (2.77)	4.25 (2.76)
Perceived Age Appropriateness	8.19 (2.61)	8.65 (2.10)	8.04 (2.74)	7.61 (3.29)

Table 2

Correlations Between Exposure to Sexually Explicit Material Exposure and the Overall Thoughts on Scenarios

Variables	Pictures Sex ^a	Pictures Genitals ^a	Movies Genitals ^a	Movies Sex ^a	Sext Genitals ^b	Sext Sex ^b
Seriousness of Situation	-.20*	-.28**	-.24**	-.17**	-.18*	-.11
Behaviour will help maintain relationship	.25**	.28	.34**	.28**	.21*	.31**
Initiators thoughts on appropriateness	.01	-.03	.02	-.05	.02	-.08
Appropriateness based on relationship	.30**	.25**	.26**	.28**	.21*	.18*
Healthiness of behaviour	.39**	.36**	.37**	.33**	.26**	.26**
Exploring sexual preferences	.14	.15	.18*	.20*	.26**	.18*
Perceived consent of participation	.13	.17	.15	.25**	.17	.17
Perceived age appropriateness	-.27**	-.23**	-.14	-.08	-.04	-.11

Note. $n = 130-133$. Significant correlations are bolded to emphasize relationship.

* $p < .05$, two-tailed

** $p < .001$, two-tailed ^a = Via internet

Table 3

Correlations Between Exposure to Sexually Explicit Material and Thoughts on the Sexting Scenarios

Variables	Pictures Sex ^a	Pictures Genitals ^a	Movies Genitals ^a	Movies Sex ^a	Sext Genitals ^b	Sext Sex ^b
Seriousness of Situation	-.38**	-.44**	-.30*	-.12	-.32*	-.19
Behaviour will help maintain relationship	.23	.29*	.33*	.28*	.15	.11
Initiators thoughts on appropriateness	.14	.14	.22	.27*	-.12	-.10
Appropriateness based on relationship	.34**	.32*	.27*	.28*	.22*	.20
Healthiness of behaviour	.53*	.56*	.43**	.39**	.33*	.29*
Exploring sexual preferences	.14	.20	.15	.24	.35	.23
Perceived consent of participation	.18	.16	.17	.25	.27*	.20
Perceived age appropriateness	-.16	-.22	-.08	-.04	-.07	-.23

Note. $n = 130-133$. Significant correlations are bolded to emphasize relationship.

* $p < .05$, two-tailed

** $p < .001$, two-tailed ^a = Via internet

Table 4

Correlations Between Exposure to Sexually Explicit Material and Thoughts on the Anal Sex Scenarios

Variables	Pictures Sex ^a	Pictures Genitals ^a	Movies Genitals ^a	Movies Sex ^a	Sext Genitals ^b	Sext Sex ^b
Seriousness of Situation	-.06	-.16	-.18	-.21	-.06	-.04
Behaviour will help maintain relationship	.26*	.27*	.35**	.29*	.26*	.41*
Initiators thoughts on appropriateness	-.09	-.14	-.10	-.10	.14	-.04
Appropriateness based on relationship	.19	.19	.24*	.27*	.21	.16
Healthiness of behaviour	.29*	.22*	.33**	.29*	.20	.23*
Exploring sexual preferences	.14	.11	.18	.16	.19	.13
Perceived consent of participation	.08	.16	.12	.25*	.11	.14
Perceived age appropriateness	-.35**	-.24*	-.19	-.11	-.02	-.03

Note. $n = 130-133$. Significant correlations are bolded to emphasize relationship.

* $p < .05$, two-tailed

** $p < .001$, two-tailed ^a = Via internet

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Appendices

Appendix A

Briefing Statement

Perceptions of Sex and Media

This study is being conducted to examine the types of programming people are interested in and attitudes towards sex among minors. It is being conducted at Grenfell Campus, Memorial University of Newfoundland by Sarah Erikson under the supervision of Dr. Kelly Warren as part of the requirements for Psychology 4950 (Independent Project in Psychology). By participating in this study, your consent is assumed, and it is also assumed that you are over the age of 16-years-old. It will take approximately 10 minutes to complete the survey. There are no obvious risks or benefits involved with this study, and your responses are anonymous and confidential, however, please note you will be reading a scenario depicting sex among minors. No IP addresses will be collected. All information will be analyzed and reported on a group basis, and therefore individual responses will not be identified. Your participation in this study is totally voluntary and you are free to stop participating at any time prior to finishing the survey.

Please read each question and the instructions carefully and then answer the questions as truthfully as possible.

Appendix B

Demographics Sheet

1. How old are you?
 years old
2. Are you male or female?
 Male
 Female
3. Please indicated your relationship status:
 Single and not currently dating
 Casually dating
 In a relationship

Appendix C**Frequency Questionnaire**

In the last 6 months how often have you viewed:

Pictures on the internet of a crime scene investigation

Pictures on the internet in which people were having sex

Movies on the internet with a murder scene

Movies on the internet in which people were fighting

Pictures on the internet with clearly exposed genitals

Movies on the internet with clearly exposed genitals

Movies on the internet with a car chase

Movies on the internet in which people were having sex

Pictures in a text message with clearly exposed genitals

Pictures in a text message with someone drinking alcohol

Pictures in a text message in which people were having sex

Appendix C**Scenarios and Perceptions Questionnaire**

Please read the following scenario. When you are finished, please answer the questions that follow.

Scenario 1:

Katie and Jeremy are 14 years-old and have been in an exclusive relationship for the past 8 months. Although Katie and Jeremy have been sexually active with each

other for the past 3 months, Katie is sometimes unsure how Jeremy feels about her. One day, Jeremy asks Katie to send a nude photo of herself via text. He tells Katie that his friends receive nude pictures all the time from other girls, even if they are not in a committed relationship. Katie is hesitant about the situation however feels like she must send Jeremy a nude photo of herself in order to maintain their relationship. Katie sends Jeremy a photo of herself in her bra and panties, however, asks Jeremy not to show anyone else. Jeremy assures Katie that the photo will not be sent to anyone else.

Katie and Jeremy are 14 years-old and have been in an exclusive relationship for the past 8 months. Although Katie and Jeremy have been sexually active with each other for the past 3 months, Jeremy is sometimes unsure how Katie feels about him. One day, Katie asks Jeremy to send a nude photo of himself via text. She tells Jeremy that her friends receive nude pictures all the time from other guys, even if they are not in a committed relationship. Jeremy is hesitant about the situation however feels like he must send Katie a nude photo of himself in order to maintain their relationship. Jeremy sends Katie a photo of himself in his boxers, however, asks Katie not to show anyone else. Katie assures Jeremy that the photo will not be sent to anyone else.

Scenario 2:

Katie and Jeremy are 14 years-old and have been in an exclusive relationship for the past 8 months. Although Katie and Jeremy have been sexually active with each other for the past 3 months, Katie is sometimes unsure how Jeremy feels about her. One day, Jeremy asks Katie to engage in anal sex. He tells Katie that he recently saw two people engaging in anal sex in a video online. Katie is hesitant about the situation however feels like she must engage

in anal sex with Jeremy in order to maintain their relationship. Katie engages in anal sex with Jeremy, however, asks Jeremy not to tell anyone else. Jeremy assures Katie that he will not tell anyone else.

Katie and Jeremy are 14 years-old and have been in an exclusive relationship for the past 8 months. Although Katie and Jeremy have been sexually active with each other for the past 3 months, Jeremy is sometimes unsure how Katie feels about him. One day, Katie asks Jeremy to engage in anal sex. She tells Jeremy that she recently saw two people engaging in anal sex in a video online. Jeremy is hesitant about the situation however feels like he must engage in anal sex with Katie in order to maintain their relationship. Jeremy engages in anal sex with Katie, however, asks Katie not to tell anyone else. Katie assures Jeremy that she will not tell anyone else.

Based on the above scenario, please rate the following statements:

1. How serious do you believe this situation to be?
2. Do you think this behavior will sustain the relationship?
3. Do you think the person initiating the behavior thinks the behavior is appropriate?
4. Katie and Jeremy are in an exclusive relationship. Do you think this behavior is appropriate?
5. Do you think this behavior is healthy for their relationship?
6. Do you think Jeremy and Katie are just exploring their sexual preferences?
7. Do you think the participation in the scenario is consensual?
8. Do you think Katie and Jeremy are too young to be engaging in behavior like this?

Appendix D

Debriefing Statement

Thank you for completing the survey. The purpose of this study was to gain insight into the public perception of sexual behaviour in minors. More specifically, I am interested in whether the types of programming/pictures you view influence your attitude toward various sexual behaviours. The information provided will help to determine people's attitudes regarding sexual behaviour among minors. If you have any questions please contact Dr. Kelly Warren at kwarren@grenfell.mun.ca or Sarah Erikson at seriksongaudon@grenfell.mun.ca. Thank you for your participation. If anything you have read reminded you of your own negative experience and you would like to talk to someone about your experience please call the CMHA crisis line toll free at 1-888-737-4668.

Excessive Overtime Work: Impacts on Quality of Life

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Overtime work is a necessary part of employment depending on occupation. While the financial compensation may be appealing and motivating for the worker, adverse effects of too much overtime work may be of consequence. Several studies have shown that prolonged work schedules without sufficient recovery time has negative effects on one's physiological processes and therefore have adverse impacts on one's health. There are several factors that influence the impacts overtime work hours will have on a worker's overall health such as job type, job satisfaction, work scheduling, and the ability to maintain a healthy lifestyle. Each of these factors is important to consider when identifying the adverse impacts of too much overtime work on an individual's overall quality of life.

The extent to which people work may have negative impacts on their overall quality of life. It is important to note that there is no discrimination between the type of job (i.e. office work versus field work) and the need for overtime work hours needed in order to keep the workplace operating at an optimum pace to gain maximum financial income. However, the increase in demand for natural resources in recent years has allowed for an increase in jobs for people in the trades industry (Prato, 2012). The necessity for more workers may lead to an insufficient amount of employees in certain organizations, and therefore allow for an increase in overtime hours for employees. The immediate financial gratification attained by an increase of pay for working overtime is motivating for employees to work extra hours, but the short term and long term repercussions that are inevitable impact one's mental health when a person is working too much.

According to the Institute of Professional Management (2012), the average amount of hours that is deemed to be acceptable per week is between thirty-five to forty hours. Time spent working more than forty hours per week is considered overtime work and is generally compensated for by paying employees more money per hour. Although there are policies that are put into place by the employment

standards legislation, it seems as if workers are not hesitant to take full advantage of the allowed extra hours. Employees may be willing to put in extra hours, but may not be fully aware of the effects on their mental health that can be derived from mental and physical exhaustion. Problems such as sleep deprivation and depression are commonly found among individuals who do not get a sufficient amount of rest time. While studying the effects of overtime on quality of life, it is important to study influences on physical health as well as mental health because both are interrelated.

Effects of Overtime on Physical Health

When a person is placed under stress for long periods of time, it is possible that his/her lifestyle may be negatively impacted due to disruption of regular routines. For example, if employees are asked to work both day and night shifts, their physical activity routine will inevitably be disrupted due to added work hours and less leisure time. Therefore they may not be able to maintain a stable physical activity routine and potentially lack a regular exercise regimen. Added stress of overtime work in combination with a lack of regular exercise can result in a potentially unhealthy lifestyle. A longitudinal study conducted was able to verify that working overtime hours did in fact lead to lower levels of physical activity and a lower consumption of fruits and

vegetables which contribute to beneficial health behaviors (Taris et al., 2010). This is because working overtime requires more time and energy from the worker and in turn lessens his/her likelihood of engaging in extra activities that require more work and effort. Also, it is important to note that a person's attitude towards his/her health plays an important role in his/her overall wellbeing. If a person feels that he/she is unhealthy and lacking in energy, he/she is more likely to feel less energetic and positive than a person who has increased levels of energy and a more positive attitude from regular exercise (Johnson, 2007). It is essential to recognize the influences resulting from lack of exercise due to overtime because of physical exhaustion are inevitably linked to mental fatigue which can lead to depression and sleep problems. Although it is safe to assume that a worker will most likely be more physically impacted by overworking him/herself, it is also critical to understand the adverse mental repercussions that accompany an unhealthy lifestyle. If a person's physical health is suffering as a result of work-life imbalances due to excessive overtime work, his/her mental well-being will subsequently be affected as well.

Effects of Overtime on Mental Health

Fatigue can be almost assumed to be inevitable when working too many hours. The required mental effort that is used to focus one's attention on work tasks will inevitably lead to mental exhaustion and may therefore manifest itself as fatigue. Although the financial compensation offered for working extra hours may be enough to motivate a person to do the work, the risk of getting fatigued is high. It has been shown that employees who work more than their scheduled hours are more likely to show depressive symptoms as a result (Galinsky et al. 2005). Not only is fatigue a result of physical over exertion, but it has also been

found to be a result of conflict between an individual's personal life and work schedule. This is because the interference of working long hours may take away from the worker's leisure and family time which can cause a more depressive mood state (Golden & Wiens-Tuers, 2008). Workers may feel as if their family life and work life are unbalanced as a result of working too many work hours and may not have an overall sense of life satisfaction (Keene and Quadagno 2004; Major et al. 2002; Reynolds 2003).

The disturbance of a person's "social and biological rhythms" will affect a person's mood and therefore potentially cause depressive emotions (Driesen, Jansen, Kant, Mohren, & van Amelsvoort, 2010). This can also be accounted for because of impaired cognitive performance due to excessive voluntary attention which leads to increased fatigue, depression, and confusion (Proctor, White, Robins, Echeverria, & Rocskay, 1996). The study conducted by Drisen et al. (2010) also showed that there was a positive trend in males who worked a prolonged work day and deemed it as being troublesome. Similarly, a study conducted with one hundred and thirty Chinese office workers revealed that employees who worked high amounts of overtime tended to have lower levels of psychological well-being (Houdmont, Zhou, & Hassard, 2011). It is important to note that the study was done with office workers specifically and therefore attitudes can be influenced by job type. For example, if an office worker is inactive while doing office type work, it could be possible that attitudes may differ from a person that is doing field work or is physically active. Time may appear to be longer and workers may feel more mentally fatigued by lack of physical stimulation throughout the work shift. Motivation was also a key factor in the study. Workers that are more highly motivated and that are more

likely to enjoy what they are doing, will not experience the adverse effects of mental exertion regardless of whether or not they are working too many hours per week. It was found that factors such as job rewards, workplace environment and intrinsic motivation contribute to the likelihood of working more overtime hours for the employee. (Houdmont et al., 2011).

Demographic Factors Influencing Overtime

Demographics such as age are important in studying the effects of working long hours during a work week, especially when the job requires shift work. It is essential to examine demographic factors influencing an employee because these factors may be indirectly related to a person's overall mental health. For example, while age may have a more direct impact on a worker's physical well-being, overall job type and job satisfaction may impact a worker's overall morale which influences his/her mental health. While physical characteristics will directly influence their physical health, it is equally important to study people's attitude towards the type of work they are doing in order to assess their overall mental health.

Job Type

The type of job that one is doing will inevitably impact workers differently depending on the work task they are engaging in. For example, a field worker in the trades industry has different duties than an office worker or an employee in the health care industry. The type of work that a person does requires different duties which will inevitably have ranging effects on the employee who is working overtime hours. A person that is working in the trades industry may have a job that mainly requires physical labor which takes a toll on the physical body. However, office workers will spend the majority of their time using cognitive skills which requires an excess

amount of mental energy. Both occupational categories require a high amount of energy whether it is physical or mental energy and this can lead to adverse health effects if one is overworked.

While distinguishing between the types of jobs a worker is engaging in, it is important to take age and job experience into account because both of these factors influence the demand that is placed upon the worker. Employees that are older in age maybe asked to take on more difficult tasks that require more experience because of their familiarity and knowledge. This could mean placing more demand upon themselves in order for operations to run smoothly. However, it is logical to assume that with increase in age, an employee may experience more problems as a result of too much overtime than a younger employee. This is because the mind and body would be more negatively impacted when workers are overworked. While it is easy to assume that older workers may be negatively impacted by working too many hours, this may not always be the case. Older workers tend to have more discretion in the type of work they do and also are able to "work smarter rather than harder". This way of thinking enables a worker to reduce his/her chances of becoming injured or to negatively impact his/her health while working overtime hours. In a study assessing the impact of age and overtime on employee health, it was found that there were no adverse effects linking age to working overtime. Instead, the adverse effects that were found were dependent on job type and the amount of hours spent working overtime (60+ hours a week) (Allen, Woock, Barrington, & Bunn, 2008).

A survey examining job type, sex, age and salary level, found that moderate overtime work was related to happiness and job satisfaction. The aim of the study was to investigate whether the well-being of a

worker is influenced by the monetary compensation for his/her extra hours (Beckers et al., 2004). The sample consisted of Dutch full-time employees who either voluntarily or involuntarily worked overtime hours. The majority of overtime workers were financially compensated for their efforts, but the workers who were not, were more likely to report enjoying their work and generally had a higher income which encouraged them to volunteer their time. On the contrary, workers who put in involuntary hours were more likely to become fatigued and reported lower job satisfaction (Beckers et al., 2004). Another study by Van der Huls, Van Veldhoven, and Beckers (2001) found that fatigue in overtime workers was mostly found in jobs that were in high demand and that did not personally influence on the type of work they were doing and that were low in autonomy. This means that workers that were given specific instructions with no input on the work task that they were performing, as well as workers that worked by themselves (without help) were more likely to become fatigued. An employee who is doing a job where he/she has low involvement in the type of work they are doing will likely be less enthusiastic about their work and therefore have lower levels of motivation and become fatigued or have depressive emotions (Van der Hulst, Van Veldhoven, and Beckers, 2006).

When a worker has a low morale about the type of work he/she is doing, it will impact his/her overall attitudes towards his/her work making overtime hours seem more dreadful than what is found with an employee who is satisfied with his/her work type. It is important to understand that if a person's attitude remains the same in an unenthusiastic manner over long periods of time, this will impact his/her overall mental health.

Voluntary and Involuntary Overtime

Another factor that is important to consider is whether or not overtime work is voluntary or involuntary. Although it may seem that adequate financial compensation may be motivation for workers putting in overtime hours, it is not necessarily the case. There are factors that contribute to an employee's willingness to work overtime that influence their overall job satisfaction. For example, jobs that require a moderate amount of overtime will be influenced by psychosocial aspects of the job such as job demand, job variety, and job control (Beckers, et al., 2004). In combination with these work characteristics, there are two other important influences on job satisfaction that were found to contribute to psychosocial task characteristics. The first is the control on overtime work which is "an employee's possibilities of control over the duration, position, and distribution of work time" (Ha'rma", 2006). If an employee has no influence on his/her work schedule, it will inevitably influence his/her home life and lead to distress and dissatisfaction with their work-life balance leading to increased depressive emotions and lead to an increase of health problems (Beckers, et al., 2004). The second psychosocial characteristic that contributes to a workers overall job satisfaction is rewards for overtime work (Ha'rma", 2006). The Equity- Reward-Imbalance Model by Siegrist (1998) theorizes that workers efforts are a part of a social exchange in which they feel entitled to fair compensation or "rewards" for their efforts. If a person feels that they are not "rewarded" for their contributions in the workplace, it can be assumed that he/she will experience feelings of distress and overall lower job satisfaction (Siegrist, 1998).

Job control and job rewards are two important factors that contribute to overall job satisfaction and thus overall quality of an

employee's lifestyle. However, these factors are greatly influenced by whether or not the employee is participating in voluntary or involuntary overtime hours. Van der Hulst and Geurts (2001) conducted a study that showed involuntary work was associated with adverse health effects in low reward situations. However, this study was limited to a specific occupation of postal workers and was based on "general job rewards" rather than for overtime work. A study conducted by Beckers et al., (2004) found that workers that had a higher education level, higher income and an increase in job variety and job autonomy were more likely to work voluntary work unrewarded work hours in comparison with rewarded involuntary workers. These findings can be attributed to the fact that voluntary overtime workers that are not rewarded for their added efforts are more likely to be in favorable jobs and to have a higher income than workers that are financially compensated for involuntary work hours. It was also found that workers that take part in involuntary overtime hours are more likely to be at risk for "burnout" and to have a lower overall job satisfaction (Beckerts et al., 2004). When an employee does not have much influence on their work schedule (i.e. mandatory overtime work), his/her home life and rest/ recovery time will inevitably be impacted leading to higher changes of fatigue and low job satisfaction (Siegrist, 1998). Although it is found that higher income and job control is associated with voluntary work hours, this does not entirely comply with employees in industries such as healthcare. Healthcare professionals are examples of employees that are highly educated with higher than average incomes, but that often work involuntary overtime work hours.

Overtime in Healthcare

Nurses and doctors are required to use a substantial amount of physical and

mental energy to perform their job duties and are constantly in demand of overtime work. While healthcare workers are known to have to work shifts that may lead into overtime work hours, they will inevitably face lack of sleep as a result of shortage of employees and patient influxes. This is problematic because lack of adequate sleep will result in decrease of alertness and quality of task performance (Olds, 2010). Fatigue-related cognitive impairment has the capability to contribute to workplace error and potentially result in injury. Data shows that every additional five hours worked per week (past 40 hours) were associated with an average increase of approximately 0.7 injuries per 100 worker-hours (Dembe, Erickso, Delbos & Banks 2005). This statistic is applicable to a variety of industries not specific to the healthcare industry, but is important to consider when involving the health and safety of others than the worker (Owens, 2007).

It is especially crucial to recognize the adverse effects of fatigue-related cognitive impairment in the healthcare industry as it pertains to doctors that have to make important decisions regarding the well-being of patients in emergency situations. Doctors are known to work tremendous amounts of overtime, especially in prolonged surgeries. The consequences of not getting enough sleep can have detrimental effects on the patient if the medical professional in charge is mentally and therefore physically exhausted. If the cycle of working overtime hours without sufficient rest time continues, medical professionals may suffer from burnout and potentially be unable to work altogether (Berney & Needleman, 2005). Nurses have been known to feel that they are unable to provide adequate patient care as a result of burnout and therefore consider leaving their job. When this happens, there is a further shortage of nursing staff which will put

more pressure on other nurses which contributes to the overall unhealthy work schedule for nurses (Sung- Heui & Brewer, 2010). Employees in the healthcare industry exemplify the fact that working overtime is not necessarily beneficial to the employer, employee or the patients whether it be voluntary or involuntary overtime. While overtime work may be necessary due to staff shortage or patient influxes, lack of adequate rest time will leave the employee at a disadvantage rather than benefit him/her. A disappointing fact reported by the Canadian Broadcasting Corporation stated that roughly 4500 registered nurses from 257 hospitals responded to a survey regarding topics such as hospital resources and quality of care. It was found that about 60% of nurses that responded to the survey claimed that there was a shortage of staff in the hospital where they worked and 40% of workers claim to have suffered from “burnout”. The shortage of nursing staff is resulting in inadequate care for patients and nurses claim that they would not recommend their place of work to friends or family (Hildebrandt, 2013). The decrease in job satisfaction in the nursing community is a valid example of the negative impacts that working too much overtime has on overall quality of life. Although overtime work may be a necessary part of one’s job, there is a need for evaluation of employee satisfaction in order to ensure a healthy work- life balance.

Conclusion

Overtime work may seem to be profitable for companies, especially manufacturing companies that require a high productivity demand. It may seem easier to increase an employee’s pay to work excess hours rather than hiring new employees to compensate work hours. This is because it may require money to train new employees which may seem like a setback. Also, the employers may believe current employees

have more experience at their job and will be more efficient than a newer employee who has the potential to make mistakes and therefore create productivity set back. However, it may not be as feasible as the company may think due to the adverse effects that may come with overworking an employee. It is evident that there are negative consequences for individuals working longer than average work hours and both long and short term effects that derive from mental and physical overexertion will create undesired setbacks for the company. Factors that can contribute to optimal workplace productivity such as employee health and overall job satisfaction are essential to consider before placing working hour demands on employees. Employers may believe that it is more efficient to keep a current employee on duty rather to hire new workers, but it is obvious that there are problems with this method of working arrangement that may not be apparent to the company or establishment. Perhaps a periodic overall assessment of employee’s attitudes and physical health should be done if the employee working overtime hours would benefit both the workplace establishment and employee’s. This way the employer will be aware of how overtime hours are impacting the employee’s quality of life. If the employee is satisfied with his/her work routine, then both the employer and the employee will benefit.

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Early Intervention for Children with Autism spectrum disorders

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Autism spectrum disorder (ASD) is an umbrella which autistic disorder, Asperger's disorder, childhood disintegrative disorder, Rett's disorder, and pervasive developmental disorder (not otherwise specified) fall under. All the disorders that fall under autism spectrum disorder are characterized by qualitative impairments in communication, social skills, and restricted and repetitive behaviors, which, without individualized interventions, can impede academic success and independent functioning (Barton, Lawrence, & Deurloo, 2012). Researchers know that it is possible to identify children with autism by the middle of their second year of life. Two-year-old children with autism present primary symptoms of ASDs from the social and communication domains, particularly with negative symptoms such as delayed speech, decreased imitation and pointing, and a lack of eye contact and symbolic play (Barton, Dumont-Mathieu, & Fein, 2012). Autism is becoming more prevalent, with about 60-116 children per 1000 being affected representing a serious public health challenge (Barton et al., 2012). As the number of autistic children is increasing, and studies have been documenting the positive outcomes and possibilities for a child with autism and the help of early intervention. Health care providers want to identify children with signs of autism as early as possible to help implement the intervention as early as possible (Barton, et al., 2012). The term early intervention is used widely to describe opportunities offered to young children, from birth to three years of age, and their families. Treatment is designed to

prevent and improve the negative consequences of a child with disability due to ASDs (Einav, Levi, & Margalit, 2012). In most cases children cannot be provided intensive early intervention services until they have been diagnosed with autism (Barton et al., 2012) and this is a large disadvantage to the program. As many studies have stated, early identification and attending early intervention are associated with more positive outcomes in communication, social interaction and cognitive development (Barton et al., 2012). As children with autism develop, they are continuously disadvantaged by lacking the prerequisite skills needed to access to the next stage of social competence and independent functioning (Vernon, Koegel, Deuterman, & Stolen, 2012). Therefore the advantage that a person with autism can gain with early intervention is very helpful for most aspects of his/her life. There are many advantages to the early intervention of autism. It has been shown that early intervention for autism can show a difference in neuroimaging, therefore the biology of a person with autism can be changed with the help of early intervention showing just how significant it can be (Dawson et al., 2012). Also, the involvement of parents and the entire family in deliverance of the program has advantages in the improvement of the child as well.

Advantages

Early intervention has been shown by many researchers to be an effective way in helping with the symptoms of autism spectrum disorders, increasing skills in social behaviors, and in school based

activity. In the last few years, researchers have been developing new intervention programs to help children with an autism spectrum disorder (Granger, des Rivieres-Pigeon, Sabourin, & Forget, 2012). There are different forms of early intervention to help best suit the child and the family. There are group and community interventions which are meetings held by interventionist and children of the same developmental level will attend to work on their skills. There are also interventions like the Early Start Denver Model which is delivered by an interventionist but also requires parents and family members to engage in the intervention for a certain number of hours at home. Early intensive behavioral intervention (EIBI) was developed by Lovass in the 1980s to enhance children's deficit behaviors (Granger et al., 2012). Also, schools deliver intervention in the classroom during the school hours. All of these interventions have been reported to help children with the symptoms of autism.

Normalized Brain Activity

Neuroimaging and genetic studies have pointed towards some biological underpinnings of autism spectrum disorder; with the help of early intervention it has been able to change the biology in the brain to a more normal brain image (Dawson et al., 2012). Dawson et al., (2012) conducted a study with 48, 18-30 month old children that had been previously diagnosed with autism spectrum disorder. After being diagnosed some children received the Early Start Denver Model (ESDM) intervention for 2 years, while others just attended a community group. After the two years of intervention EEG activity was measured during the presentation of faces versus objects. Children who had received the ESDM were more responsive to faces than children from the community group. The children exhibited greater improvements in autism symptoms such as, IQ, language, and

adaptive and social behaviors than children who had just been in a community group for autism without an individualized intervention. Dawson et al., (2012) found that the ESDM group and typical children showed a shorter latency and increased cortical activation when viewing faces, whereas children in a community group showed the opposite pattern. This demonstrates that individualized early intervention not only helps children with ASDs on a behavioural level, but it also helps them on a cognitive level. Dawson et al., (2012) were the first people to demonstrate that early behavioral intervention is associated with normalized patterns of brain activity, which is associated with improvements in social behavior in young children with ASD.

Early Screening

There is a great importance on early screening for ASD in children, and a great emphasis should be placed on early screening. Although parents of children with ASD often report concerns with the development of their children beginning at about 18-24 months, studies have shown that children may not receive a formal diagnosis until an average age of four years (Barton et al., 2012). Children from economically disadvantaged or minority groups may, on average, be identified even later. Early screening is important because in most cases children cannot be provided with intensive early intervention services until they have been diagnosed with autism spectrum disorder (Barton et al., 2012), and early intervention has a large importance on the development of a child with autism.

Although screening children for ASDs is important, it is a difficult task. There is an uncertainty when it comes to the nature of the early signs of ASD in young children, currently there are no biological markers identified for autism spectrum disorders making it more difficult to identify

the disorder and autism screeners will have to focus more on specific observable behaviors in order to identify child at risk (Barton et al., 2012). Barton et al. (2012) found that the best screening for child of one year of age is with a parent-report questionnaire. Two-year-old children at risk for ASD present symptoms from the social communication domains, particularly with negative symptoms in delayed speech, decreased imitation and pointing, and a lack of eye contact. Researchers have focused more on early signs of social communication delays and the failure to develop age appropriate behaviors that are associated with social aspects (Barton et al., 2012). Screening tools for younger children are based on parents' reports but this is sometimes difficult because first time parents may be unaware of inappropriate development (Barton et al., 2012).

In recent years, many new screening instruments have been developed in an attempt to identify children with an elevated risk for ASD as soon as possible (Dereu, Roeyers, Raymaekers, Meirsschaut, & Warreyn, 2012). Typically children are screened with a level one screener to identify any problems and then a level two screener will show what specific disorder the child has (Barton et al., 2012). More screening instruments have been developed to test children at different age levels. The Early Screening of Autism Traits questionnaire (ESAT) and the Checklist for Early Signs of Developmental Disorders (CESDD) for children younger than three years old, and the first year inventory (FYI) was developed for children one year of age and younger (Roeyers, Raymaekers, Meirsschaut, & Warreyn, 2012). Although the benefits of screening for ASD are clear, no screening instrument for young children has yet to be developed with appropriate values for all the major measures of diagnostic accuracy (Roeyers, et al., 2012).

ASDs in the School

The increasing amount of children with autism spectrum disorder has had a dramatic effect on schools and educational policy involving the intervention presented at school and placement of children with the disability in the classroom (Barton et al., 2012). Current research is supporting the inclusion of young children with autism (Barton et al., 2012). An increasing number of children with autism are receiving services in inclusive settings alongside their peers. The Individuals with Disabilities Education Act (IDEA) mandates that children receive services in inclusive settings with peers with typical development to the extent possible (Barton et al., 2012). As a result of IDEA mandating this, early childhood educators, and other professionals working with young children need to learn how to implement strategies that address the needs of each individual child with autism. The inclusive preschools for children with ASD provide more opportunities for teachers to implement social and communication skills, and more opportunities for social interactions with peers (Barton et al., 2012). Children with autism benefit greatly from inclusive classrooms when the instruction is individualized and focused on teaching functional skills for children who are all on the same level in development (Barton et al., 2012). Although the children are benefiting greatly from the inclusion of being in a classroom alongside peers, the intervention has to be individualized so some children are not ahead or behind the instruction leaving the instruction unless to those not in its realm.

Parental and Family Involvement

A number of studies have shown that parents' involvement in the various educational and rehabilitation processes display positive results in the development of children and in the success of intervention

programs (Granger et al., 2012). When parents are applying intervention at home themselves, those are extra hours which may help to improve a child's cognitive, language, social and adaptive skills (Granger et al., 2012). Vernon et al. (2012) studied three young children diagnosed with autism. The children and their parents participated in the study, the parents engaged in the intervention with the children, and attended meetings regarding the child's intervention. In the study, Vernon et al. (2012) got the parents to use a toy reward to reinforce, and encourage a child displaying positive social behaviour. Results showed an increase in the children across all measured areas of social functioning, including child eye contact, verbal initiations, and directed positive affect. Simultaneously, parents found engaging in the intervention to have a positive effect, and also an increase in engagement with the child was displayed (Vernon et al., 2012). The study by Vernon et al., (2012) also suggests that parents found some aspects of the intervention personally rewarding. This could be attributed to observing the positive responses of their children. These findings suggest that there was a new level of child-parent engagement established that did not exist before (Vernon et al., 2012). The findings of these studies suggest that parental involvement in early intervention helps above and beyond that of just the regular group and in-school intervention.

Disadvantages

Family Stress

Parenting a child with a developmental disability has been considered a risk factor for developing stress. Granger et al., (2012) found that parents of children with autism are more likely to show symptoms of stress, depression and hopelessness. Einav et al. (2012) found that when just one parent was focused on delivering the intervention to the

child with autism in the family, other aspects of the family dynamic would be lacking such as the relationship between the parents, and the amount of attention the other children were receiving. Although this is a downside to the intervention Einav et al. (2012) discovered that simply thoughts of hope, and having the entire family involved in the intervention helps maintain attention from parents to other siblings, and keeps a connection between the parents. Studies have indicated that the developmental courses of children, as well as their family's well-being, are dependent on the degree to which the family has knowledge about the disorder, and the extent to which the environment provides resources to meet the needs of the child and the family (Einav et al., 2012).

Individualizing Treatment

As children with autism develop, they are continuously disadvantaged by lacking the prerequisite skills needed to access to the next stage of social competence and independent functioning (Vernon et al., 2012). Therefore, each treatment needs to be individualized to try and help children with autism. Although it has been discovered that including children in group settings with peers is helpful, the setting has to be beneficial to all children this is a problem that Barton, Lawrence, & Deurloo (2012) noted. Every child with autism has unique strengths, and needs, guidelines for selecting, designing, and delivering instruction in classroom settings must emphasize individual adaptations (Barton, Lawrence, & Deurloo, 2012). Therefore, the intervention is a great thing if it is applied properly, but can be useless if the children are not on the same level as the intervention.

Further Research

Although the current paper has just examined early intervention for children who are preschool aged, Dawson et al (2012) suggest that if just two years of

intervention can show a difference in cognition then intervention should be continued throughout life. Another study could be conducted to look at how continuing intervention normalizes brain activity versus individuals who do not continue to receive the intervention. Also, the stress on the family was discussed, but prejudice that the family faces was not. This is something else that could be looked at under the disadvantages because parents with a disabled child will be stigmatized due to association, and possibly even blamed for the child having ASD which is another stressor placed on the parents. Most studies mention that early intervention increases IQ, but it is never said how IQ is measured. Future research could examine how IQ is being measured.

Conclusion

Early intervention for children with ASD has been shown to be helpful in increasing social and behavioural skills, and researchers have been working to create interventions to continue to help children with ASDs. Dawson et al., (2012) research showed the great advantage to early intervention in young children when the study showed that after two years of intervention a child with autism had developed a more normalized brain. This shows that the intervention is extremely helpful and it would be beneficial to continue it throughout life. Although it is known that the intervention is useful, children have to be identified with the problem first and this is often a difficult task. Screening for young children is not getting implemented as early as it should, and not all screening is 100% accurate therefore there are some misdiagnoses, leading to children not having the advantage of receiving early intervention and its benefits.

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Grief, Stress, and Bereavement: Nurses and Parents Caring for Terminally Ill Children

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The death of a child is difficult to understand and accept from anyone's perspective. There is also a large amount of grief and stress involved for those people who care for the child such as parents and nurses. The grief reactions of parents can be vast and detrimental to the health of the parents if not handled appropriately. Nurses are a part of the support system that care not only for maintaining the comfort of the dying child, but also for supporting the family who will be left behind. Both the family and nurses can benefit from the relationship because they support one another through the child's death (DeSpelder & Strickland, 2011). Consequently, nurses' grief can be heightened if they make strong connections with children and their families (McGibbon, Peter & Gallop, 2010). The problems that arise for nurses from bereavement of a child are often ignored by society and by the medical system (Saunders & Valente, 1997). Yet, grief can lead to burnout in nurses (Rushton et al., 2006). To date, there is a lack of research about stress and grief relating to the bereavement of nurses and parents. There are interventions that can be useful for both parents and nursing staff for relieving the effects of bereavement. It is important that the medical community be aware of these interventions so they can be implemented into the medical system.

Grief is an unavoidable emotion that will undoubtedly affect all people in society at some point. As defined by DeSpelder and Strickland (2011), grief is "the reaction to loss" (pp. 334). It includes a variety of responses such as: behavioral, emotional, physical and spiritual reactions. True grief is said to include feelings of depression, tightness of the chest and throat, and frequent crying (Lindemann, 1978 as cited in Soricelli & Utech, 1985). Based on aspects of grief that have been discussed, grief may appear to be an extreme case of sadness or devastation. Most people experience grief and its effects when a person with whom they have built a relationship or for whom they care passes away. Bereavement defines the event of losing someone through death (DeSpelder & Strickland, 2011). The finality of death has the potential to evoke a strong grief response in a person. Though it can be very extreme, to feel grief is considered a healthy and universal emotion for individuals who experience loss (Capitulo, 2005).

Although grief is a natural reaction to bereavement of loved ones, when a child

passes away, it is considered to be the greatest source of stress that a person ever experiences (Miles, 1985). This stress likely arises because the death of a child is considered to be unnatural (James & Johnson, 1997). Life is expected to be a long process and it is thought a person should pass away when he/she is old and has completed any goals he/she may have had. Consequently, the experience of grief due to the loss of a child may expectedly be much more intense than the experience of grief caused by losing a parent or a spouse (James & Johnson, 1997). This increased grief may be because a parent feels an intense responsibility to care for and protect his/her child from all danger and harm. There is an intense connection that a parent feels with his/her child.

The job of a nurse can be strenuous not only physically but also emotionally. The nurse plays a role as a caregiver for the dying child and also as a support system for the family (Saunders & Valente, 1994). While helpful for the family, strong relationships can carry heavy emotional consequences for the nurse. The grief of

bereaved nurses often gets ignored by society and by the health care system (Saunders & Valente, 1997). Nurses are not usually given the right to grieve the loss of a patient. The stress and grief must be addressed in an attempt to prevent “burn out” and to allow nurses to continue giving the best care possible to subsequent patients (Rushton et al., 2006). There are programs and coping mechanisms in existence that can help to relieve the stress and grief that is felt by nurses in such situations.

Parents of children who are dying will start to show signs of stress and grief at the beginning and throughout the process of losing their child (Soricelli & Utech, 1985). Parents start to experience the loss of their child from time of diagnosis. Some symptoms that parents of terminally ill children may experience throughout the process include anger, powerlessness, guilt, sadness or devastation (James & Johnson, 1997). It is important that the child receives optimal care, but also that the parents receive supportive care from people around them including health care professionals (DeSpelder & Strickland, 2011). Parents’ concern for the well-being of their child can affect their own well-being (Price, Jordan, Prior & Parkes, 2011). Parents sometimes neglect themselves when they become overwhelmed trying to give extra care to their sick child. A parent may likely feel that he/she needs to be providing care for his/her child along with hospital staff (Price et al., 2011). It is important that parents receive support in order to deal with the disruption of their emotions (James & Johnson, 1997). Communication between families and nursing staff is crucial for a positive relationship and to help ease the family through the death of the child (James & Johnson, 1997).

Symptoms of Grief/Stress in Parents

Accepting the impending death of a child can be difficult for parents. This is

mostly because it feels “unnatural” for people to die very young and it is generally unexpected (Soricelli & Utech, 1985). It may be difficult to understand that children die because they are thought of as being innocent. Young children have not lived long enough to experience all that is expected in life: prom, college, and marriage, for example. Before they were able to accept their children’s diagnosis, many parents reported that they remained in a state of denial (James & Johnson, 1997). It may be easiest to deny the diagnosis in order to maintain hope and to believe that the child can recover from illness. However, as the illness progresses parents must begin to accept the inevitable death of their child.

Parents sometimes experience the feeling of great loss starting from the moment they are told their child is going to die (Soricelli & Utech, 1985). This can be a very unsettling time for a family. Emotional reactions of grief can range anywhere from frustration and overwhelming sadness (James & Johnson, 1997) to symptoms that closely relate to post-traumatic stress disorder (Capitulo, 2005). The symptoms related to grief can range from emotions that would be expected to long-term, intense psychological issues. After they have accepted that death for their child is unchangeable parents may start attempting to navigate. (Price et al., 2011). When parents are trying to navigate they are attempting to decide what happens next and to take control of as many aspects of the situation as possible (Price et al., 2011). Parents feel the need to do for their child and to protect the child as a part of their parental instincts (Price et al., 2011). They sometimes feel profound guilt as a consequence of being unable to control their child’s illness or to protect the child from dying (Price et al., 2011). The grief associated with being bereaved in this way is

very great. In some cases, it may be a feeling of going through a state of crisis (James & Johnson, 1997). Parents are in a whirlwind of decisions and emotions. The loss of a child leads to a multitude of grief and stress reactions such as weakness, sleeplessness, loss of appetite or chills and tremors that can be disruptive in the life of parents (DeSpelder & Strickland, 2011). The wide range of emotional and physical grief reactions that occur in parents can result in extreme stress.

Stress that is related to the grief of losing a child can come from many different sources. It may be stress from the long complications of the disease or exhaustion from the extra effort put into caring for the child while the child was in the final stages of life (Miles, 1985). Complications may arise depending on what type of disease the child is suffering from. He/she may also contract other illnesses as a result of the disease, treatment may be tedious or the child may experience chronic pain. Stress on marriage and on the family dynamic is a possibility because there is an emphasis on the sick child often leading to neglect of other familial duties (Miles, 1985).

Improper or repressed communication of information between health care staff and family can be a cause of frustration throughout the dying trajectory (James & Johnson, 1997) or the process of active dying; when death is near and eminent (DeSpelder & Strickland, 2011). Stress may also be related to the variety of decisions that need to be made on behalf of the child by the parent (Price et al., 2011). Parents must be concerned with more simple decisions like whether the child wants to be at home or in the hospital while he/she is sick but also more serious decisions like what is to be done with the body after death. There is a struggle by parents to be able to maintain a sense of normalcy in the child's life while also being able to give the child

the extra care and attention he/she needs (James & Johnson, 1997). To make the child comfortable the parents may want to avoid excessive change but still need to accommodate for the illness and its consequences. Parents may also feel stress originating from the fear that the child may pass away when he/she is alone or with someone other than the parents (James & Johnson, 1997). Parents do not want the child to feel alone or abandoned in the greatest time of need.

The death of a child brings on stress not only from the grief that is felt and the struggle to make end-of-life as comfortable as possible for the child but there may also be legal issues, marital strain or handling the feelings of other surviving siblings (Miles, 1985). Depending on where the family is living there may be large medical bills. When other children are present the parents must be able to mourn and grieve while still parenting and supporting the other children.

It is also important to consider that within the first 30 months of a child's death parents' emotional symptoms do not significantly change for the better (Miles, 1985). Shadow grief – cases of recurring grief after recovering -- may exist on significant occasions like birthdays or anniversaries of the death (Freud, 1917 as cited in Capitolo, 2005). After death, it may be extremely stressful and a cause of great grief for a parent to find activities that fill the time he/she would have spent caring for his/her child (Price et al., 2011). The death of a child is a mournful and difficult experience for the bereaved parents. With many additional stressors aside from immediate grief related to the death, it is important to explore options of self-care and support to help the parents reduce some of their emotional trials.

Coping Systems for Parents

Preventing stress to begin with could be beneficial to reducing negative feelings.

Good communication between those caring for the child and the family is a key component to reducing the stress and frustration of parents (James & Johnson, 1997). James and Johnson (1997) stated that for up to 2 or 3 years after losing their child, parents felt that the amount of information they received from health care professionals was still influencing how they were able to cope with the death. Having adequate information, parents are able to understand more about the illness so they can feel more in control (Price et al., 2011). This can help relieve some of the stress associated with decision making and with ensuring the normalcy they want for the child while meeting the child's needs. Lack of information on the other hand, can hinder a relationship between the nurse who is caring for the child and the parents (Beckstrand & Kirchoff 2008 as cited in Tubbs-Cooley et al., 2011). Since nurses not only give crucial information but also care for the family along with the child, it is important that they build positive relationships (James & Johnson, 1997).

Parents also find it helpful to speak with people who have experienced similar situations with a dying child (James & Johnson, 1997). Being able to relate to someone else can help to relieve the loss. Support groups can be beneficial for relieving feelings of grief (Miles, 1985). There are bereavement programs available in some regions for parents of children who have passed away. Some of the programs include support packages, phone calls, meetings and peer support (Aho, Astedt-Kurki, Tarkka & Kaunonen, 2010). Looking for support from others could be a form of self-care that is necessary to carry on after the death of a child. Parents become so engaged in caring for their sick child that they neglect their own well-being and face emotional and sometimes physical issues (Price et al., 2011).

Self-care is important because there are so many direct and indirect stressors involved with these situations. In some cases hospitals have set up programs to maintain contact with parents after the death of their child. In an assessment of one such program, Darbyshire et al. (2012) examined a telephone bereavement program that was set up to give parents support and to act as a follow up. They found that parents appreciated the phone calls from the hospital. Phone calls were made leading up to holidays reflecting the deceased. Parents sometimes feel as though they have been abandoned or are being avoided by the staff with whom they have developed intimate relationships (James & Johnson, 1997). Parents may feel it is too hard emotionally or that they do not have the right to be visiting now that their child has passed (Darbyshire et al., 2012). Visiting with the parents after the death, phone calls and letters from hospital staff can help parents feel connected to the memory of their child (James & Johnson, 1997).

Another method of coping seen in parents who are losing a child is to continue to engage in parenting throughout the illness until death. Caring through parenting roles like bathing or comforting the child may help to reduce the feeling of impending loss. Parents feel useful when they are able to continue caring for their child; there is a need to be "doing" for the child (Price et al., 2011). Price et al. (2011) looked at parenting behaviors throughout the end-of-life course. They found that parents have a need to continue to have a sense of control, to provide for their children, to protect their children from hurt and to preserve their children's memory. This all contributes to being able to "do" for their child and to maintain a sense of control and parenting (James & Johnson, 1997).

It seems as though it is not only the child who has needs but also the parents.

Some parents may internalize their feelings instead of expressing them which is considered a “professional” grief reaction (Capitulo, 2005). However, by taking care of the child’s needs parents often feel like their needs have also been met (James & Johnson, 2011). Nurses have to be aware that when dealing with bereaved parents men and women have different needs and therefore will feel grief and mourn differently; they must be able to offer different support for each gender reaction (Capitulo, 2005). The role of nurses in communicating to parents how to care for their child and in allowing them to take responsibility is a part of the relationship that allows parents to cope with the situation (Price et al., 2011). Through self-care, support programs, and health care professionals – specifically nurses – parents can maintain or reduce their levels of stress.

Nurses Grief & Stress

Nursing is a strenuous job that carries a lot of responsibility. Nursing can be a very rewarding job, but there is a “dark side” of the profession when working with terminally ill children that has the potential to negatively affect nurses (Papadatou, 1997). Nurses must be physically, emotionally and mentally involved with their jobs. The connections that nurses make with the families the care for could sometimes be so strong that they remind nurses of their own families (McGibbon, Peter & Gallop, 2010). Many nurses feel as though a dying child and the process of his/her dying is the most stressful part of their job (Kaplan, 2000). However, the grief of nurses is often neglected because it is considered unprofessional to show symptoms (Saunders & Valente, 1994). The grief of nurses could be considered “disenfranchised grief” which can lead to feelings of anger, prolonged sadness or mental disorders (Capitulo, 2005). Disenfranchised grief refers to the way that

grief of certain parties is seen as unimportant or unnecessary. Society has disenfranchised the grief of nurses because they do not consider that although nurses are not family they still worked with their patients frequently and developed a relationship with patients before those patients passed away (Kaplan, 2000). Ignoring the stress and grief that comes with bereavement for nurses, may result in denying other patients the best possible care (Rushton et al., 2006). Rushton et al. (2006) found that in order for other children to get proper care the nurses must get proper care for themselves following a significant loss that resulted in grief. As more patients die and nurses experience more grief, ignoring it will allow it to build up. The problem arises when nurses are unsure of what emotions they can show and what emotions they should conceal (McGrath, 2011). Because the medical system often expects nurses to repress their feelings, nurses are learning to deny themselves of self-care and support measures (Kaplan, 2000).

There are multiple issues that arise in the form of stress and grief when a nurse loses a patient. The emotions related to patient death and grief may include sadness, anger and/or anxiety (Saunders & Valente, 1994). Patient death may also result in damaged self-esteem as it pertains to the nurses’ professional abilities (Saunders & Valente, 1994). Professionals may feel as though they have taken part in “triple failure” (Papadatou, 1997). Papadatou (1997) explains that they may feel as though they failed in saving a life, they were not able to save the child not only as a nurse but also as an adult in typical adult-child roles, and thirdly that they failed the parents of the child. These emotions have the potential to become serious issues like overload and burnout (Conte, 2010). Layered suffering is an accumulation of grief that can cause suffering for a nurse in his/her daily life

(McGrath, 2011). It is shown that not only do nurses experience grief over losing a child but they also indirectly face the stress of moral confusion and role conflict (Rushton et al., 2006). A healthcare professional has a job in which the goal is always to try and save the person but when faced with someone who has a terminal illness, the ultimate goal changes which can be difficult for the caregiver (Papadatou, 1997). Layered grief is a result of these emotions and inconsistencies of self. In order to avoid burnout or overload a nurse needs to address his/her thoughts and feelings (McGrath, 2011).

Coping Systems for Nurses

Coping for nurses is a vital activity in preserving their normal functioning and duties as a professional. Kaplan (2000) says that if nurses were not able to find ways to reduce their pain they would not be able to continue the job. Some coping mechanisms that have been suggested are: being aware of emotions, finding support within a group setting or attending/participating in bereavement programs (McGrath, 2011; Tubbs-Cooley et al., 2011). As mentioned earlier, nurses are often expected to repress their emotions or are unsure of how they are permitted to express emotions. Emotional awareness can help nurses move forward (McGrath, 2011). The ability to express themselves could help to relieve “emotional tension” (Kaplan, 2000).

It is shown that support groups and bereavement programs are beneficial to the reduction of nurses’ grief and stress. This type of intervention allows for discussion of experiences with dying patients and the relationship that was developed (Rushton et al., 2006). Support groups may act as a gateway for the nurses’ ability to express grief and sadness (Saunders & Valente, 1994). Withholding emotions was one of the most serious factors causing stress in nurses so these groups can be very positive

experiences (Saunders & Valente, 1994). Since nurses are not necessarily expected to show their grief this creates a place where it is safe to be honest about both positive and negative feelings (Rushton et al., 2006). MacPherson (2008) identified a group that used story-telling to relieve grief in pediatric oncology nurses. The sessions dealing with bereavement have been shown by nurses to help not only with the impact of grief but more so for the ability to see some benefit from the experience (MacPherson, 2008). By having a chance to express their emotions by speaking out about their relationship with the patient, nurses could begin to heal using the positive memories and what they learned from the experience instead of only feeling hurt. Professionals who have attended debriefing sessions after experiencing the death of a patient have said that these programs are helpful and meaningful (Rushton et al., 2006).

Avoiding unnecessary amounts of stress caused by this job in particular can be approached in a few different ways. Nurses who are dealing with children who have terminal illnesses should redefine their goals from being cure-oriented to concerning themselves with the emotional/physical comfort of their patients and the family (Papadatou, 1997). The goals in caring for dying children must be to maximize the ability of children and families to live as fully as possible and to find meaning in life while they are dying (Papadatou, 1997). It is important for nurses to acknowledge their own needs as well as the needs of the family in order to support them throughout the death process once they are bereaved (Papadatou, 1997).

Making these changes to nurse-patient goals is an important part in helping a nurse in preparing for the stress or grief he/she will encounter. Another way that nurses can be prepared for these experiences is through death education. Whittle (2002)

suggests that education in this area should start before they even begin the nursing program as a student and continue throughout their schooling. Training can give the nurse the skills to properly communicate with his/her patients, and to understand patients all have different needs, which can allow him/her to give the patient a good death (Papadatou, 1997). Participants in a study by Papadatou (1997) reported that training in this area helped them to work together with colleagues in the care for a child. They also reported that training helped them to accept that there are unique needs with every patient and it helped them reach a deeper understanding of death and their personal beliefs surrounding it. Having better understanding about death and dying can help nurses to alleviate some of the stress and grief felt when they lose a child patient. Though stress will not be non-existent it may be easier to manage emotions if nurses are trained to know what to expect. However, this area of training is rarely utilized and many nurses go without a beneficial level of education in death and dying (Whittle, 2002).

Limitations/Future Research

There is very little research assessing the grief of parents and nurses and programs to help parents and nurses cope. This may be due to the topic being uncomfortable for those who are experiencing it, a difficulty obtaining a sample or researchers feeling as though the topic is taboo. It is difficult to gauge grief in early phases because it changes as time goes on (Miles 1985). The research that exists about parent grief has a tendency to be narrow in subject, for example particular relief programs or bereavement due to cancer. A large portion of studies are based on interviews with parents or nurses in single hospitals or wards. This area could benefit from longitudinal research existing over a few years and measuring the progression of grief

and recovery. Research may be limited because it would be unethical to conduct experimental research.

Future research may include thorough research on grief reactions throughout the dying trajectory of the child in parents and nurses. The studies could include emotional reactions, behavioral reactions and any mental health issues that may arise as compared to that seen in a "normal" population. It may also be helpful to develop coping mechanisms and bereavement programs if research is done looking at a group who experienced a group bereavement program versus one that has not. Finally, doing longitudinal research with both parents and nurses addressing changes in grief and stress would help in identifying what steps should be taken at what times to alleviate suffering.

Conclusion

Parents of terminally ill children and the nurses who help care for them while they are dying are subject to various sources of stress. Parents are most frequently, and justifiably, the more addressed of the two groups when it comes to grief reactions after losing the child. However, there is a need to address the nurses who are involved with the child as well. It has been found that parents experience symptoms that include: frequent crying (James & Johnson, 1997), guilt (Price et al., 2011), denial (James & Johnson, 1997), similarities to post traumatic stress disorder (Capitulo, 2005) and weakness, sleeplessness, chills or tremors (DeSpelder & Strickland, 2011). All of these symptoms may continue on and become long-term problems in the daily lives of parents if not addressed and properly dealt with.

Nurses experience grief in a different way than parents but it is important that their grief still be considered and taken seriously. Nurses who are working in a ward with terminally ill children are more susceptible to grief because they will often experience

loss of a young patient. In many cases nurses may have time to build relationships with these patients because they are caring for them up to death. Nurses are often considered to be unprofessional if they show signs of grief with the family or other staff members (Kaplan, 2000; Saunders & Valente, 1994). This creates confusion for nurses about how to express grief, often resulting in the nurses containing their grief and allowing it to layer (McGrath, 2011). Some of the feelings that nurses are experiencing when they handle young, dying patients and their families are sadness anger and anxiety (Saunders & Valente, 1994). Nurses may also feel damage to self-esteem (Saunders & Valente, 1994), moral confusion and role conflict (Rushton et al., 2006) and an overload of stress (Conte, 2011). These stress or grief symptoms when related to bereavement may result in burnout if care is not taken (Conte, 2011).

There are coping mechanisms that may aid in recovery from bereavement for both parents and nurses. Parents find it most helpful to speak with other people who have experienced similar circumstances (James & Johnson, 1997), support groups (Miles, 1985), phone calls or meetings with other parents (Aho et al., 2010), building relationships, and having open communication about the child's illness with staff (James & Johnson, 1997), as well as maintaining contact with the hospital staff who helped care for their child (Darbyshire et al., 2012).

Nurses' grief can also be helped through bereavement programs set up within the hospital (McGrath, 2011). These programs allow nurses to express their grief without feeling unprofessional. Nurses will benefit by being aware of their emotions (McGrath, 2011), telling stories about particular patients or experiences to other staff members or within a support group (MacPherson, 2008) and debriefing after

patient death (Rushton et al., 2006). There is little research regarding support systems and coping mechanisms in regards to nurses' grief.

Additional research is very important in this field because nurses are crucial components of the system that cares for sick people. They are especially important because they care not only for their patients but also for the families of patients. By researching what parents and nurses feel when they lose a child, steps can be made to improve the grieving process and interventions. When nurses have a background in death education they may be able to better communicate with the family and engage in proper self-care (Papadatou, 1997). "Having a comprehensive understanding of how and why parents respond to their child's illness and eventual death is crucial to the provision of effective professional support for families living through the nightmare of losing a child" (pp. 1391, Price et al., 2011). Nurses are better able to act out their role as professionals when they are given the opportunity to relieve their emotions.

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Deception and Child Development: Age and Gender Differences

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Deception and child development are assessed to examine the factors that lead to deception, such as age, gender, and cognitive development. Age and gender differences are examined to determine whether or not they have an influence on a child's ability to deceive and also on the success and sophistication of a child's deception. The crucial age for the emergence of deception is 3-4 years old; by age 5 children are beginning to become more successful and sophisticated with their lies and can better differentiate between the different types of lies. When examining gender it was determined that males tend to lie more than females but females are better able to detect deceit in others than males. These age and gender differences are examined and explained using theories such as, theory of the mind, executive functioning, and conceptual and moral understanding.

Deception refers to "making a false statement with the intention of deceiving the recipient" (Talwar & Lee, 2008, pp.866). It can come in the form of a white lie (e.g., telling someone you are busy to avoid making plans with them), bigger lies that affect the well-being of an individual (e.g., being unfaithful to a partner or spouse), smaller lies that tend to have no impact on those involved (e.g., your dress looks great), or serious delusions that we tell ourselves to maintain confidence and self-esteem (Deception, 2013).

As children, we see other children and adults lie and begin to understand the differences between the different types of lies such as white lies or bigger lies that are meant to or turn out to hurt others (Talwar & Lee, 2008). Once children can understand this difference and begin to develop morals, they come up with their own false beliefs, which eventually lead to the ability to create and tell their own lies (Talwar & Lee, 2008).

Deception in children is hard to assess because the age at which children can understand right and wrong needs to be determined, since children must understand this to knowingly create a false belief. This is difficult to determine because in order to know this, children's morals and their concept of right and wrong would have to be measured.

Deception is something we learn as children. Therefore, as we get older, the success and sophistication of our deception increases. This can potentially be explained by theories such as, theory of the mind, executive functioning, and concept and moral understanding. Age differences can also be seen because as an individual ages he/she has observed more and more knowledge about deceit.

Theories Offered to Explain Deception

When examining deception and child development, there are many different ideas that can explain how a child first begins to learn what a lie is and how this later turns into the child being able to successfully come up with and follow through with his/her own false beliefs. Three ideas that have been offered to explain the development of lie telling are theory of the mind, executive functioning, and conceptual and moral understanding.

Theory of the Mind

The theory of the mind perspective suggests that in order for a child to be able to tell a lie he/she has to be able to deliberately understand and create a false belief in the mind of another person (Talwar & Lee, 2008) (e.g., saying he/she did not eat the cookie when he/she knows he/she did). This particular perspective on deception could potentially explain the development of

lie telling because a child cannot tell a lie unless he/she knows how to create a false belief. In order for a child to be able to create a false belief he/she has to be taught what one is and has to realize what he/she is doing is morally wrong and can be classified as a lie. An example of this can be seen in a study by Talwar, Gordon, and Lee, (2007). Talwar et al. examined children aged 6-11 years-old. The children were asked not to peek at the answer to a question when left alone in the room but the majority could not resist the temptation. Results showed that the majority of children lied but when questioned about it they leaked critical information that helped to reveal their deceit. This says that children at this stage were able to understand what a lie was and how to tell one but when it was time to follow through with the lie or details of the lie they were unable to stick with details or to create a false belief in the mind of another person. Researchers found that this ability was positively correlated with second order beliefs, referring to more complicated beliefs (e.g., Maria knows they're selling brownies, but thinks that Sam still thinks that they sell chocolate chip cookies) (Hollebrandse, Van Hout, & Hendriks, 2013). This suggests that children are able to understand what a lie is and are able to tell one but they are unable to follow through with this lie and to create a false belief in the mind of another person.

Executive Functioning

Executive functioning refers to the higher order psychological processes that are involved in goal orientated behavior completed under conscious control (Talwar & Lee, 2008). Executive functioning includes cognitive skills such as; self-regulation (the ability to control one's emotions, behavior, and desires in order to obtain a reward or to avoid punishment) (Self-Regulation, 2012), inhibitory control (nerve impulses that act to stop a particular

activity or response. For example, the brain sending messages to stop the bladder from spontaneously emptying when it is becoming full) (Inhibitory Control, 2012), attentional flexibility, and strategy employment. These higher order psychological processes have been known to emerge in late infancy and to develop throughout childhood (Talwar & Lee, 2008). During this time researchers have seen an increase in lie telling in children, suggesting that inhibitory control and working memory may be directly related to children's ability to deceive (Talwar & Lee, 2008). This appears to be the case because it suggests that in order for a child to be able to tell a lie, he/she must have reached a particular stage in cognitive development. As a child develops the child becomes more successful and sophisticated with his/her lie telling.

An example of how executive functioning plays a crucial role in lie telling can be seen in a study by Evans and Lee (2011). Evans and Lee examined 8-16 year-olds to determine their lie telling ability, the sophistication of their lie and also their cognitive development. The results showed that older participants, with a better working memory and a greater ability to plan out and follow through with their lies were better able to successfully deceive the recipient. Therefore, in order to successfully tell a lie a child must have reached a particular stage in cognitive development.

Conceptual and Moral Understanding

The conceptual and moral understanding perspective, similar to the theory of the mind perspective, suggests that for a child to successfully tell a lie he/she has to understand the different kinds of lies. As age increases children are able to differentiate antisocial or white lies from exaggerations or honest mistakes and the social context in which these lies are told (Talwar & Lee, 2008). This particular perspective may explain the development of

lie telling because a child cannot honestly and purposely tell a lie if he/she cannot understand that what he/she is saying or doing is morally wrong. Although this perspective is quite similar to the theory of the mind it differs in that the theory of the mind perspective suggests that in order to deceive a child must be able to create a false belief in the mind of another person, whereas this perspective suggests that in order to be able to successfully tell a lie and follow through with it, a child must first understand that what he/she is doing is morally wrong. This may potentially explain the development of a lie because a child cannot be accused of a lie or be successful and/or sophisticated in telling one if he/she cannot differentiate between the different lies and also if he/she cannot understand that what he/she is doing is morally wrong.

An example of this can be seen in a study by Wang (2005). The study investigated 7-11 year-olds and their conceptual and moral understanding of lie telling in the context of benefiting a group or benefiting an individual. The results showed that children were less likely to see something as a lie when it was of benefit to a group. As age increased children were more likely to use honesty and collectivism as a way to justify their opinions of deceit. Therefore, a child cannot successfully tell a lie or judge a lie until they have an understanding and have developed morals.

Age Differences in Deception

There are many factors to take into account when determining if a child can understand and be successful at deception, such as the sophistication of a lie. When children first begin to lie or learn what deception is their lies may or may not be well thought out or successful (Talwar & Lee, 2008). For example, the first time a child tells a lie he/she may get nervous or think that the person he/she is deceiving may get mad at the child or that he/she may get in

trouble. This might cause the child to ruin the lie or to reveal his/her attempt to deceive by fidgeting or mixing up the story. Therefore, failing at telling a lie may indicate to the recipient that what he/she is being told is untrue. Research suggests that the success and sophistication of a lie increases with age as the brain develops continuously throughout childhood (Talwar & Lee, 2008).

In one study children between the ages of 3 and 5 years-old were surveyed to investigate their ability to deceive their opponent while playing a game. The results showed that the crucial age for the emergence of deception was approximately 3-4 years-old and the difference between 4 and 5 year-olds was significant. The 4 year-olds lacked the ability to refrain from deception when it was disadvantageous to them. For example, the 4-year-olds could not realize when a lie would not benefit them. They were unable to recognize that when a lie did not benefit them there was no point in telling it, while the 5-year-olds had this ability. The difference in deceptive ability among the different ages was significant (Chang, 1998).

In a similar study, 118 children were divided into three age groups, 4, 6, and 8 year olds. The children participated in a competitive game that was designed to measure their deceptive abilities (Smith & LaFreniere, 2011). In order to be successful in the game

children were required to inhibit useful information or to provide misinformation to their opponent. The results showed that the 4-year-olds were not strategic and very rarely successful in the game, 6-year-olds were increasingly strategic and successful and 8-year-olds were significantly more subtle in their deceptive strategies, more successful at the task, and more likely to be able to verbalize an understanding of their opponents expectations than the younger

groups (Smith & LaFreniere, 2011).

Both of these studies provide support for the executive functioning perspective. The executive functioning perspective suggests that in order for a child to be able to successfully tell a lie the child must have developed higher order psychological processes that are involved in goal oriented behavior (Talwar & Lee, 2008). In these studies children were unable to recognize the advantages and disadvantages of lying. For example, in the study by Chang, (1998) the 4 year olds were unable to refrain from deception when it was disadvantageous compared to the 5-year-olds who were able to do this. This suggests that children at this age have not yet developed the higher order psychological processes that are involved in goal oriented behavior. Therefore, they are unable to be successful and sophisticated in their lie telling because they do not understand the reason behind lying and the situations in which it is appropriate to tell a lie.

In yet another study, 8-16 year olds were surveyed to investigate their tendency to lie, the sophistication of their lies, and cognitive development. The children were asked ten questions on a trivia style test (Evans & Lee, 2011). To motivate the children to do well, the researchers told the children if they could answer all ten questions correctly they would receive ten dollars. The children were presented with a book that included both the questions and answers. They were instructed to answer all ten questions without peeking at the answers while the researcher left the room, and then to let the researcher know once they had completed all the questions. A video camera recorded the process to determine whether or not the children had actually peeked (Evans & Lee, 2011). The researchers found that 54% of the participants peeked at the answers while they were left alone. A logistic regression analysis showed that as

age increased, children were less likely to peek at the answers (Evans & Lee, 2011). Of the 54% who peeked at the answers, 84% lied about peeking and only 16% told the truth about peeking (Evans & Lee, 2011).

In a similar study, 5-57-year-olds were examined to determine their conceptual and moral evaluations of deliberate lies and unintentionally untrue statements. The participants were shown videos that depicted either deliberate lies or unintentionally untrue statements (Peterson, Peterson, & Seeto 1983). It was observed that the definitions of lying were found to change gradually over this particular age range. Adults were found to be more lenient in their moral evaluations when looking at all statements compared to children, while all age groups agreed that a lie or untrue statement that did not cause any harm was better than one that caused trouble, and all lies or untrue statements that were motivated to benefit the individual telling the lie were worse than unintentional falsehoods or lies that were told to please the recipient (e.g., your dress looks great) (Peterson et al., 1983). This particular study can be related to the conceptual and moral understanding perspective because it shows that once an individual has developed a set of morals he/she is able to differentiate between the different types of lies and to understand when it is morally and socially acceptable to tell the different types of lies. For example, this particular study found that all individuals could recognize that it was morally wrong to tell a lie that was selfishly motivated or to benefit the person telling the lie, while a lie told to please the recipient was seen as morally and socially acceptable.

The results of these studies can be explained by the conceptual and moral understanding perspective. The conceptual and moral understanding perspective suggests that in order for a child to be able to deceive he/she must be able to

differentiate between the different kinds of lies and must have developed a set of morals. The results of these studies can be related to this particular perspective because the results show that children at this particular age are able to successfully tell a lie and follow through with it. All studies show that individuals have a good understanding of conceptual and moral understanding; they realize it is wrong but they also realize the different types of lies and how lying can be advantageous to them and continue to go through with lying anyway.

Gender Differences in Deception

In addition to possible age differences in deception the possibility exists that there are gender differences in deception. In one particular study, 6-8 year olds were examined to see who lied more, and to determine whether or not there were gender differences. Parents and teachers were asked to complete a questionnaire over three consecutive years. The questionnaire included questions addressing things such as; the prevalence of occasional and frequent lying, the stability of lying, the relationship between lying and disruptive behaviors, and whether the relationship between lying and disruptive behaviors varied according to these factors (Gervais, Tremblay, Desmarais-Gervais, & Vitaro, 2000). The results of this particular study showed that while there was no significant difference found in deception across ages, both parents and teachers rated girls as lying less than boys across all ages (Gervais et al., 2000).

A similar study examined differences in deception across genders, specifically assessing whether males or females were better at lying and at detecting lies (Sato & Niehei, 2008). One hundred and sixty-eight participants were asked to evaluate their confidence to tell a lie and their confidence in being able to successfully detect a lie (Sato & Niehei, 2008). The results showed

that females were less confident in their ability to lie compared to males, which may be attributed to the stronger emotional arousal that females feel about lies compared to males (Sato & Niehei, 2008). For example, recent studies have shown that females tend to be more emotional than males and are often times more affected by being lied to, therefore, females may feel particularly emotional or hurt when being lied to which also affects their ability and confidence to deceive another person (Sato & Niehei, 2008).

A study by Forrest et al. (2004) showed similar results. The study examined individuals' ability to deceive and to detect deceit in others. The results showed that lies by women were more accurately detected than lies by men, reinforcing results from the previous study which found that women were worse at deception than men but better at detecting lies compared to men.

The results of these particular studies can be related to the conceptual and moral understanding perspective because it shows the level of concept and moral understanding that is necessary to be able to tell or not tell a lie. For example, females are seen to be more emotionally aroused when it comes to situations in which lying is involved, therefore, they are more in touch with their morals and find it hard to deceive another person, but find it easier to detect deceit when they are the recipient.

Conclusion

In conclusion, a child's ability to deceive seems to increase with age because the older the child becomes, the more knowledge he/she has about morals, the difference between right and wrong, and the different kinds of deceit (e.g., white lies and bigger lies) and also the particular lies that are acceptable in particular social settings. For example, a white lie is more acceptable when telling a friend that her new dress looks nice. Besides age differences in deceit,

recent research has also found significant gender differences when it comes to deception. Females tend to lie less than males and those females are more confident at detecting lies compared to males.

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Delinquent Youth: Evaluating Intervention Methods Used to Reduce Youth Crime

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Adolescents between 12 and 18 years of age who commit a criminal act are considered to be juvenile delinquents, and are thought to pose numerous challenges to the justice system. Over the years several changes have been made to the criminal justice system as an attempt to focus on the needs of youth in order to properly respond to and reduce youth crime in Canada. Despite steps to improve the criminal justice system, youths' needs are still not being considered and intervention methods are not used effectively (Pozzulo et al., 2009). The current paper is an evaluation of the intervention methods currently aiming to reduce crime.

The Young Offenders Act (YOA)

In 1984 the Young Offenders act was introduced as a new act to replace the Juvenile Delinquents Act (Rosen, 2000). The YOA was supposed to be a positive step forward in the treatment of delinquent youth in Canada. It adopted a new approach known as the "justice" model of juvenile criminal justice (Rosen, 2000). It recognized the importance of risk assessment in the process to "save" the child rather than treat the child like a criminal (Rosen, 2000). It was understood that the age of adolescence is a time of great growth, whereby adolescents are quite impressionable and are influenced by factors such as their peers, family, and the media (Steinberg & Scott, 2003). The YOA was to be applied to all adolescent persons between the ages of 12 and 18 (Rosen, 2000). Youth who were at these ages and who committed crimes would be treated such as adults would in the adult justice system, except to a lesser extent; the main focus would be on social intervention and on rehabilitating youth so they could return to their community (Rosen, 2000).

The creators of the YOA had great intentions for dealing with youth justice, but despite the attempt to fix the system, there were obvious problems with how the act was enforced (Endres, 2004). Four major issues

surrounding the YOA can account for the most recent change in the act. The main problem was clarity (Endres, 2004). The YOA fell short when it came to providing a legislative direction; this unclear direction led to misinterpretation and misuse of the act. With unguided use Canada faced shocking youth incarceration rates, whereby Canada had incarcerated over 200 more youth per every 100,000 people than the United States; a country that was thought to have outstanding crime rates at this time (Endres, 2004). "You do the crime, you do the time" was the mentality of the YOA. As with the way in which crimes were categorized; there was no distinction between what it meant to commit a "serious crime" versus a "less serious crime" (Endres, 2004). This too led to a high number of youth being sentenced in the courts rather than being given an alternative sentence (Endres, 2004). Canadian youth courts were overused for less serious offences that could have been dealt with in a much more efficient manner that did not involve the court system (Endres, 2004).

While the YOA was supposed to reduce youth crime in Canada, it ultimately failed due to its strict no tolerance policy (Endres, 2004). Concern directed towards the functioning of the YOA began to arise and this led the justice system to adopt the

most recent model the Youth Criminal Justice Act. The YCJA took the place of the YOA and was meant to handle delinquent youth in a more efficient manner.

The Youth Criminal Justice Act (YCJA)

In April of 2003, The Youth Criminal Justice Act or YCJA came into effect to replace the Young Offenders Act (Endres, 2004). The YCJA was designed from the strengths and weaknesses of the YOA, and was supposed to address the areas in which the prior act had failed. Specifically, the Young Offenders Act failed to provide a clear legislative direction surrounding proper enforcement of the act. The YCJA was supposed to provide clear and coherent principles to improve decision making in the Youth Justice system, as well as to use the court system more appropriately, focusing on fairness of youth sentencing, reducing the rate of youth incarceration, reintegrating youth into the community, and providing a clear distinction between serious violent offences and less serious offences (Department of Justice, 2012). The Youth Criminal Justice Act differed from the Young Offenders Act because it focused on a new approach called extrajudicial measures (Endres, 2004).

Extrajudicial measures were introduced by the YCJA to deal with less serious nonviolent offences (Endres, 2004). With this approach, the YCJA steered away from punishing youth in the courts, an approach on which the YOA relied so heavily (Endres, 2004). The YCJA recognizes that youth have to be held accountable for their actions, but that this is an impressionable time, where many other factors can explain a youth's deviant behaviour such as the peers they are associated with, their parents, and development itself. With this in mind, extrajudicial measures are used rather than custodial sentencing as a way to address the reasons for youths' behaviour and to take

steps to rehabilitate them into the community (Endres, 2004).

Within the first few months of the YCJA it appeared as though the act was succeeding in reducing the number of youth going to court; less serious crimes were being dealt with in other ways (Bala & Anand, 2004). It was thought to be a step in the right direction toward addressing the needed change for Canada's youth criminal justice system (Endres, 2004). As of 2012, the YCJA has been quite successful in removing minor offences from formal youth court processing (Sprot, 2012). Police officers need to consider all options available for punishing a youth before they charge him/her in court (Sprot, 2012). This is a problematic issue with the YCJA because there seems to be quite a bit of variation in how the act is being used in each province (Sprout, 2012) The result is in order for the YCJA to be successful, it needs to be used consistently and it needs to take a risk-need-responsivity approach; a method psychologists have been emphasizing the importance of for years.

Risk Assessment

Psychologists emphasize the importance of a risk-need-responsivity approach to treating criminal offenders (Pozzulo, et al., 2009). The risk-need-responsivity approach looks at who is at a higher risk for committing a criminal offence, then takes these people assesses their needs, and responds to needs in an attempt to reduce the likelihood of these people reoffending.

The risk principle looks at the person as an individual rather than as part of a group, focusing on understanding that an individual can change over time as well as recognizing that a person's risk level is a reflection of his/her personal characteristics, background, and the situations that could possibly affect his/her involvement with criminal behaviour now and in the future

(Pozzulo et al., 2009). Risk assessments are frequently conducted in civil and criminal contexts as a way of better understanding the risk of an offender (Pozzulo et al., 2009). This is important because it shows that people differ from each other in their reasoning and in their likelihood of engaging in crime. By using risk assessments we are able to look at the risk factors that can be attributed to an individual and to focus on these factors to reduce his/her chances of reoffending (Polaschek, 2012).

There are three categories that offenders can be placed under to summarize their risk of reoffending. These include low-risk, moderate-risk, and high-risk (Pozzulo et al., 2009). An individual with a low-risk of offending is assumed least likely to re-offend, while an individual with a moderate-risk of reoffending is more likely to reoffend than an individual with a low-risk but less likely than an individual with a high risk (Polaschek, 2012). Someone who is at a low-risk of reoffending is not going to be given the same type of intervention as someone who is at a high-risk of reoffending. In order to properly assess an individual, risk methods such as actuarial tools and professional judgements are used (Polaschek, 2012). These types of assessments identify static and dynamic risk factors that can help predict reoffending (Pozzulo et al., 2009).

Static risk factors are factors that influence an individual's likelihood of committing a crime but that cannot be changed by any type of intervention or treatment approach (Pozzulo et al., 2009). Static factors include things like the age at which the individual committed his/her first crime, or the age of first arrest (Pozzulo et al., 2009). When focusing on the offender's needs we are focusing on their dynamic risk factors. Dynamic risk factors also influence the likelihood of an individual committing additional crimes but these factors can be

changed through intervention or treatment (Pozzulo et al., 2009). Dynamic risk factors include things like parental supervision, peer influences, antisocial behaviours, and drug and alcohol use. Research suggests by addressing a youth's dynamic risk factors we can address the needs of each offender and reduce the likelihood of him/her committing additional crimes (Pozzulo et al., 2009).

The last step to the risk-need-responsivity model is responsivity, or the "how" part of intervention for crime (Polaschek, 2012). The responsivity principle focuses on the specific characteristics of an individual that will affect how he/she responds to intervention; this may include gender, personality, level of intelligence, or motivation to change behavior (Pozzulo et al., 2009). By responding to the risk and needs of an offender proper intervention can be administered. Research shows that when the risk-needs-responsivity principle is not followed, intervention methods are used inappropriately and this leads to higher recidivism rates (Sprot, 2012).

The Youth Criminal Justice Act set out to deal with youth crime by focusing on the reasons why youth committed crimes, and on determining the proper form of punishment in order to rehabilitate. However, although the YCJA may be successful in reducing the amount of crimes handled in court it is not succeeding in reducing the amount of crime committed by youth (Sprot, 2012). In order to be successful, it is crucial that an offender goes through the risk-need-responsivity approach; an approach with evidence that supports its validity (Sprot, 2012). For example, when informal action is taken with delinquent youth their risk and needs are not being measured, therefore they are not going to be punished in a way from which they will benefit and learn from their mistakes.

Reporting Youth Crime**Police Report VS. Self-Report**

Determining prevalence rates of criminal activity is not always a simple process; rather, there can be several different methods in how this data is obtained. Two ways in which crime is assessed are through the use of police reported crimes and the use of self-reported crimes (Spratt & Doob, 2008). Police reported crimes include the reports for crimes that involved police intervention and thus these are recorded in the criminal justice system. Self-reports are another method widely used to measure criminal behaviour (van Batenburg-Eddes et al., 2012). Self-reported data is normally collected through questionnaires where a participant is asked about his/her involvement with criminal activities. Both methods obtain data for crime rates, but in most cases the data obtained differs to some extent (Spratt & Doob, 2008). This is unfortunately due to the fact that the rate at which a youth is charged by the police does not accurately depict the amount of crimes he/she has committed (Spratt & Doob, 2008). It is important to understand that when examining crime reporting, we cannot look at one or the other, but rather we need to evaluate both police reports and self-reports then compare the two. This will likely give a better depiction of the prevalence of criminal activity for minor and severe offences committed by delinquent youth (Spratt & Doob, 2008).

Police reported data tends to focus mostly on criminal offences for which a youth has been charged or has been punished through police intervention (Spratt & Doob, 2008). Therefore, police reports are a good indicator of the number of youth crimes that are more serious (Spratt & Doob, 2008). In many instances however, minor crimes are pushed aside by police officers through their use of discretion (Spratt & Doob, 2008). Police have the

option to deal with the crime formally or informally and studies have shown that 30% to 40% of youth crimes are handled informally (Pozzulo et al., 2009). When cases are dealt with informally they are not recorded in the police system, and therefore are not accounted for in the data demonstrating crime reports. The majority of crime committed by youth is comprised of minor offences; thus police-recorded crime is under representing these types of minor offences causing an obvious problem when trying to determine the prevalence of youth crime. This is where self-reported data becomes useful.

While police recorded data is useful for obtaining numbers of the more serious crimes committed by youth, self-reported data may be a better indicator for obtaining the number of minor offences that adolescents are committing as well as the crimes not accounted for through police reports (Spratt & Doob, 2008). Youth are for the most part more than willing to answer a questionnaire regarding their criminal behaviour. However, researchers need to be cautious when analyzing self-reported data since youth may overemphasize their criminal behaviour in an attempt to glorify themselves or may be apprehensive in revealing their criminal activity for fear that they may be approached by the police (van Batenburg-Eddes et al., 2012). If crime is not reported or is handled informally, youth are not receiving intervention that could prevent additional future crimes.

Intervention Methods**Boot Camps**

In the early 1990s boot camp facilities became the correctional answer for dealing with delinquent youth (Bottcher & Ezell, 2005). Instead of the more traditional detention facilities being used to treat delinquent youth, boot camps were being offered as an alternative (MacKenzie,

Wilson, Armstrong, & Gover, 2011). It was thought that boot camp facilities were the best of both worlds; with the cost of the facility being cheap and affordable and the added bonus of reducing the amount of criminal recidivism (Bottcher & Ezell, 2005). The idea behind boot camp facilities is to apply strict discipline and physical exercise, similar to that seen in a military setting, to “straighten out” delinquent youth (MacKenzie et al., 2011). The population of boot camps tends to be male youths who have committed less serious crimes that otherwise would not have been dealt with in the court system (MacKenzie et al., 2011). Several debates exist on the issue of whether or not the strict military approach used at boot camps is effective when trying to deter a youth from engaging in criminal activity (MacKenzie et al., 2011).

Boot camps are perceived in a positive light by the staff working at these facilities, the general public, as well as political representatives (Polsky & Fast, 1993). When youth are asked their opinions of boot camp they generally have a positive attitude towards the facility (MacKenize et al., 2011). Youth see boot camp as a better alternative to the more traditional facilities for delinquent youth. One study reported that boot camps were seen as a positive environment whereby the youth felt safer, and felt like they would receive more help for their needs than they would in other types of punishment (MacKenzie et al., 2011).

The military based program of boot camps requires strict rules that the youth follow and obey, and if the youth disobey these rules strict discipline in the form of physical activity or chores is given (MacKenzie et al., 2011). Through this intense program youth are thought to experience an increase in self-esteem and self-worth and are given the opportunity to build strong relationships with other youth

and the staff at these camps (Polsky & Fast, 1993). Young offenders who are sent to boot camp for punishment for their crime(s) appear to have lower levels of anxiety and depression when compared to that seen among young offenders at more traditional facilities; this is especially apparent for youth who have a history of antisocial attitudes and depression (MacKenzie, 2011). While there appear to be benefits for the youth who attend boot camp facilities, it is important to note that once youth complete the boot camp program there are high rates of recidivism (Bottcher & Ezell, 2013).

A great deal of research shows that boot camps are a horrible form of intervention for delinquent youth, because the risk of the youth reoffending is highly likely (Bottcher & Ezell, 2013; Polsky & Fast, 1993; MacKenzie, Wilson et al., 2001). If the risk-need-responsivity approach is applied to boot camps it is readily apparent that these programs do not evaluate the risk and needs of the offender (Polsky & Fast, 1993). Before a youth is placed into a boot camp program, it is important that the youth’s dynamic needs be assessed and addressed, however, this is not what is happening. For example, the military environment may be too much for a young adolescent despite the crimes he or she may have committed and this could lead to the production of harmful effects like higher stress levels which could lead to depression (MacKenzie et al., 2001). Likewise, youth who come from families with a history of abuse will not benefit from a boot camp facility (MacKenzie et al., 2001). These adolescents are raised in an environment where they are continuously abused, physically, mentally, or emotionally. When these youth enter a boot camp facility they cannot benefit because it resembles their everyday lives prior to entering the camp. The camp is only going to remind them of the lives that led them to commit criminal

acts and they will continue down that path (MacKenzie et al 2001). Polsky and Fast (1993) suggest that aside from the strict military approach, it is important to add additional aspects to the program such as challenges in areas like education, life skills, and self-realization. This type of approach may be better suited to reducing youth crime as it may address appropriate dynamic risk factors.

Traditional Facilities

Using traditional facilities to punish delinquent youth for their criminal behaviour is seen as very controversial (Warren, 1977). When looking at sentencing a youth to prison time, the issue of deciding the right age at which youth can be held accountable for his/her actions must be considered. Is it 7, 13, 16, 17, 18, 21 (Warren, 1977)? When determining the right punishment, it is important to recognize that the punishment must be harsh but not too harsh, fair in the sense that it fits the crime that has been committed, and it must be effective in deterring the offender from committing more crimes once released (Andrews & Bonta, 2006). A major impression of prison is that a sentence will teach offenders that punishment is real and serious and will deter them from committing more crimes (Gendreau & Goggin, 1999; Warren, 1977). For youth placed in prisons, one of the main forms of punishment tactics used is the “scared straight” approach. It is believed that the prison environment is so shocking and nerve wracking that youth will be deterred from committing crime because they would not want to spend time in jail; however, this is not the case, rather there tends to be high recidivism rates associated with youth who are placed in prison.

Under the Young Offenders Act thousands of youth were incarcerated and placed in correctional facilities (Rosen, 2000). Since the shift to the Youth Criminal Justice Act, very few youth are being placed

in prison and instead they are being placed in other types of facilities such as boot camps (Andrews & Bonta, 2006). Part of the problem is that prisons also fail to meet the criteria of the risk-needs-responsively approach. When a youth is placed in jail, it is important to assess the youth and to develop a program that is going to meet the youth’s needs. For a low risk youth for example, prison could be more dangerous than beneficial. These low risk youth commit less serious crimes and are not a big threat to society, but when placed into a setting with a group of other criminals, the opportunity to learn is presented (Andrews & Bonta, 2006). The low risk offender can be placed with experienced criminals, and then he/she has the opportunity to learn new techniques and ways to be a better criminal. Then once the individual is released from prison, the risk of recidivism is high. For a high risk youth, being placed in a prison is going to be just as detrimental as it is for a low risk youth. A high risk young offender can enter prison as early as age 12 or 13, and spend his/her whole adolescent life and young adulthood in this facility. When a youth spends this much time in prison he/she is kept from learning the necessary skills to function properly in society (Andrews & Bonta, 2006). Once he/she has been released from prison he/she will have no idea how to function in a normal daily life (Andrews & Bonta, 2006). This is when the risk of recidivism rises because the youth does not know anything else except a life of crime.

In order for a prison sentence to be effective for a young offender, it is important that the risk-needs-responsivity approach be taken. If youth continue to be placed into these facilities without individual needs assessed, this will continue to lead to high recidivism rates once youth are released because the youth are not treated but rather just placed in a situation in which

they can learn to be better criminals. While traditional facilities are problematic, one of the more beneficial approaches being used today is the use of restorative justice programs. The restorative justice approach to reducing crime is a new approach being used in order to move away from the more traditional facilities and it appears as though this may be a positive move.

Restorative Justice

Restorative Justice is a Correctional Service of Canada (CSC) program for individuals who have been affected by crime either directly or indirectly (Correctional Service Canada, 2013). RJ helps people who have committed crime meet their needs in a more inclusive and meaningful way. RJ addresses conflict by creating programs with community partners and assisting an offender in recognizing his/her values and principles (Correction Service Canada, 2013). Unlike other types of crime intervention methods, RJ takes both the offender and the victim and focuses on open communication in hopes of recognition of harm, choice, inclusion, facilitated dialogue, accountability, safety, and truth (Correction Service Canada, 2013). The goal of restorative justice programs is to meet the needs of participants and to address the overall harm caused by the crime while reducing the chances of recidivism (Correctional Service Canada, 2013). The choice behind using a restorative justice program rather than a traditional facility or boot camp varies, but a key point in its favor is that RJ includes different types of programs to satisfy the needs of many personalities (Correctional Service Canada, 2013). For example, Sentencing Circles are a form of restorative justice that have been widely used in aboriginal communities across Canada.

The process of a sentencing circle involves assistance from the accused, and the victim(s), their families, the elders, a

judge, a defense counsel, a prosecutor and/or police officers (LaPrairie, 1995). Through open communication involving these individuals there is a recommendation of a sentence for the accused, and the end result is reconciliation between the accused and the victim (LaPrairie, 1995). Sentencing Circles have been shown to reestablish pride and self-worth in the accused, especially for aboriginal individuals who are involved heavily in their culture. For these individuals respect for the elder will make this a more suitable sentence than prison where the offender would likely experience hatred at being forced to go through a white man's punishment. In other words, a need of the individual offender is being met. If an offender was not heavily involved in his/her culture this would not work because it would not address the needs of the offender. Since it would not fit with that individual's risk, needs, and responsivity.

Conclusion

Three types of intervention methods currently used to reduce youth crime under the Youth Criminal Justice Act have been discussed. Boot camps, traditional facilities, and restorative justice, are just three of the many intervention methods currently being used in an attempt to reduce youth crime. Boot camps and traditional facilities are failing to reduce crime rates because they are not recognizing that youth have needs, or addressing the needs and this is leading to improper punishment that is not benefiting the youth.

Boot camps have been shown to be beneficial in the sense that they may make youth feel safe in the military environment while teaching them proper discipline, however research shows that once a youth is released into society the military approach of boot camps fails to teach the youth how to properly function in society. When youth are placed in traditional facilities this can be a very negative experience. These youth are

being placed into prison with other experienced criminals and are being given the opportunity to learn new skills in becoming better criminals. One major issue with prison sanctions for youth is the fact that incarcerated youth may spend their entire adolescent lives in prison and never learn how to properly function in society. To this end, both boot camps and traditional facilities are failing to meet the needs of the adolescents and this is leading to high recidivism rates amongst these youth once they are released from these facilities.

Restorative justice is one form of intervention for youths that is actually working to some extent, reducing youth crime and recidivism. With its focus on both the victim and the offender this approach seems to be more effective than others being used. Programs such as Sentencing circles, when used properly are deterring youth from committing more crimes. This is due to the fact that the restorative justice approach is recognizing that every youth has a different level of risk and needs. When this is recognized, youth are being placed into programs that are actually going to benefit them.

If the criminal justice system wants to reduce youth crime then it is crucial that these programs start using the risk-needs-responsivity approach to reducing crime. There is a great deal of research stating the validity of this model in its ability to help reduce crime rates (Pozzulo et al., 2009). The importance of the risk-needs-responsivity has to be stressed to the justice system in an effort to reduce youth crime. If no one is assessing the needs of a young offender, how are his /hers need going to be addressed? Offenders will continue to be placed into intervention methods built around false ideologies that attempt to reduce recidivism rates. It is very apparent that once youth leave facilities such as boot camps and prisons they engage in criminal

activities once again (Andrews & Bonta, 2006). Youth need to be assessed for the level of risk they pose to society, then we can focus on their dynamic needs and determine how to properly respond to those needs and aid proper reintegration into society with youth now acting as law abiding citizens.

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Addicted to Drugs? : The Results of Opioid Use and How it Leads to Criminal Behavior

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Drug addictions are a growing concern in society. For many, addictions can lead to a drug dependency. Many signs and symptoms of drug dependencies are portrayed in drug abusers. Some of these include tolerance, withdrawal, and behavioral changes (American Psychiatric Association, 2000). Dependencies can occur with a number of different drugs but opioids have a higher dependency rate than others (Soyka et al., 2012). Opioids come in different forms with the most common being heroin and oxycontin (Ghodse, 1989). These drugs both lead to dependencies and to higher rates of criminal behavior (Bukten et al., 2012). Criminals who use opioids have a greater risk of being imprisoned (Drake, Torok, Kaye, Rossm, & Mcketin, 2010). There are also gender and age differences among individuals who use opioids and who consequently take part in criminal behavior (Harmon & O'Brien, 2011). Opioid dependencies, fortunately, can be treated successfully with methadone. However, the treatment with methadone is controversial because it involves treating a drug addiction with another drug. Although controversial, methadone treatment has been shown to be effective in reducing opioid dependency and criminal behavior.

Drugs consume the lives of many individuals. Throughout history, drug use was restricted in that drugs were only available in certain areas (Ghodese, 1989). More recently, geographic limitations have decreased and drugs are becoming increasingly available in more parts of the world (Ghodese, 1989). Traditionally, drugs were seen as substances that were used for the medical treatment of both mental and physical illness (Goldstein, 2001). Society has moved from this definition because of the reoccurring abuse that individuals engage in when taking drugs for non-medical reasons. A more accurate definition of a drug is that it is any substance that is psychoactive; this is any substance that has an effect on the central nervous system (Goldstein, 2001). Drugs can change the user's mood, perception or consciousness (Goldstein, 2001). The specific effects of drugs can vary depending on the kind of drug that is being taken and on the person who is consuming the drug (Ghodse, 1989).

People who take drugs and receive a satisfying high can get used to the feeling and continue taking the drug to continue having the same great feeling (Johnson,

MacDonald, Cheverie, Myrick, & Fischer, 2012). After repeatedly taking the drug, people's liking for these amazing feelings becomes a need for the high (Tunnell, 2005). This is how a new addiction is formed and dependency consumes the life of the abuser. At first, most drug users do not see the harm in their drug addiction and by the time they see what it is doing to them, unfortunately they may no longer be able help themselves (Tunnell, 2005). Drug abusers then may find themselves in trouble because of the drugs they are using (Johnson et al., 2012). Treatments can help save some individuals from lifetime addictions that may be causing them harm physically and mentally and leading them to engage in criminal behavior (Bukten et. al, 2011). In prisons, drug addictions are seen among inmates of different genders and of different ages (Drake et al., 2010).

Dependencies

Individuals who become addicted to drugs develop a dependency on those drugs. Substance dependencies are categorized as psychological disorders (American Psychiatric Association, 2000). Substance-related disorders are associated with taking a

drug (including alcohol) in an abusive manner (Goldstein, 2001). The substances that are included as being part of this disease can be grouped into eleven classes, one of which is opioids (American Psychiatric Association, 2000). These substance-related disorders can be divided into two different groups. They can be seen as a substance use disorders, which is the dependence on the substance and the abuse of that substance (American Psychiatric Association, 2000). They can also be seen as substance-induced disorders, which is withdrawal from drug usage.

Features seen in substance-related dependencies include a number of cognitive, behavioral, and physiological symptoms that show the individual is still using the substance despite the problems that the individual encountered while using the substance (Ghodse, 1989). The DSM defines substance dependency as having one or more symptoms at the same time over a period of 12-months. The symptoms for each group of drugs are similar across the spectrum, which includes withdrawal, tolerance, and the compulsive drug taking behavior (American Psychiatric Association, 2000). These symptoms tend to follow one another in sequence, as the dependency grows stronger. The symptoms of dependency include tolerance, withdrawal, compulsiveness, and changing behaviors.

Tolerance is described as having the need for an increased dosage of a substance in order to gain an effective desirable result (American Psychiatric Association, 2000). Another component of tolerance is when an individual's normal amount of the substance is no longer effective in giving the desired intoxication (Goldstein, 2001). Different drugs are associated with different levels of tolerance as can be seen by the reaction with the hormone receptors of the central nervous system (Schlaadt, 1992). Individual differences are also taken into consideration

when talking about tolerance levels. Everyone has a different reaction to certain substances, such that what would be enough to give one individual a high would not be nearly enough for another individual (Schlaadt, 1992).

Withdrawal is defined as a maladaptive behavioral change both physiologically and cognitively (American Psychiatric Association, 2000). Withdrawal occurs in individuals who have taken a substance chronically. This means that the drug use has been frequent and over a prolonged period of time and the drug user has stopped taking the substance. Withdrawal symptoms can become so strong that the user must use the drug to eliminate the feelings of withdrawal or the user will not be able to stop using the drug just to avoid getting withdrawal symptoms from the start (Schlaadt, 1992). The specific withdrawal signs and symptoms vary across the different groups of substances such that individuals will experience stronger withdrawals to some drugs than they would to others (Ghodese, 1989).

Compulsiveness is when the individual changes his/her intent or plan with the substance (American Psychiatric Association, 2000). A drug dependent individual will take a larger dosage or take the drug for a longer period of time than he/she had originally planned (Schlaadt, 1992). This interferes with the intent to slow down the amount of times that the drug is being used or to regulate the drug's usage (American Psychiatric Association, 2000). The intent to stop usually leads to numerous failed attempts (Schlaadt, 1992).

Soon after taking drugs a dependent person starts to experience a very noticeable behavior change. The dependent person will start spending a substantial amount of time obtaining the substance and his/her life will start to revolve around the substance (American Psychiatric Association, 2000).

This is when a substance-dependent individual will start to remove him/herself from family activities and stop participating in his/her usual daily hobbies. The user will start removing him/herself to free up more time to take the substance or to be around other people who are associated with the substance (American Psychiatric Association, 2000). The individual will eventually see the psychological and physiological problems that are associated with his/her substance dependent behavior, yet will continue to use the substance (American Psychiatric Association, 2000).

What are Opioids?

Opioids are an example of a drug that is produced from plants (Ghodse, 1989). More specifically, opioids are drugs that are produced from the opium poppy (Tunnell, 2005). These drugs include some of the most commonly used drugs such as opium, heroin, morphine, codeine, hydrocodone, and oxycodone (OxyContin). Most of these drugs were not produced for recreational use but were produced for medical reasons, to provide patients with pain relief (Tunnell, 2005). These drugs have come a long way in the means of production. Before the Middle Ages, individuals ate or drank raw opium in order to receive the effects of the drug but in recent times opium has been produced in many different forms (Goldstein, 2001). Presently, these drugs are injected by needle or taken orally through a capsule. It is the means of injection that has led to opioid users having some of the highest rates of potential hepatitis and HIV transmissions seen (Soyka et al., 2012).

Opioids can be prescribed to a patient for the relief of both physical and mental pain (Goldstein, 2001). Humans have opioid receptors in the brain and spinal cord as well as in the body's tissues. Consequently, opioids will provide adequate pain relief when the drug activates the opioid receptors in various places in the

body (Ghodse, 1989). Some of the main receptors that are stimulated by opioids are mu, delta, kappa, sigma, and epsilon. Specific pain receptors have different reaction times. This means that one receptor might take an hour to activate and recognize the pain relief while another may be activated immediately. Heroin is the number one choice for opioid users followed by morphine/hydrophone (Johnson et al., 2012). The reason these drugs are the number one choice for users is that these drugs offer the abuser a faster reaction time in obtaining the feeling of being high (American Psychiatric Association, 2000). Even though these fast acting drugs are the most popular choice, about 75% of opioid users prefer to take a mixture of one or more opioids as opposed to just one (Goldstein, 2001).

Heroin is one of the biggest known street drugs used amongst drug abusers (Ghodse, 1989). It was not until the 19th century that heroin came into production (Goldstein, 2001). Heroin is a popular choice because it is known as being a fast acting drug. When injected into the veins, it starts moving towards the brain immediately causing the abuser to have a fast acting effect (Goldstein, 2001). Even though heroin has its perks, it also has a downside. Heroin is one of the hardest drugs to obtain, with most people requiring connections in order to obtain it. The user will need to know how to dissolve the drug, how to filter it, and how to get it into a syringe or needle (Ghodse, 1989). Heroin is a drug that should not be played with since a large amount of heroin can be very lethal to a new user. New users must be taught about appropriate dosages (Schlaadt, 1992). Interestingly enough, heroin usage has been decreasing since 2003 (Johnson et al., 2012). There could be a number of reasons for the decrease but one commonly cited reason is the fear of contracting AIDS (Ghodse, 1989). To obtain fast results from heroin, it

must be injected and after the AIDS pandemic many people began to fear needles may be dirty, thus increasing the chance of acquiring an illness that they could never recover from (Goldstein, 2001).

OxyContin is another opioid drug that has become a well-known street drug (Tunnell, 2005). This drug is usually purchased illegally through fake prescriptions, pharmacy thefts, and through drug smuggling (Tunnell, 2005). A number of American States have reported an increase in pharmacy robberies deemed by police to be the result of a strong need for oxycontin for the purpose of illegal sale (Goldstein, 2001). Unlike heroin, Oxycontin users experience a slow reaction time (Tunnell, 2005). There are different methods of taking the drug such as snorting, injecting or taking a capsule orally (Schlaadt, 1992). The high that the individual will eventually receive will be strong and last over several hours (Tunnell, 2005). This can be a deadly drug for many users. The slow results cause the person to become impatient and the person will end up taking more of the drug, which can result in an unfortunate drug overdose (Tunnell, 2005). Many drug overdoses and deaths have been tied to oxycontin (Tunnell, 2005). Oxycontin is known as a poly-drug. This means that the drug is often mixed with another drug such as alcohol or other depressants (Tunnell, 2005). It is difficult to then attribute the cause of a person's death when a person has used oxycontin because it is difficult to know if the death was due to oxycontin, other drugs, or a combination (Tunnell, 2005). Dependence on a drug requires compulsive use of that drug (American Psychiatric Association, 2000). This happens with oxycontin because the person does not feel any immediate effects and will continually take more of the drug (Tunnell, 2005). If death by overdose does

not occur then dependency on oxycontin probably will.

Oxycontin is prominent because it is easily found on the streets (Tunnell, 2005). If the drug cannot be found on the streets, the abuser can easily walk into a doctor's office complaining of an unbearable pain to obtain a prescription for the drug (Tunnell, 2005). Even doctors have been seen to develop an opioid dependence, writing their own prescriptions or transferring the pharmacy prescription of a patient on opioids to their offices, without the patient's knowledge (Tunnell, 2005). Many doctors are now aware of problems with opioids and as a consequence fewer prescriptions are given for this drug (Ghodse, 1989). Pharmacies have taken the drug from their businesses and have refused to sell the drug (Ghodse, 1989). Most of the pharmacies have removed the drug out of fear of being robbed and to avoid the negative stigma that has been produced by the drug (Ghodse, 1989).

People who use opioids have advanced levels of tolerance (American Psychiatric Association, 2000). It has been suggested that these tolerance levels can become so high the user's new normal dosage would be very lethal to a non-user (Ghodse, 1989). Withdrawal signs are easily measurable and noticeable in regards to opioids (American Psychiatric Association, 2000). Withdrawals are strong in opioid users and will happen as soon as opioid usage is stopped. As previously mentioned opioid users will experience an intense compulsive behavior with the drug, wanting the drug more and more than they expected which can thus lead to increased dosages (American Psychiatric Association, 2000). Opioid users tend to experience this compulsive behavior more than other substance abuse users (American Psychiatric Association, 2000).

Legal problems often arise for individuals who excessively abuse opioids (Ghodse, 1989). Abusers of the various types of opioids take the risk of entering the legal system when they purchase these drugs through illegal methods (Ghodse, 1989).

Criminal Behavior

Drug problems are not new to police and the criminal justice system. Historically, those that possessed a drug addiction were seen as being criminals that did not belong anywhere other than in prison (Goldstein, 2001). Opioid addicted criminals vary in their criminal behaviors but there are some commonalities (Soyka et al., 2012). These behaviors are generally the reason why many drug abusers end up behind bars. In the United States, about 21% of all jail inmates have reported using opioids and about 23% of state prison inmates have reported using opioids (Fu, Zaller, Yokell, Bazazi, & Rich, 2013). Opioid dependent individuals are at a significantly high risk of being imprisoned (Soyka et al., 2012). People who sell these drugs are making great profits from a drug that requires a prescription in order to purchase it (Bukten et al., 2012). Once an opioid user is addicted he/she will start looking for new criminal activities to obtain the drug (Darke et al., 2010).

Crime among opioid abusers can vary among individuals. Heroin addicts, in particular, have been known to be manipulative schemers who are criminally sociopathic and need to be locked away from the rest of the world (Goldstein, 2001). Most of their crimes are noted as acquisitive crime. This is a crime committed for economic reasons (Havnes et al., 2012). People will commit illegal acts like theft or illegal producing and selling drugs for financial gain. Heroin is an expensive drug to consume. People who develop a dependency on heroin will sometimes go as far as selling their personal belongings to get

the drug (American Psychiatric Association, 2000). Soon users will no longer have anything left to sell and will have to resort to criminal behavior to find the financial means to feed their drug addiction. Studies show that 60-80% of imprisoned individuals charged with drug-related crimes such as possession, trafficking, or random crimes while under the influence of drugs have committed these crimes to help support their own opioid addictions (Chaez, 2012). Making an illegal sale is an easy way for these individuals to receive enough money to buy their own drugs. Violent crimes are less prominent in opioid users (Havnes et al., 2012). However, there has not been much research completed to assess the correlation between violent behaviors and opioid use.

Heroin users are the individuals who most need the treatment and they do not receive the help that they need (Bukten, et al., 2011). It has been suggested that correctional institutions are not fully equipped to handle opioid addicted prisoners (Chavez, 2012). Heroin users for example require a full team of health professionals to help them overcome their addiction and most institutes do not have the resources to provide the services. The users have a difficult time being incarcerated because they are constantly going through withdrawals. An opioid maintenance treatment can serve as a good rehabilitation tool (Chaves, 2012). Only 1 in 5 prisoners when released from jail go through any treatment program. Once released from prison, these individuals usually participate in criminal behavior again to feed their addiction (Johnson et al., 2012).

Interestingly, there are gender differences in both opioid use and in the consequent criminal behavior. It has been found that males are more violent and more likely to partake in criminal activities than females (Darke et al., 2010). The most common charges laid against opioid users

are verbal threats and assaults on others (Havnes et al., 2012). It is important to remember that just because males were found to have the highest criminal records this does not mean that females do not take part in criminal acts. As with males, when drugs are made available to females, criminal activity and violence increases (Masseti et al., 2011). For females, drugs can be harder to get especially different kinds of drugs like heroin. Another possible reason for the gender difference is that males have a greater tendency to get caught and to be convicted than females who may be more likely to get away with criminal activity (Harmon & O'Brien, 2011). Opioid dependencies lead to negative consequences for most users but there can be a light at the end of the tunnel. There are methods available to help drug addicted individuals who need and want the help.

Treatment

Like most other disorders, substance-related dependencies can be treated (American Psychiatric Association, 2000). Treatment may not cure the individual but the drug use can be controlled. Nurses who work with and treat opioid users have to be trained in how to specifically deal with these drug users as they can have different personalities compared to other drug users (Chazes, 2012). Opioid drug users are a difficult group of individuals to work with but treating and helping them is necessary. The method of treatment for opioid abuse is a controversial treatment that has taken much backlash despite its positive outcome (Goldstein, 2001). The treatment that is most often used is methadone treatment, which involves treating an opioid problem with a different kind of drug (Ghodse, 1989). In 1969 the first methadone clinic opened its doors to addicts (Goldstein, 2001). The clinic opened in San Jose, California. Researchers have emphasized the positive results of the treatment on drug-

addicted individuals (Chazes, 2012). The World Health Organization has classified methadone maintenance treatment as being a successful tool for reducing opioid use, criminal activity, and viral hepatitis transmission (Fu et al., 2013). Methadone treatment seems to be the number one choice since the use of this drug does not have any effects on the patient's cognitive or psychomotor abilities (Goldstein, 2001). The drug has not shown any side effects on a person's performance on skilled tasks or memory (Bukten et al., 2012). The end result of this treatment can be positive. In fact, many studies show that methadone treatment is more effective than non-pharmacological treatment including behavioral therapy (Bukten, et. al, 2012).

Although there is a negative stigma attached to methadone treatment, studies show that it has had successful results (Goldstein, 2001). Prisons are reluctant to use methadone treatment and seem to be lagging behind in the services required for treatment. In one attempt to change this, government officials made it a priority that people on methadone treatment not be turned down for employment just because they are on methadone for medical reasons (Fu et al., 2013).

Treatment with methadone and with therapy has led to the statistical measuring of criminal behavior by substance users (Havnes et al., 2012). It was shown to be a good measure because 10% of individuals in methadone therapy are arrested ever year and about 30.6% of those individuals who are arrested are opioid users (Fu et al., 2013). Studies conducted have shown that there is a significant decrease in criminal behavior by addicts during opioid maintenance treatment programs (Havnes et al., 2012). After continuous treatment, participants who were originally addicted to heroin decreased criminal behavior and convictions by two-thirds compared to those

who did not receive treatment (Buken et al., 2011). With treatment, drug users who become criminals due to the addiction can be integrated back into society (Soyka et al., 2012). However, it is important to complete the treatment, as during treatment abusers may still take part in criminal activities. However, about two years into the treatment program there is a significant reduction in criminal behavior (Bukten, et al., 2011). It has been proven that an opioid maintenance treatment program reduces violent and criminal behavior in those users who take part in the programs (Havnes et al., 2012). Many of the addicts in these treatment programs drop out due to incarceration (Fu et al., 2013). While in prison the users usually cannot access a treatment program as it is not available to them, resulting in a disruption in recovery. Often many of the recovering addicts who are incarcerated find themselves back using the same drugs they were trying to stop using.

The criminal justice system is not taking treatment programs within prisons seriously enough (Goldstein, 2001). The prison system does not offer methadone support treatment to substance-addicted prison inmates. Unfortunately, these individuals need it and with prisons failing to treat opiate addictions, they are also failing to reduce the chances of these addicted individuals being incarcerated once again. It is for this reason and for the fear of withdrawal that opioid dependent individuals may be deterred from receiving treatment (Fu et al., 2013).

For example, a study was conducted on 517 convictions of opioid addicted criminals for three years after opioid users had been released from prisons (Havnes et al., 2012). It was determined that out of the 517 convicted users, 295 of the individuals were convicted of violent crimes. It was noted that there was a decrease in the rate of violent criminal behavior when males and

females remained on an opioid maintenance treatment program (Havnes et al., 2012). The group of users who left or who could not receive treatment did not show a significant reduction in violent criminal behavior (Havnes et al., 2012). Those who left or who were denied access to treatment actually showed an increase in violent activities (Havnes et al., 2012). The addicts who dropped out or were unable to get treatment were also more likely to be the most violent individuals (Havnes et al., 2012). The most common type of criminal behavior seen among these drugs users is property crimes such as breaking and entering and homicidal attempts or threats (Vinkers, Beurs, Barendrect, Rinne, & Hoek, 2011). The least common criminal act is sexual abuse, likely explained by the fact that sexual abuse does not lead to the same financial gain

Age and Treatment

Heroin abusers of younger ages are more likely to leave treatment as opposed to older drug abusers (Havnes et al., 2012). This is the same with abusers of other opioids; the younger abusers are more likely to leave treatment early (Johnson et al., 2012). Some have been reported to leave treatment as early as the first episode (Havnes et al., 2012). Unfortunately, for the younger abusers, leaving has ended up having negative effects on these individuals (Ghodse, 1989).

Younger males who, prior to treatment, have criminal convictions are more likely to commit criminal acts during their treatment (Havnes et al., 2012). It has also been found that there is a higher rate of death among the individuals who drop out of treatment (Harmon & O'Brien, 2011). Because younger individuals are more likely to drop out of treatment compared to older individuals they are more likely to have higher mortality rates than older individuals

Conclusion

Drug addictions can lead to dependencies. One of the most addictive pain relieving drugs is opioids (American Psychiatric Association, 2000). Dependencies change the lives of many opioid abusers. These abusers will gain a tolerance to the opioid that they are taking (American Psychiatric Association, 2000). These individuals will start increasing their dosage in order to achieve a desired result (American Psychiatric Association, 2000). Dependences will also lead to withdrawals. Opioid users tend to have strong withdrawal symptoms, which increase the chances of them suffering greatly both mentally and physically if they do not get the drug (American Psychiatric Association, 2000). Compulsiveness is also another aspect of an opioid dependency (American Psychiatric Association, 2000). This is when the drug abuser becomes so addicted to the opioid that he/she will start participating in compulsive behavior (American Psychiatric Association, 2000). Signs of dependency includes behavioral changes like selling personal items for money, disconnection from family and friends and a strengthened connection to people who are associated with opioids.

A drug dependency is a disorder and like most disorders it needs to be treated before it ends in the death of the drug abuser (Tunnell, 2005). Opioids are drugs that affect abusers both physically and psychologically (American Psychiatric Association, 2000). Opioid use is correlated with anti-social and criminal behavior. Although this addiction seems to be a death sentence, opioid dependencies can be treated. The two largest opioids of choice by users are heroin and oxycontin (Tunnell, 2005). Heroin is a fast acting drug that when injected into the blood stream can have fast acting results (Goldstein, 2001). Oxycontin, on the other hand, takes a longer time to

absorb in the blood stream and a longer time to see a noticeable effect (Tunnell, 2005).

Treatment usually consists of a combination of both therapy and methadone (American Psychiatric Association, 2000). Positive outcomes are possible only if the opioid users remain in treatment programs as long as it is required (Havnes et al., 2012). Opioid users who leave treatment early are more likely to fall back into the addiction and into problem behaviors (Soyka et al., 2012). Opioid treatment has been successful in getting abusers to lessen or stop their drug abuse and as a result has decreased the amount of criminal activity that opioid users take part in (Bukten et al., 2012).

These drugs are most often purchased illegally (Tunnell, 2005). This is often accomplished by stealing or faking medical problems or by exaggerating painful medical conditions (American Psychiatric Association, 2000). This is the point at which abusers start the criminal behavior but as the addiction becomes stronger the criminal behavior increases drastically (Havnes et al., 2012). Opioid dependent individuals will participate in criminal behavior to allow them to afford their opioid of choice (Tunnell, 2005). Income generated crime is the most common type of crime among opioid users and violent crimes are the least prominent (Havnes et al., 2012). Criminal behaviors can decrease with treatment (Bukten et al., 2012).

There have been age differences found (Havnes et al., 2012). Younger users are more likely to remove themselves from treatment (Havnes et al., 2012). The young opioid users are also more likely to take part in criminal behaviors during treatment (Ghodse, 1989). There are also gender differences in criminal behavior between male opioid abusers and female opioid abusers (Harmon & O'Brien, 2011). Males who are on opioids are more likely to

participate in violent behaviors than females (Harmon & O'Brien, 2011). It is safe to say that drugs are affecting many individuals both mentally and physically (American Psychiatric Association, 2000). Drugs can ruin an individual's life in an instant. Drug dependencies are something that needs to be taken seriously by all levels of government and by the general public. The drug addiction can be treated and individuals can have a normal life without suffering from the symptoms of dependencies (American Psychiatric Association, 2000). If treated, an abuser can save his/her own life, avoiding a lifetime of pain and incarceration.

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Physical Exercise and its Effect on Overall Mental Well-being, Depression and Anxiety

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Physical exercise is known to have a positive impact on physical health, while the impact on mental wellbeing is not recognized. The following literature review aims to discuss the various effects of physical exercise on mental well-being. It also aims to discuss the implications of exercise as a treatment for depression and general anxiety. It was found that exercise had overall positive effects on many areas of mental health, and vast improvements were found when exercise was used as a treatment of depression and anxiety. Physical activity appears to have vast benefits on mental health and should be utilized as a method of prevention and improvement of mental devices.

The health benefits of physical exercise have been noted in many areas of research (Warburton, Nicol, & Bredin, 2006). It has been established that exercise helps prevent chronic illnesses and diseases such as cardiovascular disease, diabetes, cancer, hypertension, obesity, and osteoporosis (Warburton et al., 2006). Being physically active also means you will be less likely to die from a premature death. It appears as though the health benefits of exercise have been shown repeatedly and exercising is the conventional way to become a healthier individual. Research on the impact of physical exercise on mental health is not as well known or as promoted to the public. The World Health Organization has recognized that 1 in 4 individuals will develop a mental health illness over their lifespan (Alawan & Saraceno, 2008). Whether being diagnosed with a mental illness or having a brother, sister, parent, spouse, child, or friend who is diagnosed, virtually everyone is touched. But yet there still are those individuals who do not fit into a specific disorder in the DSM. While not formally diagnosed, these individuals live with the consequences of a low self-esteem and body image, low mental well-being, or general fatigue and malaise. All of this leads to the question of how the benefits of exercise can affect our mental

health. This is especially the case when living in the developed world where physical activity has fallen aside to machinery and technology, both of which have replaced labor intensive jobs and created convenient ways for us to become inactive. Thus, studying the effects of physical activity on our mental well-being is important, while also focusing on the positive effects of exercise on depression and anxiety.

One of the first questions when looking at any study involving physical exercise is the kind of exercise that is appropriate and the necessary frequency of exercise. Most studies vary with their definition of exercise with changes in both the length, and in the frequency of exercise. One meta-analysis showed that most studies use exercise regimes ranging from two to four times a week (Stathopoulou et al., 2006). The participants would do from 20 to 45 minutes with either an unspecified amount of intensity or an intensity of up to 85% of maximum heart rate (Stathopoulou et al., 2006). These ranges indicate that many different physical activities and regimes are possible to use when studying the relationship between exercise and mental health.

A study completed at a health facility in Australia found that mental health

patients were significantly more likely to be smokers, to be obese, and to have a poor diet (Wynaden, Barr, Omari, & Fulton, 2012). The same study also found that patients who were hospitalized as a result of mental illnesses gained weight, and increased waist size during their hospitalization. In another German study, the findings showed, mental health inpatients were more likely to be obese, to smoke, and to have a poor diet (Kilian et al., 2006). These findings were replicated again in a study conducted on schizophrenia patients by Connolly and Kelly in 2005. These findings of poorer physical health amongst individuals with mental health illness when compared to the general population indicate a need to examine the relationship between mental health, exercise, diet, and obesity since all three of these are linked. Veale (1987) speculates that those who are predisposed to have lower activity levels and to develop obesity are more susceptible to develop mental illnesses such as depression and anxiety. In other words, it is possible that mental illnesses may be more prominent among individuals in the population who do not exercise and who are considered to be obese.

Many studies involving mental health focus on the effects of aerobic exercise, with an increase in aerobic capacity being offered as the reasoning behind changes in mental well-being (Veale, 1987). However, it has been repeatedly shown that both aerobic and anaerobic exercises have positive effects on mood and brain activity (Veale, 1987). There is an immediate physiological stimulation of the brain following both aerobic and anaerobic exercise (Veale, 1987). In individuals who exercise regularly, this arousal begins directly after completing either type of exercise and is often referred to as “runners high” or a “warm glow” (Fox, 1999). In the short term this results in a decrease in anger,

anxiety, stress and depressive symptoms; many athletes also report feelings of exhilaration (Fox, 1999; Veale, 1987). Fox (1999) reports that in over 20 studies he has reviewed, the “warm glow” or “energise” that respondents claim physical activity yields has been proven to have a relationship with vast chemical changes in the brain. These studies support a positive effect of exercise on overall immediate and short term mood as well as mental well-being. This effect is also reported to be stronger when respondents believe they are making personal improvements (Fox, 1999). These results show yes, exercise does make you feel good.

An overall negative relationship between mental health and self-reported levels of physical exercise in the general population shows that the more participants exercise the lower their reports are of anxiety and depressive symptoms. This relationship exists even after controlling for confounding variables, including sex, age, illness and socio-economic differences (Strohle, 2009). These findings were also confirmed by Fox, (1999) who found that those who were more physically active rated themselves as having a significantly higher sense of mental well-being. Other findings show that physical activity not only improves overall mental health but that it also increases levels of alertness, levels of concentration and levels of confidence as well as also improving sleep quality and sleep patterns (Alexandratos, Barnett, & Thomas, 2012; Fox, 1999).

A low or high self-esteem can play a role in many mental illnesses and can point to recovery in mental health patients (Fox, 1999). Therefore the impact of exercise on self-esteem is of importance. Fox (1999) notes that there is no strong evidence for the impacts of exercise on self-esteem, instead the relationship is weak and studies document conflicting findings. Tiggemann

and Williamson (2000) conducted a study which may explain this weak relationship. They found that in general among older women and both younger and older men there is a positive relationship between physical exercise and self-esteem. The more these individuals exercised the higher their self-esteem. It was also found that this relationship extends to overall well-being (Tiggemann & Williamson, 2000). Unfortunately, in the same study it was found that among young women (16-21 year olds) there was a negative relationship between self-esteem and physical activity. The more young women exercised the lower their self-esteem and their body satisfaction scores were when compared to those who were fairly inactive. Another study conducted showed that female dancers had a positive attitude towards their physical conditioning and fitness but had an overall negative body image (Scully et al., (1998). Suggesting that even though participants felt they were in physically fit shape they were still unhappy with the appearance of their bodies. Scully et al. (1998) suggest that longitudinal studies on self-esteem need to be conducted as few studies focus on how self-esteem changes over time as well as across genders.

The problem assessing the relationship between exercise and self-esteem may lay in age and gender differences. Tiggeman and Williamson (2000) found that when exercising for health reasons there was a positive association between physical activity and well-being. This is similar to findings by Fox (1990). In the same study women were more inclined to exercise for weight loss and control but this was not seen among men (Tiggeman & Williamson, 2000). Smith, Handley and Eldredge (1999) also found a similar relationship between exercise and attraction with differences according to gender. Exercising for the reasons of weight

management and attraction increased when exercise was related to a negative body image (Cash, 1989; Fox, 1999). Wilson and Rogers (2002) found that when women reported exercising for intrinsic reasons, they were more likely to have higher perceptions of their self-worth and higher self-esteem while female participants who reported extrinsic motivations for exercising were more likely to report low perceptions of self-worth and low self-esteem. It was also found that women who had high levels of self-esteem also valued the importance of staying healthy through being physical active, and were more likely to report finding exercise fun and rewarding (Wilson & Rogers, 2002). Fox (1999) suggests that self-esteem is an essential gauge of a person's overall mental health, as it can be an indication of other poor mental habits and it can signify our own judgments and thoughts towards ourselves. Therefore, the effects of self-esteem and exercise especially in young women, a susceptible population, should be further examined.

While the effects of exercise on overall mental health appears to be positive, exercise as a treatment for depression, anxiety and other mental disorders also needs to be evaluated. The diet of the western world has a strong relationship with depression and anxiety (Gomez-Pinilla, 2008). Current technology also means that many individuals in the western world are not getting the recommended amount of exercise to stay healthy. Therefore, physical and mental health are both suffering as a result of the lifestyle we live in modern times. If this is the case and exercise affects mental functioning in healthy participants as was demonstrated by its relationship with self-esteem, cognitive functioning and mood, can it affect the mental health of those subjects with depression or anxiety in the same ways? Can exercise play a role in

treating mental illnesses and aid patients in their recovery?

Depression

The use of exercise in treating depression appears to be very effective. Study after study shows the significant effects of physical activity on depressive symptoms (Bryne & Bryne, 1993; Doyne et al., 1987). Those who regularly took part in physical activity had a decreased chance of developing depression, general anxiety, and phobias (Goodwin, 2003). This was true even after accounting for comorbid disorders and other demographics. This relationship between depression and physical exercise will further be discussed.

One meta-analysis completed showed a significant difference in the change of depressive symptoms between a waitlisted control group and an experimental exercise group (Stathopoulou, et al., 2006). Stathopoulou and his colleagues suggest that there is more than enough evidence for physical exercise to be used as a treatment. As there was an equivalent effectiveness for the use of exercise as a treatment in comparison to a medication only group (Stathopoulou et al., 2006). These same findings were also noted by Lawlor and Hopker, (2001) who focused solely on clinical populations and found in 14 different trials that there was a significant change in depressive symptoms with the use of an exercise intervention. Showing exercise was more effective than no treatment at all. It was also found that exercise had a similar effect to a psychotherapy group, with no significant difference in depressive symptoms after experiencing one of the two treatments (Lawlor & Hopker, 2001). Lawlor and Hopker (2001) also proposed that the mounting evidence for the use of exercise in the treatment of depression needs to be assessed for clinical use. An evaluation of clinical treatment and intervention needs to

be completed so exercise can be incorporated in treatment and further improvements to depression treatments can be made (Lawlor & Hopker, 2001).

Previous studies seem to suggest that the relationship between physical exercise and improvement in mental health disorders was as a result of an improvement of aerobic capacity (Bryne & Bryne, 1993; Simons et al., 1985). More recent studies have shown that this finding is incorrect. Instead, it has been found that both aerobic and anaerobic exercise have a significant effect on depressive symptoms (Stathopoulou, et al., 2006). One study comparing both aerobic and anaerobic exercise, used running and weight lifting as the exercise regimes respectively with a waitlist control. It found that both types of exercise had a significant difference on major depressive disorder symptoms compared to what was seen in the control group (Doyne et al., 1987). It was also found that even though the trial period was only 8 weeks, after a twelve month follow-up patients were in both better physical and better mental health than those who were in the waitlist group (Doyne et al., 1987). These results are important for those patients who do not have the ability to partake in forms of aerobic exercise such as running, but would like to gain the benefits of exercising as a treatment. This would also be beneficial for those who do not have the initial motivation or incentive for cardiovascular exercise but would be willing to start on a resistance or weight training regime (Martinsen, Hoffart, & Solberg, 1989).

The use of exercise as a treatment for depression also appears to be effective for both the general population as well as older adults. Research completed on clinically diagnosed 50-to-77-year-old patients, show that treatment of major depressive disorder with aerobic exercise or aerobic exercise with pharmacotherapy was significantly

effective (Blumenthal et al., 1999). Depressive symptoms were assessed with the Beck Depression Inventory and the Hamilton Rating Scale of Depression, and over a 16 week period scores in both exercise groups as well as in a medication only group all showed significant changes. There were no significant differences among scores for those assigned to the three groups (Blumenthal et al., 1999). The same study also found that patients in the exercise groups were more likely to have full or partial recovery after a six month follow up (Blumenthal et al., 1999). Singh, Clements, and Fiatarone-Singh (2001) also found similar significant results in a study of exercise and depression in elderly subjects. Elderly subjects over the age of 60 were randomly assigned to an anaerobic exercise group or a health education lecture control group. Depression scores were significantly lower amongst those who were in the exercise group than the control (Singh et al., 2001). A follow-up of participants completed 20 weeks after the study still showed significant improvements in the mental health of the exercise experimental group over the control group (Singh et al., 2001). These findings are very important for the treatment of elderly patients as many may already be on a variety of conflicting medications or may find conventional medications and their symptoms harder to cope with than others. Many elderly face many physical ailments such as high blood pressure, or diabetes as well as having a general deterioration in their physical health, such as failing vision and hearing. These changes often mean that medications are necessary, these can either alter mood or have other symptoms which could interfere with the use of antidepressants for these subjects. This means exercise as an alternative treatment could be beneficial for the treatment of depression in aging subjects.

One issue when conducting research involving exercise and mental health is whether patients who dropped out of studies or those who do not volunteer have more severe depression symptoms, or other factors which may interfere with the findings of the research. It was found that when comparing dropout rates across exercise and medication groups, as well as a combined exercise and medication group, the number of dropouts did not change between the three groups (Herman et al., 2002). All dropout participants had higher levels of anxiety and lower scores on life satisfaction when compared to those participants who completed the study (Herman et al., 2002). In both the medication only and the combined medication and exercise group, participants who dropped out had a higher number of physical symptoms; while in the exercise only group, participants who completed the study had a significantly higher number of physical symptoms than those participants who dropped out (Herman et al., 2002). Initial depression ratings were not predictive of dropout rates in a study conducted by Dunn, Trivedi, Kampert, Clark, and Chambliss (2005). Scores on a pre-study fitness test predicted that those in poorer levels of fitness were more likely to drop out of the study (Leppämäki, Haukka, Lönnqvist and Partonen, 2004). It was also found that insomnia scores, on the Basic Nordic Sleep Questionnaire were predictive of dropping out of the study as well (Leppämäki, 2004). These findings are not surprising as both having a poor level of fitness and insomnia would be outside factors that would make participation in studies on exercising much harder than those who do not experience them.

Overall, the benefits of physical exercise and mental health appear to be pronounced. The effectiveness over no treatment, the apparent long term

improvements in depression scores, combined with no side effects and low costs of exercising makes further research important for the treatment of depression (Fox, 1999). With that being said there is solid data supporting physical exercise for the treatment of depression, but with regards to other mental disorders such as anxiety, exercise as a treatment has been less frequently completed (Carek, Laibstain, & Carek, 2011).

Anxiety

The effects of physical activity on General Anxiety Disorder also appear to have a positive relationship. Exercise reduces anxiety sensitivity (Smits, Powers, Berry, & Otto, 2006). Researchers have speculated that there is a possible connection between the symptoms of anxiety and the changes exercise has on physiological functions (Smits et al., 2006). Exercising produces many of the symptoms of anxiety, such as a raised heartbeat, and rapid breathing. One notion brought forth by Smiths et al. to explain why exercise is effective in improving anxiety symptoms is that patients experience many of the negative sensations associated with anxiety disorders but do not have the negative associations when participating in physical activity (Smits et al., 2006). As patients begin to face these feared sensations over and over through exercise they are systematically desensitized as the negative consequences are no longer paired with these sensations (Smits et al., 2006).

Low and high intensity levels of physical activity both have significant effects on anxiety as shown in a study completed by Sexton, Maere, and Dahl in 1989. This study compared the effects of walking and jogging in treating anxiety symptom levels. It showed that although both low (walking) and high (jogging) intensity conditions led to changes in Anxiety sensitivity Index Scores, those who

engaged in high intensity exercise had significantly better scores than those who engaged in low intensity exercise. In the walking, low intensity condition there was no rapid change in heart rate or breathing that would mimic the conditions of anxiety that were mentioned above (Sexton et al., 1989). In another study on patients predisposed to coronary heart disease, high intensity exercise was also effective in alleviating anxiety scores (Lobitz, Brammell, Stoll, & Niccoli, 1983). It was also found that there was a significant drop in heart rate and systolic blood pressure (Lobitz et al., 1983). These changes are significant for patients with a predisposition to coronary heart disease as all three factors are important in preventing the onset of the disease. It was concluded that anxiety symptoms are benefited by exercise in general but even more so by the effects of high intensity aerobic exercises. High intensity aerobic exercise simulate the feared symptoms of anxiety without the negative associations showing support for the notion that aerobic exercise desensitizes the sensations of anxiety experienced (Sexton et al., 1989).

A study conducted by Martinsen, Hoffart, and Solberg (1989) supported the notion that both aerobic exercise and anaerobic exercise has an effect on levels of anxiety symptoms. Martinsen et al. (1989) compared both types of exercising against each other and found that both, aerobic and anaerobic exercise, lowered anxiety levels. There were also no significant differences between the two types of exercise (Martinsen et al. 1989). This suggests that the idea brought forth by Smith et al. (2006), which is that exercise mimics the rapid heartbeat and breathing of anxiety and systematically desensitizes patients to anxiety symptoms, may not be completely correct as anaerobic exercise does not mimic the effect. Instead it has been suggested that

the significance of exercise is through psychological mechanisms such as being a distraction and mastering (Martinsen et al., 1989).

Paluska and Thomas (2000) found that exercise was just as effective as meditation and relaxation in reducing anxiety scores on the Spielberger State-Trait Anxiety Inventory (STAI) as well as the Profile of Mood States scale. It was also found that aerobic exercise had a larger effect on decreasing anxiety scores than weight lifting and flexibility training (Paluska & Thomas, 2000). Another study comparing exercise, meditation and a reading control studied the immediate effects of exercise and meditation after only 20 minutes of participation in healthy individuals. All three groups had significantly lower anxiety levels than their initial scores on the State-Trait Anxiety Inventory (Bahrke & Morgan, 1979). These changes in anxiety scores were significant for both those participants who had typical initial anxiety levels and also in those who had initially raised anxiety levels (Bahrke & Morgan, 1979). These outcomes also suggest that psychological mechanisms (such as distracting) could be significant when looking at how exercise, meditation, or just relaxing (reading control) affects anxiety symptoms, as was earlier suggested by Martinsen et al. (1989). This also suggests that more research needs to be conducted to look at the underlying mechanisms which may account for the effectiveness of exercising, reading, and mediating on anxiety symptoms rather than for these activities themselves.

Conclusion

The effectiveness of exercise in improving mood, self-esteem and well-being is seen in the general population and is also effective when studying patients who are established as having either depression, anxiety or both (Wynaden et al., 2005). It is also found to be effective in improving

patients' sleeping patterns and confidence and in decreasing patient's negative thoughts surrounding the diagnosis of having depression or anxiety (Wynaden et al., 2005). There are also many indications that exercise is an effective means to an improved and overall positive mental well-being, as well as being effective in treating depression and anxiety.

There are however, some limitations to the research done in the area of physical exercise and mental health, such as a volunteer bias for the studies conducted. Those who volunteer in exercise programs versus those who do not, are more likely to be interested in exercise, would be more motivated to exercise, and would be more motivated to make changes to improve their overall health (Alexandratos et al., 2012). Thus, there may be an overestimation of the effects of exercise on mental health. With that being said, most studies conducted through Randomized Control Trials (RCTs) used a volunteer sample, which is considered to be the most effective way to conduct such studies (Alexandratos et al., 2012). Although there is a vast amount of research in the area of mental health and physical activity more research is still needed in order to understand the role of exercise in treatments and prevention. Motivational factors for physical exercise should be further researched in order to allow us to conclude whether the effect is found in exercise itself or found in the social and mental means that exercise provides. Means such as the social interactions while exercising, feelings of control over participant's own body, having purposeful feelings and empowerment, as well as a meaningful use of time for participants (Alexandratos et al., 2012).

The significance of physical exercise in the improvement of mental health and as an effective treatment for anxiety, and depression, means it should be utilized.

Exercise is cost effective, especially when compared to the use of psychotherapy and drug treatments and when completed properly, it also has virtually no side effects, and can enhance patient's overall health (Byrne & Byrne, 1993). It is also suggested that exercise reduces dependency on medication, thus it is useful when drug treatments are coming to an end for patients (Wynaden et al., 2005). The improvements made in overall mental health in the areas of mood, sleeping patterns, self-control, reduction of anxiety and stress, as well as increases in well-being and self-confidence are all significant findings for the field (Alexandratos et al., 2012; Fox, 1999; Wynaden et al., 2005). As well, the significant improvements to depression and anxiety symptoms when exercising are greatly beneficial. Therefore, more means should be created to promote exercise in clinical and general populations as a way to achieve personal mental health improvements.

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Psychological Consequences of Wrongful Conviction after Imprisonment

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Wrongful convictions occur due to miscarriages of justice (Denoy & Campbell, 2005). This includes common errors such as eyewitness errors, professional misconduct by both police, and investigators, false confessions, and racial bias (Denoy & Campbell, 2005). The Innocence Network which was founded by Barry Scheck and Peter Neufeld in 1992 provides help to victims of wrongful conviction to help prove their innocence through DNA testing, and provides assistance for victims after incarceration. Victims who spend many years incarcerated need to learn to become adapted to a new environment, to develop new relationships, and may need help to regain practical skills. There are treatments victims of wrongful conviction should be made aware of after incarceration to help establish better consequences. Research clearly demonstrates consequences in victims of wrongful conviction including personality changes, post-traumatic stress disorder, psychiatric disorders, mood and anxiety disorders and other physical and psychiatric consequences (Grounds, 2004). Research has been conducted regarding the psychological consequences of wrongful conviction but further research is needed to assess the attitudes towards the stigmatization of victims of wrongful conviction.

Little research has been completed to assess wrongful convictions. However there is a growing concern with wrongful convictions in the criminal justice system. Research has been conducted focused on psychological factors and on other factors that exist after wrongful conviction. Individuals who have been wrongfully convicted experience multiple symptoms after serving multiple years in prison including personality changes, post-traumatic stress disorder, psychiatric disorders, mood and anxiety disorders and other physical and psychological consequences. It is difficult to know what specific symptoms are experienced as there has been a lack of research directed toward individuals who were released after being wrongfully convicted (Grounds, 2004). Fortunately, research has begun to investigate attitudes towards wrongful convictions (Clow, et al., 2012) including the attitudes and opinions of those who were wrongfully convicted, police officials, prosecutors, and defense lawyers (Smith, Zalman, & Kiger, 2011).

Wrongful convictions occur due to miscarriages of justice (Denoy & Campbell, 2005) including both individual errors and

errors made by the criminal justice system. Some common factors that have led to wrongful convictions include eyewitness error, professional misconduct including misconduct by police, false confessions, and racial bias (Denoy & Campbell, 2005).

As a consequence of conviction, freedoms and rights are taken away from individuals. In fact, there are many negative consequences of prison life. Victims of wrongful conviction may serve several years in prison for crimes that they did not commit and learn to adapt to the only life they face every day during prison (Clow et al., 2012). Prison life is significantly different from the environments these victims are used to outside of prison. These individuals can be stuck in a little cell while other inmates are pounding on the walls and yelling threats and insults (Clow et al., 2012) for a crime they have not committed. Victims are automatically labeled with negative terms by those both inside and outside of prison although they are innocent. They might experience violent behavior regardless of the crime they are thought to have committed. It is no wonder then that victims of wrongful conviction may enter prison life with no

symptoms of psychological disorders, but when later released from prison may need rehabilitation to adapt to their environments (Grounds, 2004).

Adaptation is important in order to rebuild life after serving several years in prison for a crime you did not commit (Grounds, 2004). It is difficult to cope with a different environment and with both new and old relationships after prison (Denov & Campbell 2005). Your community has likely changed; family and friends have aged, and most likely things are quite different than they were before you were imprisoned. Services are often provided after imprisonment to help these individuals adjust to and rebuild life after imprisonment. Of course, the consequences of wrongful conviction never fade; but instead rest with you for the rest of your life. Unfortunately, an added problem is that many people in society will continue to experience negative views of these victims even though it was that they were innocent of the crime for which they were charged. Treatment for victims of wrongful conviction is crucial in treating symptoms that exist including both long-term and short-term forms of treatment.

Wrongful Conviction

No one factor can explain all wrongful convictions. Instead, factors that affect wrongful convictions include eyewitness error, professional misconduct, false confessions, erroneous forensic science, and racial and class biases.

Much research has been conducted on eyewitness identification as this is one of the most common factors that contribute to wrongful convictions (Denov & Campbell 2005). Scheck et al. (2000 in Huff, 2004) reported that 84% of DNA victims examined that were later proven innocent were wrongfully convicted due to eyewitness error. Eyewitnesses are called on to report the events, and errors may occur due to “police interviewing, unconscious

transference and the malleability of confidence” (Grounds, 2004, pp.226). Positive feedback from authorities can cause witnesses to choose the wrong person in a police lineup or from a group of people. Incorrect identifications are often caused by police during investigations (Leo & Davis, 2010).

Professional misconduct can involve police, lawyers and judges (Huff, 2004). While investigating a scene, police officers can either “intentionally suppress, lose, misinterpret, or overlook evidence” (pp.110) which can result in a wrongful conviction (Huff, 2004). Likewise, evidence can be withheld during trial that would favorable to the person who is accused (Denov & Campbell, 2005). Common mistakes that occur are incorrectly constructed police lineups, the misuse of informants, solicitation of false confessions, and reliance on poor forensic science (Denov & Campbell, 2005).

Psychological interrogations can cause wrongful confessions for serious crimes that individuals may have not committed (Denov & Campbell, 2005). Scheck et al. (2000) report in Denov and Campbell (2005) that many of their exonerations involve false confessions. Techniques are used by police which cause victims to confess due to feelings of hopelessness and the victims eventually believe the only alternative would be to falsely confess. These confessions usually occur during the early stage of the investigation process where victims of wrongful conviction are feeling emotionally unstable. Confessions can also lead police to ignore or simply fail to notice other pieces of evidence (Kassin, 2012).

In some instances, evidence can become “contaminated through inadvertent human error, exaggeration, misinterpretation, and bias” (Denov & Campbell, 2005, pp.229). Scientists who

work in police laboratories can tamper with evidence and intentionally or unintentionally cause a wrongful conviction. With improved development of laboratories, there has been significant improvement in forensic science and in fact the use of scientific techniques is now helping us better understand wrongful convictions (Denov & Campbell, 2005).

Racial and class biases are commonly found among African American individuals in the United States and among Aboriginal people in Canada (Denov & Campbell, 2005). Research has shown that victims of wrongful convictions may also be victims of racial differences. Supporting this, recent studies have shown that African Americans are more likely than white individuals to be wrongfully convicted in the United States.

Who are wrongfully convicted?

Individuals who are wrongfully convicted face years of “notoriety, fear, and isolation in their claims of innocence” (Grounds, 2004, pp.176). A survey conducted in California found that victims of wrongful conviction experienced physical, spiritual, psychological, social, and economic consequences (Weigand, 2009).

Victims may spend years in incarceration. For instance, a study by Grounds, (2004) showed that victims who had been wrongfully convicted of murder were sentenced to life in prison and spent between 9 months and 19 years in prison for crimes they did not commit. The average age of these victims was 28 upon entering prison and 38 upon release from prison.

While in prison, individuals experience depression, anxiety, isolation, trauma, and alienation (Denov & Campbell, 2005). They become stripped of their identity and come to experience hatred and aggression towards the criminal justice system and towards society as a whole. Innocent individuals become labeled as murderers, pedophiles, or as rapists for

crimes they did not commit (Denov, & Campbell, 2005). Often, the only people who associate with victims of wrongful conviction are inmates who have actually committed such crimes. After being released from prison, these negative consequences do not disappear. Rather, they become every day issues that these victims face while trying to cope with society, relationships, and perhaps more importantly, with their own survival (Denov & Campbell, 2005).

Victims of wrongful conviction often leave prison with next to nothing. They leave prison incapable of adjusting to new environments or practical skills. They often have difficulty expressing any kind of emotion (Clow, et al., 2012). Upon release, victims often report higher levels of aggression and temperament and become more “angry, aggressive, and impulsive than they were prior to imprisonment” (Denov & Campbell, 2005, pp.235). Victims may experience a continued sense of imprisonment even after being released and often report experiencing a feeling of fear of being “retargeted by the criminal justice system” (Denov & Campbell, 2005). Years of incarceration affect their behaviors, perspectives and circumstances (Denov & Campbell, 2005). Consequently, these individuals often disguise their identity. What is even more ignored is that wrongful conviction has a significant effect not only the victim, who was wrongfully convicted, but on family and friends as well. Consequently, individuals who have been wrongfully convicted often have difficulty regaining positive relationships after incarceration.

Psychological Consequences

Wrongful convictions that are commonly known of in Canada are those of Guy Paul Morin, Donald Marshall, David Milgaard and Thomas Sophonow (Grounds, 2004). Studies have been conducted on these individuals to show the long-term

psychological consequences these victims experienced. Long-term imprisonment often leads to personality change and several psychiatric disorders (Grounds, 2004, pp.167).

Some characteristics of personality change involve distress, “a hostile or mistrustful attitude towards the world, social withdrawal, and feelings of emptiness or hopelessness” (Grounds, 2004, pp.168). Victims of wrongful conviction appear to express different attitudes and behaviors towards their family, friends, and society. These personality changes can affect family and friends with some family members describing a loved one as “a completely different person” (Grounds, 2004, pp.169).

Characteristics of mood and anxiety disorder include violence and fear of violence, stigmatization, paranoia symptoms, and moodiness and irritability. A study by Grounds, showed that ten of the men they interviewed suffered from depressive disorders after imprisonment, five showed symptoms of panic disorder, four showed symptoms of paranoid disorder, and three suffered from alcohol and drug abuse. These individuals also suffered from sleeplessness, moodiness, and irritability after imprisonment, making it much more difficult for loved ones.

Among those who come to experience post-traumatic stress disorder symptoms include anxiety disorders, violent behavior, repeated delusions of experience from prison, isolation, paranoia, drug and alcohol abuse, and chronic fear. Victims often experience nightmares of assaults and memories of prison life, and may also experience panic attacks. Others report feeling “apprehensive when out in public places, fearful of being attacked or constantly feeling as though they were being looked at and talked about” (Grounds, 2004, pp.172). Some report avoidance, and heightened psychological arousal.

Many of the fears noted by these individuals are not unfounded. Often, victims are stigmatized by society and this can lead to far more negative consequences. For instance, finding employment can be quite difficult after imprisonment. For example, one female who was wrongfully convicted for child abuse reported continued unemployment and stigmatization by those in her community after serving 5 years in prison (Clow, et al., 2012).

Similarly, Campbell and Denov (2004) interviewed five men who had been wrongfully convicted in Canada and found they experienced feelings of guilt, hyper arousal, intrusive thoughts, feelings of hopelessness, difficulty becoming emotionally connected with family and friends, and trouble envisioning the future (Clow, et al., 2012).

Adaptation

Individuals who have spent many years in prison need to become adapted to a new environment after incarceration. As already mentioned, victims often have difficulty regaining relationships with friends and family members. They experience physical and psychological deterioration and perhaps as a consequence victims have poor coping abilities which can lead to poor education and training skills. Victims of wrongful conviction have often reported “inexperience and anxiety associated with technological advances” (Clow, Leach, & Ricciardelli, 2012). For instance, these victims have difficulty managing to use technology such as computers, ATM machines, and the internet (Clow, et al., 2012). Added to this, after being released from prison, victims may still be labeled as thieves, murderers, and rapists. Many have become adapted to the prison life (Wildeman, Costelloe, & Schehr, 2011) and may resort to isolation as they were isolated during prison.

Some victims of wrongful conviction develop strategies to help them deal with this new world that can be viewed as the opposite of prison. For instance, a healthy strategy some victims use is the “incorporation strategies” which means victims develop positive attitudes towards their experiences during prison (Clow et al., 2012). Others use unhealthy strategies such as the “rejection strategy” which involves “further isolation and occasionally, self-destructive behaviors” (Clow et al., 2012, pp.334). Strategies used after being released should make new experiences comfortable and include discussions with others who have experienced unlawful convictions. For instance, it might help to discuss similar disturbing experiences such as “suicide ideation, the death of loved ones, and fear of prison violence” (Clow, et al., 2012, pp.335).

Those who experience difficulties with practical skills often need immediate support from specialists, family or probation officers (Grounds, 2004). Other examples of practical skills these individuals may find troubling include simple tasks such as “not knowing how to work heating, TV remote controls, video, credit cards, or cashpoints at banks” (Grounds, 2004, pp.171). A feeling of shame and guilt often results from lacking practical skills (Grounds, 2004). This encourages victims of wrongful conviction to feel as though they remain in a prison environment. Victims who are fortunate enough to find employment also have the difficulty of sustaining their position while dealing with problems adjusting to not just a new home environment, but also to a new work environment (Wildeman, Costelloe, & Schehr, 2011).

Relationships are difficult to reestablish. Specifically, with regards to family, victims report “a loss of closeness that never returned” (Grounds, 2004) after incarceration. Victims no longer really know

their family and friends. Victims can find it difficult to meet the emotional needs of their children and their family. These negative factors may become permanent, but can be also treated with the right form of treatment or rehabilitation.

Treatment

It is crucial that victims of wrongful conviction be aware of support needed after imprisonment. Victims may be treated in residential facilities where specialists are available after imprisonment (Grounds, 2004). If victims become aware of treatment after imprisonment, they are more likely to experience positive consequences (Grounds, 2004). It is necessary to have two forms of psychiatric help which include “appropriate treatment for specific psychiatric conditions and long-term counseling” (Grounds, 2004, pp.178). Although it may be difficult for some victims of wrongful conviction to cope with new relationships, it is crucial that family members help in developing strategies that help deal with the psychological consequences. Long-term treatment is also crucial in order to stop psychological consequences, especially after serving several years in prison.

Group therapy is a common form of treatment in helping victims of wrongful conviction since it allows these individuals to share their thoughts and feelings with those who have similar experiences with wrongful conviction (Wildeman et al., 2011). This allows socialization among victims and helps victims reestablish their place in society (Wildeman et al., 2011). Individuals can establish similar connections between one another outside of treatment and this can reduce the psychological consequences that they experienced.

A reentry program is also another option for some victims after incarceration (Wildeman et al., 2011). This includes employment services for those having difficulty seeking employment, difficulty

with practical skills, and other factors such as “readiness training, vocational training, and employment referrals” (Wildeman et al., 2011, pp.14).

Innocence Network

The innocence network was founded by Barry Scheck and Peter Neufeld in 1992. It provides “legal assistance to inmates who are challenging their convictions” (Huff, 2004, pp.115). Its main goal is to help victims of wrongful convictions through proper DNA testing and to “provide access to “proper compensations for these wrongly incarcerated citizens” (Huff, 2004, pp.115). Another goal of this group is to avoid imminent miscarriages in the Criminal Justice System in relation to wrongful conviction (Huff, 2004). For instance, Kirk Bloodsworth was the first man to prove innocent through DNA testing by the Innocence Project (Clow et al., 2012).

A survey conducted by the Angus Reid Group in 1995 (Clow, et al., 2012) was interested in people’s attitudes towards wrongful conviction and included their attitudes towards helping decrease wrongful convictions, including government officials responsibility in paying victims of wrongful conviction after they have been released. It was shown that 65% of respondents agreed that government should increase its efforts to deal with people who have been wrongfully convicted and 90% of individuals felt that the government should compensate victims of wrongful convictions after they were released from prison (Clow et al., 2012)

As research grows, it is important to include findings in practice and policy (Clow, et al., 2012). For instance, with increasing research, treatment methods can become more sustainable and supportive for victims who suffer the psychological consequences of wrongful conviction.

Many issues that have developed around the topic of wrongful conviction

such as how wrongful convictions occur; the psychological consequences and how this prison adapted lifestyle can possibly be cured have been discussed. Many changes and laws have been put in place to help reduce cases of wrongful conviction. For example, to help insure eyewitness evidence is collected appropriately police line ups are no longer allowed to have a suspect stand out. Sequential line ups are now used in some states to prevent cases of wrongful conviction. The use of sequential line ups has been brought about by the Innocence project and has been found to reduce wrongful convictions. It is crucial that further research and a better understanding of wrongful convictions develop to prevent them from occurring.

Victims of wrongful conviction have suffered through prison life and endure the psychological consequences afterwards. With the development of DNA testing and through the Innocence network, exonerations are most likely to decrease (Denov & Campbell, 2005). Research has begun to investigate the attitudes towards wrongful convictions which include the attitudes and opinions of those who were wrongfully convicted, police officials, prosecutors, and defense lawyers (Smith, Zalman, & Kiger, 2011). There has been a significant change in police interviewing as well due to witnesses giving false information under pressure leading to miscarriages of justice.

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Sleep and Performance: Workplace Occupational Safety Hazard

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Sleep plays a crucial role in human functioning. Inadequate sleep therefore creates adverse effects on the functioning of both the brain and the body. Biological and physiological components of the brain interact with the metabolic system leading to negative influences and creating negative psychological issues (Lockley & Foster, 2012). As a consequence, lack of sleep while engaged in the workplace is associated with an increased risk of workplace injuries (Kling, McLeod, & Koehoorn, 2010). A number of studies have demonstrated that lack of sleep while in the work place poses increased risk of injury. These studies also indicate that specific sleep behaviors, work hours, certain occupations, and gender emulate increased risk of injury.

Workplace injuries are on the rise costing companies billions of dollars per year in legal and medical fees. Occupational health and safety has become a widely examined matter for national economies, employers, employees, and society in general (Clarke, 2010). Of the occupational health and safety research, sleep is becoming a widely examined phenomenon. Sleep research illustrates the effects lack of sleep has on one's body which is suggested to play a leading role in workplace injuries and accidents. In turn, identifying and understanding the effects sleep have on the body could prevent such injuries from happening.

Sleep plays a crucial role in one's functioning since it is a significant determinant of cognition, memory, learning, metabolism, hormone balances, and many other physiological and biological processes. Consequently, lack of sleep obstructs normal activity which could lead to health consequences. For example, a lack of the body's efficient metabolic functioning can lead to negative psychological consequences (Querstret & Cropley, 2012). The National Sleep Foundation recommends the adequate sleep one must get per night is 7-9 hours (Barnes, Ghumman, & Scott, 2013) This differs among young adults who need approximately 8.5 hours and older adults

who need 7.5, hours and also fluctuates between men and women (Lockley & Foster, 2012). Without this crucial amount of sleep per night a number of problems can emerge which could then be linked to workplace accidents and injuries, both fatal and non-fatal (Kling, McLeod, & Koehoorn, 2012). In addition, the number hours of sleep seen among those who work shift work vs. non-shift work can play a role in increasing sleep problems potentially causing injuries in the workplace (Dhande & Sharma, 2011). Certain types of occupations are therefore suggested to be at a higher risk and are much more vulnerable to sleep-related problems than others (Lockley & Foster, 2012). This lack of sleep or prolonged work hours can cause negative attitudes and outlooks toward both work and the workplace itself (Barnes, Ghumman, & Scott, 2013). Added, it is predicted that over the past decade sleep is heavily declining which puts great risk toward the working population given the altering affects that are associated with increased workplace injury.

Lack of sleep is often associated with periods of fatigue during work hours. People often battle these periods of fatigue with caffeine which is commonly thought of as a positive countermeasure to fighting fatigue. However, caffeine consumption should be measured since too much caffeine

consumption can pose problems that are in accordance with lack of sleep. The biological, physiological, and psychological effects of sleep on the body and the relationship this has with increased risk of workplace hazards are important to explore. Additionally, factors such as sleeping habits and behaviors, occupation, and caffeine consumption need to be examined fully to understand the relationship between sleep and workplace injury.

Sleep Regulation

Over the last 50 years surveys show the amount of sleep people report getting declining. Sleep decline is associated with long work hours, increased shift work, long commutes, and the change between time zones (Lockley & Foster, 2012). Additionally, society has become a 24-hour readily available work environment where the natural sleep cycle is disrupted (Dhande & Sharma, 2011). This poses problems for people who work shift work or overtime hours because it disrupts the 24-hour clock of the brain (Lockley & Foster, 2012). This clock which is located in the suprachiasmatic nuclei (SCN) of the hypothalamus naturally controls the 24-hour rhythm of the circadian pacemaker; a clock like apparatus which naturally controls the sleep and wake cycle (Lockley & Foster, 2012). This system is referred to as the two process model which includes the endogenous circadian system and the wake-dependent homeostatic build-up of sleep pressure which together regulate sleep (Stephenson, Schroder, Bertschy, & Bourgin, 2012). This instinctively controls the metabolic functions associated with the brain which are linked to hormone production, temperature regulation, cardiac and lung function as well as many other parts of our physiological functioning (Lockley & Foster, 2012). With the aid of the brain, these functions are regulated by environmental time cues or wakefulness in

the day while it is light consolidated sleep at night in the dark. As the circadian pacemaker is at work through the day, with the help of melatonin levels the homeostatic pressure is at work helping us to stay awake. At night the circadian pressure to sleep is then opposed by a reduction in the homeostatic drive allowing us to sleep (Lockley & Foster, 2012). The disruption of this sleep cycle causes a dramatic increase in sleepiness. This is because the circadian system is trying to produce sleep, while one is building up sleep pressure if awake for a long period of time or if one remains awake through the night (Lockley & Foster, 2012). This cycle is therefore associated with safety hazards when the cycle is disrupted, predominantly between the hours of 3 and 6 am. For shift workers or for those professions such as doctors, nurses, and heavy equipment operators there is a significant increase in work-place accidents and injuries (Lockley & Foster, 2012).

In addition to the circadian cycle, sleep is carried out in two distinct stages and measured by polysomnography. This is rapid eye movement (REM) and non-rapid eye movement (NREM) during which homeostatic sleep build up is decreased (American Psychological Association, 2000). These cycles alternate between 90-100 minute cycles which are carried out 4-5 times per night (Lockley & Foster, 2012). Numerous studies using an electroencephalogram (EEG) show a hypnogram which suggests the type of sleep that is associated with each stage which is measured by neural network activation (Hsu, Yang, Wang, & Hsu, 2013). Between the stages of NREM sleep short periods of REM sleep occur and lengthens after every period of NREM sleep. REM sleep speeds up heart rate and breathing, as the mind acts as if it were awake (Lockley & Foster, 2012). REM sleep however acts differently than NREM sleep. The first NREM stage is a drowsy

sleep in which muscle jerks and twitches are a common occurrence (Lockley & Foster, 2012). This stage of sleep is the most inconsistent since it is the transition stage from wakefulness to the sleep stage (Lockley & Foster, 2012). As stage 2 of the NREM stages continue muscular activity decreases as well as consciousness (Hsu, Yang, Wang, & Hsu, 2013). Stage 3 and 4 is a deep sleep, lack of these stages of sleep are associated with sleep deprivation (Lockley & Foster, 2012). These stages have organization through the night, stages 3 and 4 of NREM sleep increase in response to deprivation of sleep (American Psychological Association, 2000). Therefore, efficient sleep patterns and behaviors are needed to maintain the natural circadian cycle. As we age, patterns of sleep change slightly however; adequate sleep over the course of a life is needed in helping to protect one's health (Lockley & Foster, 2012). For the working population, less than 6 hours of sleep per night is related with risk of cardiovascular disease, obesity, mental health problems and is linked to accident and injury (Bin, Marshall & Glozier, 2011). Thus, maintaining an adequate sleep schedule and behavior based on the amount of hours one needs to function without harm is important.

Sleep Patterns and Behaviors

As humans age, their sleeping patterns change. Young adulthood and middle age are the primary ages where sleep and workplace injury would be commonly seen because these are the ages at which people maintain a job for the most part. However, viewing the stages and patterns of sleep is important in understanding sleep and its significance at all ages, especially among the working public.

When a child is born their first few months of life are focused around sleep (Lockley & Foster, 2012). This is primarily because the circadian cycle is not developed

(Lockley & Foster, 2012). It is suggested that REM and NREM sleep for babies occurs on just 60 minute intervals and show random sleep patterns in a 24 hour cycle with babies sleeping up to 16 hours a day (Lockley & Foster, 2012). As an infant grows, the circadian cycle begins to develop because of exposure to daylight and consolidation of new information since the brain is developing (Lockley & Foster, 2012). Less sleep is needed as the child ages because the circadian sleep cycle is being synchronized (Lockley & Foster, 2012). The REM and NREM cycle then gradually changes from 60 minute intervals, to 75 minute intervals at age 2, and 90 minute intervals by age 6. Reaching adolescence sleep patterns dramatically change due to hormone levels and social influences. Young adults need approximately 8.5 hours sleep a night and teens need even more because of hormonal and growth changes (Lockley & Foster, 2012). Moving into adulthood people generally change into morning people. This is due to the advancement of the circadian pacemaker and changes in REM sleep and social responsibilities such as work (Lockley & Foster, 2012). The homeostatic wake dependent sleep pressure decreases which contributes to the increase in sleep deprivation recovery and shift work. According to The National Sleep Foundation, the adequate sleep one must get per night is ranged at 7-9 hours (Barnes, Ghumman, & Scott, 2013). Other literature states seven to eight hours of sleep per night are the recommended sleep duration for adults. This is particularly important because research has found this amount of sleep to be adequate and to be a determinant of affect, cognition, and behavior for normal functioning which is quite important while engaged at work (Lockley & Foster, 2012). A study by Choi and colleagues found that sleeping less than 7.5 hours per night increased the risk for injuries and sleeping

more than 8.5 hours per night was associated with no significant increase in risk for injury. Of these results, work injury was higher for women who slept 5 to 6 hours per night, compared to women who slept 7 to 9 hours per night (Kling, McLeod, & Koehoorn, 2010). Failure to attain adequate sleep results in what is referred to as sleep debt (Lockley & Foster, 2012). This is a sleep deficiency or, a failure to achieve equal sleep pressure during wakefulness and sleep to restore levels of wakefulness (Lockley & Foster, 2012). Inadequate sleep over the span of five days cannot be fully recovered over a weekend of more sleep than normal (Lockley & Foster, 2012). Sleep is needed to be repaid near daily thus, substantial sleep is needed per night to maintain a healthy balance (Lockley & Foster, 2012). Chronic sleep loss or, inadequate sleep that causes health problems can lead to severe consequences of sleep deprivation. On a two week continuum with less than 6 hours of sleep the result is as performance suffering as a person without 24 hours of sleep. A seven day continuum with less than 4 hours of sleep per night has the same performance effect as someone going without sleep for 2-3 days (Lockley & Foster, 2012).

As we age and reach retirement, sleep quality becomes impaired generally resulting in broken sleep and an increase in napping (Lockley & Foster, 2012). This is caused by reduction of sleep depth during REM sleep or, taking longer to fall asleep (Lockley & Foster, 2012). Sleep problems also are also suggested to occur in elderly individuals because of reductions in melatonin secretions by the pineal gland (Lockley & Foster, 2012). Also, pigment deposition with light reaching the retina is reduced interfering with the circadian clock resulting in increased sleep problems (Lockley & Foster, 2012). Over the course of a life approximately one-third of people

will suffer one of 75 sleep problems (Lockley & Foster, 2012). Respectively, in 2002 more than 3 million Canadians met the criteria for insomnia. These problems traumatically affect one's mental and psychological health and wellbeing and in turn can interfere with work tasks which can lead to injury.

Sleep also supports the formation of memory (Born & Wilhelm, 2012). This is because sleep encodes new memories from the hippocampus in a two stage process. Encoding of memory occurs with the transferring of new material from temporary storage to long term storage (Born & Wilhelm, 2012). This formation of memory is evidently important in everyday functioning since it takes implicit information and encodes it to explicit knowledge (Born & Wilhelm, 2012). Sleep therefore helps to develop consciousness during periods of being awake. Inadequate sleep or sleep deprivation can disrupt working memory for both simple and difficult tasks (Lythe, Williams, Anderson, Libri, & Mehta, 2012). This then becomes problematic since repeated sleep deprivation and inadequate recovery can result in many poor physiological health outcomes (Querstret & Copley, 2012).

Biological and Physiological Functions Associated with Lack of Sleep

Biological and physiological components of sleep are important to examine since they can lead to negative consequences on health and a greater risk of accident and injury (Kling, McLeod, & Koehoorn, 2010). One biological aspect to examine is the circadian pacemaker which is naturally controlled by the 24 hour light change (Lockley & Foster, 2012). This occurs in conjunction with the retina of the eye since it is linked to the hypothalamus which controls the timing of sleep (Lockley & Foster, 2012). Cells which are a part of the tissue that lines the inner eye are light

sensitive and are what make visual images possible (Lockley & Foster, 2012). These too are also involved in the circadian system. These particular cells are called photosensitive retinal ganglion cells (pRGC) which contain a light sensitive pigment called melanopsin (Lockley & Foster, 2012). These cells thus enable us to differentiate daylight and darkness to regulate sleep and wake-times. Brain imaging research has proven that when exposed to light certain areas of the brain become active when we engage in activity such as alertness, cognition, memory, and mood. Thus, light exposure which is linked to sleep behavior is also linked to these areas of the brain and lack of sleep can in turn, pose a danger in workplace environments (Lockley & Foster, 2012).

The pRGCs and the circadian cycle suppress melatonin (a sleep hormone) production. Melatonin provides a signal to tell us it is dark (Lockley & Foster, 2012). High levels of the hormone are secreted primarily from the pineal gland through saliva and plasma between 2 AM and 4:30 AM (Lockley & Foster, 2012). Thus, working at night, or working shift work can pose a danger to people since they are having to stay awake and work during a sleep inducing cycle. Those who are not exposed to average light cycles such as people who live in Alaska (Northern North America) and who experience minimal daylight hours during certain times of the year as well as those who are blind often times suffer from sleep disorders (Lockley & Foster, 2012).

Biologically, sleep has been shown to be responsible for producing hormones such as the growth hormone and the thyroid-stimulating hormone. The hormones melatonin and cortisol which are most associated with sleep are also necessary for providing feedback or signals, to aid in the circadian clock synchronization. Another

important hormone in sleep production is adenosine which promotes sleep and is built up by the homeostatic drive of the circadian cycle. The hormone melatonin also inhibits sleep as it occurs within the circadian cycle when exposed to light. The hormone cortisol which is also a part of the circadian cycle however is produced as we wake up for arousal and excitatory purposes and it declines at the end of the day allowing rest (Lockley & Foster, 2012). Light also controls and adjusts clocks within the metabolic processes such as the liver and gut which control food intake. Irregular sleep schedules or inadequate sleep therefore interferes with these processes and can lead to health consequences.

Sleep is commonly viewed as a commodity people can go without according to sleep surveys (Barnes, Ghumman, & Scott, 2013). However, sleep should be taken into consideration as seriously as smoking, alcohol, diet and exercise because of its adverse effects (Lockley & Foster, 2012). Sleep deprivation increases fat lipids in the blood. This then can lead to heart disease, high blood pressure, blood clotting, and risk of stroke or even heart attack (Lockley & Foster, 2012). In relation to the circadian cycle and light, exposure to light at night is shown to increase heart rate and to form blood-clotting factors (Lockley & Foster, 2012). This in turn could impair blood glucose levels, putting one at high risk for diabetes (Lockley & Foster, 2012). This too is then associated with liver, eye, nerve functioning, and abnormal hormone alterations and it affects appetite and metabolism (Lockley & Foster, 2012). As we sleep and in between meals the hormone leptin is secreted through the stomach which reduces appetite. During the daytime the hormone ghrelin stimulates appetite. Inadequate sleep then adjusts this balance and creates the opposite effect which makes us hungrier resulting in obesity and a two to

three times increase in diabetes (Lockley & Foster, 2012). Irregular meals for shift workers have also been proven to create gastrointestinal problems (Dhande & Sharma, 2010).

Lack of sleep also decreases immune function which leaves individuals at risk of developing sickness, flus, and potentially certain cancers (Lockley & Foster, 2012). This is likely due to sleep aiding in cellular restoration and energy conservation, melatonin levels, and hormonal levels (Lockley & Foster, 2012). Due to the abnormal neurofunctioning of the brain and its hormonal changes it displays due to lack of sleep many psychiatric disorders are comorbid to the health effects (Lockley & Foster, 2012).

Psychological Consequences Associated with Lack of Sleep

Abnormal functions in the brain are proven to occur with lack of sleep (Lockley & Foster, 2012). These abnormalities can be commonly associated with that of many psychiatric disorders. Disruption of the circadian system is consolidated with impairments in normal functioning in mood, cognition, the brain, and abnormal hormone production resulting in co-morbid disorders. These disorders include depression, schizophrenia, Alzheimer's disease, Parkinson's disease, mood disorders, and an increased risk of alcohol-related problems (Lockley & Foster, 2012).

Abnormal sleep patterns can be found in the Diagnostic and Statistical Manual of Mental Disorders. These patterns can also be classified as disorders based upon specific evaluations of symptoms. These disorders are organized into four specific sections, each of which contains specific types of sleep disorders (American Psychological Association, 2000). One-third of people are approximated to suffer one of 75 sleep disorders at some point in their lives (Lockley & Foster, 2012).

Insomnia is the most prevalent sleeping disorder affecting over 3 million Canadians (Kling, McLeod, & Koehoorn, 2010). Evidently this interferes with quality of life, and mental and physical well-being as well as negative work-related problems.

Sleep depletes cognitive functioning which is then associated with negative thoughts toward work (Barnes, Ghumman, & Scott, 2013). This is because lack of proper functioning can hinder work goals and procedures creating anger and frustration. Studies also show that a poor night's sleep, quality of sleep, and sleep loss result in being less satisfied with one's job which in turn, creates a hostile environment (Barnes et al., 2013). These negative thoughts are also associated with lowering feelings of overall well-being and can lead to depression (Barnes et al., 2013). In addition to lack of sleep, (less than 6 hours) clinical burnout or episodes of increased stress and fatigue can occur which reduce one's their full potential and capacity at work and affects leisure time and quality of life (Soderstrom, Jeding, Ekstedt, Perski, & Akerstedt, 2012). Among these sleep issues comes off-job social problems that are associated with the effects of lack of sleep and of irregular sleep patterns. Working an irregular shift puts a strain on being able to participate in everyday functions which are important to human development. For people with families and small children this also creates problems in the family. Specifically, of the people who work shift work, only 33.33% can give the adequate attention to their child that is highly needed (Dhande & Sharma, 2011). Off job activities such as family, social, and recreational activities to detach from work play an important role in recovering from work. These off job activities in accordance with adequate sleep create a positive effect, reduce work-related stress, and in turn become more positively prominent in the

workplace (Brummelhuos & Bakker, 2012). Thus, sleep is important in maintaining a positive healthy lifestyle. Lack of sleep while engaged in the workplace can result in the potential increase in accidents and injuries and loss of productivity (Querstret & Cropley, 2012).

Workplace Injury Among Occupations and Gender

Lack of sleep or sleep deprivation creates fatigue through periods of wakefulness. Fatigue while engaged in the workplace affects cognitive functioning, mood, motivation, vigilance, reaction time, memory, decision making, information processing, and coordination (Querstret & Cropley, 2012). Thus, lack of sleep can lead to serious consequences in the working environment particularly in some occupations. Any overtime work schedule among any occupation leads to a 61% higher injury hazard compared to non-overtime work (Nakata, 2011). Working a 12 hour shift puts one at a 37% higher risk of workplace injury while working 60 hours a week is associated with a 23% increased risk of injury (Nakata, 2011). Sleep should therefore be of concern to organizations. In accordance to the recommended increment of 7-8 hours of sleep on average per night arises problems among some specific occupations in particular which upset the sleep cycle (Dhande & Sharma, 2010). This either happens due to overtime work hours or shiftwork schedules which increase homeostatic buildup of sleep and, in turn, create fatigue (Dhande & Sharma, 2010).

Shift work refers to working outside the normal daylight hours or, between the hours of 7 a.m. and 6 p.m. on a range between 7-8 hours long. Shift work happens since society has become a 24 hour ready society in which services are steadily being used. In addition to technology and production costs, processing is needed at a 24 hour performance level to be profitable.

Shift work therefore includes working hours in between normal hours such as during the night or working extra-long work days exceeding 12-16 hours per shift (Dhande & Sharma, 2010). These shifts rotate around the clock transitioning from evening to morning to night which happens by a weekly or monthly basis. The majority of these workers include factory workers, mining operation workers, nurses, plant workers, and others in additional industries. Although this may increase production, profit, and productivity, it puts these workers at a high risk for injury (Dhande & Sharma, 2010). Shift work also puts one at a 50% increased risk of breast and prostate cancer compared with non-shift workers (Lockley & Foster, 2012).

Shift work causes a significant impact on disturbances of sleep because of the normal circadian rhythms it upsets. Due to the circadian rhythm, the body's regular response is to be asleep during the night and awake during the day. Working between these hours causes shortened sleep cycles, creates high fatigue, and causes sleep disturbances (Dhande & Sharma, 2010). A study by Kling, McLeod, and Koehoorn (2012) using the Statistics Canada Community Health Survey Cycle for 2000-2001 found that there was an increase of work injury for workers who reported trouble sleeping compared to those who did not have trouble sleeping. Of these results, women were more likely to suffer from sleep related injuries than that of men; 561,996 work injuries were seen in men and 255,137 work injuries in females. They found that women were more particularly linked to work injury due to sleepiness in processing and manufacturing jobs and in professional occupations (e.g., teaching, medicine, nursing). Occupations in which men on the other hand were likely to result in injury due to sleepiness were in trades and transportation. Kling, et al. also found that

surprisingly working daytime hours put both men and women at highest risk of injury due to sleep disturbances (Kling, 2012). Women who worked rotating shifts also held a high rate of injury due to trouble sleeping (Kling et al., 2012). The highest odds of injury due to sleep problems were among women who worked part-time, full-time, and overtime hours; men's injuries however were only associated with full-time hours (Kling, et al., 2012). One occupation that is important to examine is that of a doctor. This is because doctors often work long shifts, are readily on call, lack sleep, and have other people's lives in their hands. In the United States, a clinical trial examined a 16 hour shift vs. a 24 hour shift (Lockley & Foster, 2012). Results revealed that the 24-hour doctors made 36% more medical errors than 16-hour working doctors. Additionally, they also made 21% more medication errors and six times more errors in diagnosing (Lockley & Foster, 2012). Other occupations that require disrupted sleep schedules such as on call workers are also important to examine. A note-worthy finding among on call workers such as fire-fighters and paramedics who are ready 24-hours per day found that they exhibit more lack of sleep than those who are not on call. This is due to the vigilance causing stress on sleep which decreases a deep sleep state, interfering with adequate sleep and putting on call workers at a high risk of accidents and injuries (Wuyts et al., 2012). Other occupations to take into consideration are ones at which cause sleep disturbances due to certain exposures at work. These include workers who are exposed to excessive noise. This not only increases stress but is also negatively associated with sleep quality. The majority of these jobs are among industrial workers who are found to have lower sleeping hours than seen in non-exposed workers (Tsafnat, Canfi. Eyal. Shoam-Vardi, Sheiner, 2011). Another important figure to examine is

motor vehicle accidents. Motor vehicle accidents due to sleepiness contribute to the world's leading cause of fatalities (Jackson, Croft, Kennedy, Owens, & Howard, 2013). Sleep deprivation and poor sleep behaviors causing fatigue and sleepiness should be taken into high consideration among heavy equipment operators. In many workplace areas coffee consumption has become the most popular countermeasure to fight periods of fatigue. Although coffee can be quite beneficial it can also create negative effects which can also create an increase in workplace accidents and injury.

Caffeine Consumption

Caffeine is used as a countermeasure to fight periods of fatigue by 87% of the United States population (Huntley & Juliano, 2012). It is also the most widely consumed behaviorally active drug worldwide. On average, people who report consuming caffeine daily consume approximately 280 mg which is estimated to be two cups per day (Huntley & Juliano, 2012). Caffeine works by blocking adenosine, the hormone which builds wakefulness (Lockley & Foster, 2012). Although a 400 mg dose of caffeine or higher is safe for people who are not typically caffeine sensitive, 50-200 mg of caffeine is the recommended dose. This is because a moderate dose of 20-200 mg produces positive effects of increased alertness, energy, attention, memory, cognition and performance (Huntley & Juliano, 2012). Alternatively, at a higher dose of more than 200 mg it could increase levels of stress and anxiety as well as upset sleep patterns and create an "overconfidence" which may potentially lead to an increase in injury. Lack of sleep is also associated with high caffeine intake which is significantly linked to insomnia, depression, and anxiety which leads to unpredictable behavior (Huntley & Juliano, 2012). A study conducted by Huntley and

Juliano measured caffeine consumption and individual beliefs regarding caffeine. It concluded that 90% of individuals within the study consumed caffeine and of these individuals, an average of 323.23 mg was consumed per day. Caffeine consumption consisted of coffee, soft drinks, tea, caffeine, pills, and energy drinks/chocolate with coffee being the highest response. Furthermore, caffeine was positively correlated with dependence and withdrawal and negatively associated with increased anxiety, negative physical effects and sleep disturbances.

Conclusion

Sleep is a crucial factor of human functioning. The adequate sleep one must get to function normally and in accordance with the circadian cycle is 7-9 hours. Less than this can lead to negative health consequences. This is because sleep is a significant determinant of cellular restoration, energy conservation, cognition, memory, learning, metabolism, hormone balances, and many other important physiological and biological processes. Lack thereof interferes with this functioning and thus creates dangerous effects. These effects lead to a primary causation of workplace accidents and injuries. Shift-work and overtime hours exceeding 12 hours a day puts people at a significant risk of workplace accidents, error, and even fatalities. Inadequate sleep and irregular work schedules should therefore be of concern to companies and employers since it places workers at an increased risk of workplace injury. Identifying and understanding the effects sleep has on the body is therefore important in preventing such sleep-related injuries from happening.

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Integrating Spirituality and Religion into Psychotherapy

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The history of the relationship between spirituality, religion, and psychology is discussed, with a historical perspective of spiritual and religious integration in psychotherapy from the 1940's to the present. An empirically based rationale for spiritually integrated psychotherapy is put forward which includes client and therapist perspectives and research indicating: people want spiritually sensitive help, spirituality can be part of the solution in psychotherapy, spirituality can be part of the problem in psychotherapy, and spirituality cannot be separated from psychotherapy. Descriptions of spiritually integrated therapy and the two main models of integration, implicit and explicit integration, are given. APA ethical guidelines and ethical considerations relating to integration are discussed including: assessment, competency, providing necessary information to clients, imposing values on clients, consultation with other professionals, boundary issues and multiple relationships, questioning or disputing religious beliefs, spiritual reductionism, trivializing spirituality, and overemphasizing spirituality. Training related to spiritually-integrated psychotherapy is also discussed.

The relationship between spirituality, religion, and psychotherapy is an interesting one. For historical context, it is necessary to see how psychotherapy, spirituality, and religion have been viewed, discussed and integrated throughout psychology as a whole. While a number of psychology's influential forefathers such as William James, Carl Jung, and Gordon Allport were deeply interested in the relationship between psychology and religion, other prominent pioneers including Sigmund Freud, John Watson, B. F. Skinner, and Albert Ellis found little, if any, value in the practice or study of religion (Barnett & Johnson, 2011; Plante, 2007). For most of the history of psychology, and science as a whole, spirituality and religion have been neglected and seen in a negative light. The discipline of psychology, with its emphasis on observable, measurable behaviour, was often viewed as being antagonistic and standing in opposition to religion with its emphasis on faith and the spiritual (Plante, 2007).

Toward the end of the 20th century however, psychology (and science in general) began to embrace spirituality and religion and to examine important questions related to their integration. Research

assessing the influence of religious and spiritual beliefs and behaviours on both mental and physical health outcomes (for an excellent overview of the research findings in this area see Day, 2010) has undermined the negative views of religion in psychology that prevailed for most of the 20th century and, in recent years, the integration of psychology and religion has been legitimized, and has received significant public, professional, and financial support (Plante, 2007; Richards & Bergin, 2004).

Historical Perspective

In ancient Greece, a kind of psychotherapy was integrated with classical Greek religion, however, formal attempts at integrating modern psychotherapy and modern spirituality are relatively recent in the history of psychology as a discipline (Worthington, 2011). Throughout the 1940s, psychoanalysis and psychoanalytic approaches to therapy were dominant and as such therapy had no explicit religious orientation (Worthington, 2011). As part of this therapeutic perspective, therapist's values were not generally discussed in therapy, but client values were, and therefore religion was sometimes discussed (Worthington, 2011). However, religion (as

associated with a set of beliefs, practices, and values of an organized religious community) was only considered and not spirituality (the personal pursuit of transcendence, purpose and meaning), *per se*. Books by Rollo May, a prominent existential psychologist (*The Art of Counseling*, 1939), and Paul Tournier, who was significant in pastoral counseling (*The Healing of Persons*, 1941/1965), were influential in moving towards integrating religion and psychotherapy during this time. Also, the incorporation of the American Association of Marital and Family Therapists (AAMFT) in 1942 brought family therapists and pastoral counselors (counselors with a specific religious affiliation) together, achieving some degree of integration at the professional level (Worthington, 2011).

In the early 1950s, Carl Rogers shifted psychotherapy from the psychodynamic perspective to a phenomenological client-centered perspective (Worthington, 2011). Many pastoral counselors were comfortable with this approach and began using it. Being religiously oriented counselors, clients were free to explore spirituality and by using client-centered therapy, pastoral counselors were free to embrace psychology and could facilitate discussion of spiritual matters (Worthington, 2011).

In the 1960s, practitioners and theorists began to explicitly integrate religion and psychotherapy; Timothy Leary and Richard Alpert, for example promoted the use of drugs and Eastern religious practices for the treatment of mental disorders (Worthington, 2011). Harvard psychiatrist, Herbert Benson identified what he called the *relaxation response*, a common factor within Eastern meditation, yoga practices, transcendental meditation, and Western-based behavioural relaxation, and conducted research on its efficacy in

behaviour therapy (Worthington, 2011). Some psychotherapists, many of whom were influenced by Eastern religious thought, began to advocate meditation and meditative techniques, and the result, was substantial research on meditation, yoga, and relaxation (Worthington, 2011). Furthermore, 12-step addiction treatment programs, which emphasized a spiritual (not religious) transformation and recovery, became more prevalent, influencing addiction treatment in general and the practitioners involved in addiction treatment services (Worthington, 2011).

In the 1970s, the cognitive revolution allowed therapists to explicitly assess values and therefore religion and spirituality were more openly addressed (Worthington, 2011). Therapists were able to initiate discussions regarding religion and spirituality and religious therapists were further permitted to use their religion in psychotherapy as long as clients were informed (Worthington, 2011). The increased use of an eclectic approach to psychotherapy also permitted therapists to integrate religion and spirituality into treatment. Professional organizations promoting the integration of psychology and religion, such as The Christian Association for Psychological Studies, The Association for Religious and Value Issues in Counseling, and the American Psychological Association's (APA's) Division 36 (Psychology of Religion) either formed or increased in popularity during this time (Worthington, 2011). Furthermore, clients began asking for and demanding religiously oriented psychotherapy (Worthington, 2011). These developments generated much research and many books and led to the production of two journals dedicated to the integration of Christianity and psychotherapy, the *Journal of Psychology and Christianity* and the *Journal of Psychology and Theology* (Worthington, 2011). Increased

immigration from Southeast Asia at this time also led to greater acceptance of Eastern religions (Worthington, 2011). Thus, pressure from more eclectic psychotherapists, professional organizations of psychologists, and more demographically diverse and vocal clients pushed toward more integration of psychology and religion (Worthington, 2011).

In the 1980s a further turning point occurred in that major psychological journals started progressively considering religion in psychotherapy, the literature on the subject grew substantially, and a body of evidence was building to support its usefulness (Worthington, 2011). In the 1990s, researchers began to study mindfulness as drawn from the Eastern religions and it became a technique in secular (non-religious/spiritual) psychotherapy. The emphasis on multiculturalism allowed people to be more comfortable defining themselves in terms of their religious and spiritual beliefs and to contend for psychotherapy that was sensitive to their religion (Worthington, 2011). Several generally theistic therapies and approaches (incorporating belief in God) were proposed as well as specific religiously accommodated therapies (used in particular religious communities) (Worthington, 2011). As a result, secular therapy became increasingly spiritual (although not religious) and integration was evident in mainstream publishing by the mid-1990s with the publication of several notable and influential books on the subject including *Religion and the Clinical Practice of Psychology* by Shafranske (1996), *A Spiritual Strategy for Counseling and Psychotherapy* by Richards and Bergin, (1997), and *Integrating Spirituality into Treatment* by Miller, (1999) (Worthington, 2011).

In the 21st century, these and other developments have led to two groups: a

secular group emphasizing and using a nonspecific spirituality in therapy and a religious group that has incorporated a particular religious emphasis in treatment (Worthington, 2011). Despite historical views that emphasize their mutual antagonism, psychology and religion actually have much in common. Psychotherapy involves interpersonal persuasion where the client adopts a worldview with meanings and values that provide hope in overcoming their problems and difficulties (Tan, 2000). As it involves elaborating and giving meanings to human experience, it therefore essentially and unavoidably deals with beliefs, morals, and values (Tan, 2000). In fact psychotherapy is infused with values and psychotherapists can be described as serving a scientific function in manipulating behaviour and a moralistic function equivalent to a secular ministry (Tan, 2000). Both Spirituality and psychotherapy are concerned with human healing and growth and religion and psychotherapy both aim to shape personal meaning and behaviour and to give hope to individuals who are seeking help or healing. Therefore, some degree of mutuality can be ascribed to psychotherapy and religion in relation to their interest and influence on personal meaning and behaviour (Tan, 2000)

In recent years, considerable work has been done to more specifically integrate religion or religious values and interventions into psychotherapeutic work (Tan, 2000). Spiritually-integrated interventions, combining spiritual or religious beliefs and practices with existing psychotherapeutic models, have increasingly been developed and tested (Gockel, 2011). There has also been an outpouring of influential books integrating spirituality into psychotherapy, several of them focusing on the value-based nature of the treatment process, and there are books that deal with specific religions such as Christianity, Judaism, Buddhism, and

Islam and their relationship to psychotherapy, or with particular schools of psychotherapy, such as psychoanalysis, behaviour and cognitive therapy and the integration of spirituality and religion (Gockel, 2011; Tan 2000).

Although spirituality and religion are often used together in the literature and are highly related and overlapping constructs, they are not entirely interchangeable. There has been considerable debate in psychology about how to operationally define and clarify these concepts and there is no agreement on the exact definitions of these terms (Hage, 2006). However, religion is generally associated with participation in specific and organized religious traditions, beliefs, and institutions (Hage, 2006). Spirituality, the broader of the two terms, while often sought and expressed through religion or religious involvement, is to some extent independent of institutionalized religion and is often described as more of a personal quest for transcendence, purpose, and meaning (Barnett & Johnson, 2011; Hage, 2006), with an individual approach to religious, existential, and ethical issues. Due to the difference in the meanings of the two terms, both are used below.

Rationale for a Spiritually-Integrated Psychotherapy

Although religion is still not as significant for psychotherapists as it is for people in the general population, it appears that therapists are more spiritually and religiously oriented today than in times past (Tan, 1996; 2000; Worthington, 2011). Many therapists define themselves as spiritual, most therapists think religious and spiritual matters are relevant to treatment, and many therapists view psychotherapy itself as a spiritual process (Gockel, 2011; Tan, 1996; Worthington, 2011). Surveys indicate that the majority of therapists see spirituality as an important component of the healing process and recognize that religious

and spiritual beliefs have a considerable impact on their practice (Gockel, 2011). While these topics were once taboo in mainstream circles, the need for their integration into psychotherapy training is increasingly being recognized as research indicates that secular, as well as religious therapists are integrating spirituality into their practice (Gockel, 2011).

While many psychotherapists profess to reject philosophical assumptions such as atheistic-naturalism, determinism, reductionism, materialism, ethical hedonism, and ethical relativism, they still adhere to mainstream traditions that are grounded in these assumptions (Richards & Bergin, 2004). Surveys show that sizeable percentages of psychotherapists believe in God, are members of one of the theistic world religions, and use spiritual interventions in their professional practices. Consequently, Richards and Bergin (2004) argue that many psychotherapists may be accurately called theistic psychotherapists and that therapists from diverse perspectives, even those who identify as agnostic or atheist, can accept and find considerable value in a spiritually integrative psychotherapy, as it would help them work more sensitively and effectively with their spiritual and religious clients (Richards & Bergin, 2004).

One might assume that only those who self-identify as faith-based psychotherapists, for example Christian psychotherapists, pastoral counselors, and those who specialize in treating religious and spiritual clients and issues, will deal with religious and spiritual concerns. However, for many clients, spirituality and religion are central to their sense of self, worldview, and belief system and spiritual or religious issues are often intertwined with their presenting problems (Barnett & Johnson, 2011). Additionally, many people when experiencing spiritual or religion-

related difficulties regularly seek the assistance of psychotherapists, not clergy (Barnett & Johnson, 2011). In fact, much data and high quality research indicate that most people around the world believe in God, are affiliated with some type of religious tradition and place of worship, and desire to be more spiritually developed (Barnett & Johnson, 2011; Plante, 2009). In the United States for example, numerous studies have revealed that 95% of Americans profess a belief in God or a higher power and that this figure has never dropped below 90% in the last 50 years (Hage, 2006; Pargement et al., 2005; Worthington, 2011). Since religion and spirituality are such an integral part of most people's lives and accordingly to many of those to whom mental health professionals provide services, therapists have a responsibility to address this fundamental aspect of people's lives as they work with them (Plante, 2009). Furthermore, clients' religious and spiritual beliefs can be a source of strength and support that can be accessed in treatment and there are evidence-based reasons for addressing and integrating spirituality in psychotherapy (Barnett & Johnson, 2011).

Pargement, Murray-Swank and Tarakeshwar, (2005) have put forward an empirically-based rationale for a spiritually integrated psychotherapy based on empirical research that has demonstrated that spirituality can be part of the solution, spirituality can be part of the problem, people want spiritually-sensitive help, and spirituality cannot be separated from psychotherapy.

In arguing that spirituality can be part of the solution, Pargement et al. (2005) reason many people, in times of stress and when faced with significant life problems and major difficulties, turn to spirituality and religion, which can be powerful resources for coping, guidance, and support. This may

be because there seems to be an existential dimension to many of life's problems and spirituality offers a distinct solution. Through spirituality people may find answers to seemingly unanswerable questions, support when other sources are unavailable, comfort when life seems out of control, and new sources of value and meaning. Spirituality helps people come to terms with death and the uncontrollable nature of life and life's problems, and as such it is a unique resource for living that is suited to the struggle of human finitude and limitations (Pargement et al., 2005). By integrating spirituality into psychotherapy, therapists could make more use of this source of hope and solutions to life's problems.

Pargement et al. (2005) further reason that for some, spirituality can be part of the problem. Research has indicated that certain kinds of religious coping and behaviour can be problematic (e.g., feeling punished by God, anger at God, feelings of anger and alienation from congregations, and making attributions of personal troubles to the devil). Studies have shown that negative religious coping is associated with poor mental health, impaired physical health, and an even higher risk of mortality (Pargement et al., 2005). It has also been noted that many of the world's greatest religious figures, from Jesus to Moses to Buddha to Muhammad, experienced their own spiritual struggles, only to emerge from them strengthened and research has pointed out that the risk lies more in "getting stuck" in the spiritual struggle, than in the spiritual struggle itself. In psychotherapy, therapists help their clients become "unstuck" in many areas of their lives and spiritual struggles deserve the same consideration. Therapists can assist clients in confronting and resolving the spiritual struggles in their lives before they get "stuck" (Pargement et al., 2005). There are also religious and spiritual

problems as outlined in the *Diagnostic and Statistical Manual of Mental Disorders*. Such problems although not defined as mental disorders, can include distressing experiences involving questioning or loss of faith, difficulties related to conversion to a new faith, or struggling with spiritual values not necessarily related to an organized religion (Tan, 2000). Certain forms of religious experience can also be negative and pathological of course.

Pargement et al. (2005) also note people want spiritually-sensitive help. As mentioned above, research has shown that clients with mental and physical health problems actively turn to spirituality as an important source for coping in their lives. However, research has also shown that people want their health care providers, including mental health professionals, to be aware of and respectful of their religious and spiritual traditions, beliefs, and practices and to address their spiritual needs in treatment (Gockel, 2011; Plante 2009). Studies have found that clients believe religious issues are appropriate topics for discussion in therapy and most, upon further questioning, showed a preference for discussing religious and spiritual concerns in therapy. When faced with a serious problem, Gallop poles indicate that two thirds of Americans would prefer to see a therapist who holds spiritual values and beliefs, and that they would also prefer a therapist who integrates his/her personal beliefs and values into therapy (Hage, 2006). Surveys also indicate that clients in secular, as well as religious settings view spirituality as an important element in healing, and want to discuss spiritual matters as part of psychotherapy treatment (Gockel, 2011). Therefore there is evidence from empirical studies that people are looking for spiritually-sensitive treatment and that a high percentage of potential psychotherapy clients would welcome spiritually-integrated therapy and

would like to discuss the role of spirituality in their lives (Pargement et al., 2005).

Spirituality cannot be separated from psychotherapy. Influential psychologists such as Carl Jung, and Viktor Frankl thought of the spiritual dimension as being fundamental to healthy functioning and fully intertwined with the physical and psychological dimensions (Frankl, 1955; Montesinos, 2005). This being true, it should not be unusual to find that changes along one dimension result in changes among the other dimensions as well. While secular psychotherapy is not intended to affect people spiritually, spiritual changes have been found to be likely to occur throughout the psychotherapeutic process (Pargement et al., 2005) and psychotherapy itself has even been described as a “religious process” (Tan, 2000). It has also been argued that every therapy involves spiritual matters as they essentially and unavoidably deal with meanings and values that structure people’s lives and every psychotherapeutic system has an implicit metaphysical worldview (see Helminiak, 2001). Until psychology addresses the “big questions” that are inherent and unavoidable in human experience, such as the meaning of life and the nature of truth and good, it cannot pretend to deal with the whole human being. Psychotherapy therefore necessarily has to include spirituality (Helminiak, 2001).

What should Spiritually-Integrated Psychotherapy look like?

Pargement et al. (2005) argue that a spiritually integrated psychotherapy should be just that, integrated, only with greater sensitivity and explicit attention to the spiritual dimension in the psychotherapeutic process. Spirituality can be and has been interwoven into virtually all psychotherapeutic traditions, including psychodynamic, cognitive-behavioural, rational emotive behaviour therapy (REBT), biopsychosocial, humanistic, existential,

interpersonal, person-centered, family systems and community to name a few (Pargement et al., 2005; Richards & Bergin, 2004) Consequently, it is believed that these forms of psychotherapy will be deepened and enriched through this process of integration. Pargement et al. (2005) also argue that a spiritually integrated psychotherapy should be based on a comprehensive theory of spirituality and must be empirically-oriented in order to guide and answer important questions related to the integration of spirituality and psychotherapy such as questions regarding: what spirituality is and how it develops and changes over the lifespan, when spirituality is a source of solutions or a source of problems, and how to successfully integrate it into therapy. Also, issues that need to be addressed are how to effectively address the spirituality of clients *and* of therapists, what spiritual interventions are most helpful and which, if any, are less helpful or even harmful, and what are the ethical obligations of therapists in a spiritually-integrated psychotherapy (Pargement et al., 2005). An empirically-oriented comprehensive theory of spirituality, with sufficient attention paid to the theoretical and theological meaning of spirituality and its roles in people's lives, would guide spiritually-integrative psychotherapy and answer many of these questions (Pargement et al., 2005).

The Process of Integration

Tan (1996; 2000) defines two main models for integrating spirituality into psychotherapy, implicit and explicit integration. Implicit integration is a more covert approach that does not initiate discussion of spiritual/religious matters and does not directly or deliberately use spiritual resources such as prayer or sacred texts in therapy. While implicit integration does not systematically use spiritual/religious resources or emphasize specific forms of religious/spiritual judgement or counseling,

it does acknowledge the value-laden process of psychotherapy and tries to build and understand personal meaning in the form of integration, whether or not that meaning is explicitly associated with a specific religious tradition (Tan, 2000). Types of depth psychology (that take the unconscious into account), such as analytical psychology, psychoanalysis, existential-humanistic psychology, and transpersonal psychology, often consider the roles of morality and values as well as religious and spiritual belief systems in therapy (Tan, 2000).

Explicit integration on the other hand is a more overt approach that more openly and directly addresses spiritual and religious concerns and intentionally uses spiritual and religious resources and interventions (such as prayer, sacred texts, referrals to church/religious groups and various other religious practices) as a key component in therapy. It often deals with spiritual themes in therapy and broad concerns like, clarification of values, direction in life, the search for meaning, and the fear of death, but can also include more specific concerns like sins, moral failures, struggles with guilt, unforgiveness, bitterness, doubt, spiritual dryness or emptiness, and even possible demonization (Tan, 2000). These as well as other spiritual issues and topics should be discussed sensitively and respectfully with clients (Tan, 2000).

These two major models can be viewed as ends of a continuum, and where a therapist falls on this continuum depends on a number of factors including the clients' interests and needs and also the therapists' own personal spirituality, religious beliefs and values, theoretical orientation and clinical training (Tan, 2000). Usually therapists practicing from an explicit perspective are religious themselves although it is not essential for a therapist to be religious in order to practice explicit integration in therapy (Tan, 1996).

Therapists who practice from an implicit integration perspective can still be religious people with their own religious values, beliefs and convictions, but show respect and caring for the client and his/her beliefs as well (Tan, 1996). Also, religious and spiritual matters may be dealt with and discussed when brought up by clients. However, if clients desire to explore these topics more explicitly, including using resources like sacred texts and prayer, the implicit therapist may refer such clients to more explicitly integrative therapists if he/she is uncomfortable doing so him/herself (Tan, 1996). It should be noted as well that some therapists may be competent and comfortable practicing integration both implicitly and explicitly, depending on client needs. For example the therapist may use an explicit approach with more religiously oriented clients who want a more religiously focused therapy and implement an implicit approach when working with clients who are not religious or who are not interested in pursuing spiritual topics or using spiritual resources explicitly (Tan, 2000).

Ethics

The Ethics Code of the American Psychological Association (APA) clearly states that psychologists must consider, be aware of, and respect spiritual and religious diversity issues as they would any other kind of diversity such as race, ethnicity, and gender. The multicultural guidelines of the APA similarly discuss the need to be competent and respectful of spiritual and religious diversity among other diversity issues. The Ethics Code as well as other APA guidelines therefore demand at least some degree of sensitivity and training on religious-diversity and related concerns (Plante, 2007).

Plante (2007; 2009) uses the RRICC model (the values of respect, responsibility, integrity, competence, and concern) to highlight ethical issues related to the

integration of spirituality into psychotherapy. This model highlights the central values of the APA's Ethics Code as well as the ethics codes of various other mental health professions in North America and abroad.

In the past, highly religious and spiritually minded clients were often pathologized by therapists (e.g., Ellis; Freud) and labeled as being deluded or not as psychologically healthy or advanced as they could be, and their beliefs and views were certainly not respected (Plante, 2007). While not necessarily required to agree with all beliefs and behaviours of clients, therapists are asked to be respectful of the religious and spiritual beliefs, behaviours, and traditions of others (Plante, 2007; 2009). The ethics code further calls for psychologists to endeavor to avoid and eliminate any kind of bias, prejudice or discrimination based on, among other things religion, and therefore therapists must be respectful of people from all spiritual and religious backgrounds and beliefs without bias or discrimination (Plante, 2007; 2009).

Since spirituality and religion play such an integral role in the lives of most people, mental health professionals have a responsibility to be cognisant of how these aspects impact those with whom they work, and further it would be irresponsible for them to ignore these aspects of their clients' lives (Plante, 2007; 2009). Furthermore, mental health professionals, including psychotherapists and counselors, are required to behave with integrity, and to be honest, open, and fair with the people with whom they work (Plante, 2007; 2009). Such professionals should not be deceptive or dishonest in any way but should be open about their skills and limitations as professionals, including their competency in spiritual and religious areas (Plante, 2007; 2009). Therefore, mental health professionals must ensure they get adequate

and proper training in spiritual and religious integration in order to provide competent professional services in this area. They must be very much aware of their level of competence in these and other areas so as not to overstep their limits and skills (Plante, 2007). Additionally concern for the well-being and welfare of others is of the utmost importance to psychotherapy, and this concern for the welfare of others must be exemplified in those who seek to integrate spirituality, religion, and psychotherapy (Plante, 2007)

Related to the values of respect, responsibility, integrity, competence and concern are a number of other ethical issues and concerns that are important to consider when discussing the integration of spirituality and psychotherapy. While there are significant and persistent problems and dilemmas related to integration, many authors have given ethical guidelines, recommendations, and principles which if followed can avoid or reduce potential ethical pitfalls and dangers (Barnett & Johnson, 2001; Pargement et al., 2005; Plante, 2007; 2009). Some of these issues include: imposing the therapist's religious beliefs or values on the client, failing to provide necessary information regarding therapy to the client, the importance of addressing religion and spirituality during assessment, lacking needed competence required to integrate spirituality into psychotherapy, consulting and collaboration with other professionals, boundary issues and multiple relationships, and questioning or disputing religious beliefs.

In regard to imposing beliefs or values on the client, psychotherapy is a value-laden process and empirical studies have revealed that the therapists' values affect the choice of therapeutic goals and the methods and interventions used (Pargement et al., 2005). Furthermore it has been demonstrated that the values of the client

tend to converge towards the values of the therapists (Pargement et al., 2005). As values cannot be removed from the psychotherapeutic process, therapists need to be conscious of the risk of imposing their values on clients (Pargement et al., 2005). Although this concern has often been directed at religiously-oriented psychotherapy, where it is thought to be more likely, it is as applicable to secular psychotherapy as it is to spiritually-integrated psychotherapy (Pargement et al., 2005). In fact, there is no evidence to suggest that therapists who integrate spirituality and spiritual concerns into therapy are more likely to impose their values on clients than are other therapists (Hage, 2006). Psychotherapists have a responsibility to cautiously monitor themselves and to be careful so as not to impose their values on clients (Hage, 2006). This also applies to therapists who exclude spiritual matters from therapy, as they are equally likely to impose secular values on clients (Hage, 2006). The best way to reduce the risk of imposing values on the client is for therapists to acknowledge the framework that guides their work, and be open and honest about their own values and beliefs when appropriate, while strongly affirming the clients' right to choose/disagree (Richards & Bergin, 2004). Richards and Bergin (2004) believe therapists who do so are actually much less likely to impose their worldview and values on clients than therapists who claim to be "value-free."

With regard to providing necessary information regarding therapy to the client; when a psychotherapist's religious beliefs and affiliations are likely to impact the psychotherapeutic process, it is important that therapists provide clear and accurate information to clients and prospective clients, whether the therapist is a secular or faith-based psychotherapist, or falls

somewhere in between (Barnett & Johnson, 2011). This is relevant when advertising services and also during the informed consent process (Barnett & Johnson, 2011). The nature and scope of services offered, including whether religiously or spiritually integrated psychotherapy can be offered, should clearly be stated (Barnett & Johnson, 2011). It has also been recommended that therapists disclose and discuss all other information relevant to the therapeutic relationship and factors that may impact the psychotherapeutic process (Barnett & Johnson, 2011). For example, the psychotherapist's qualifications, approach to treatment, level of comfort and expertise in addressing spirituality and religious issues in treatment are important topics to discuss (Barnett & Johnson, 2011). This information will help clients and prospective clients make more informed decisions about the services and treatment in which they wish to participate (Barnett & Johnson, 2011).

Concerning the importance of addressing religion and spirituality during assessment, a number of authors have highlighted the importance of including an assessment of spirituality and religion at the beginning of the psychotherapeutic relationship (Barnett & Johnson, 2011; Tan, 1996). Doing so would convey to the client the relevance of these subjects to the psychotherapy process, allowing clients to be more comfortable discussing these topics without fear of stigma (Barnett & Johnson, 2011). It may also encourage clients to further consider the roles religious issues may play in their lives and in presenting problems (Barnett & Johnson, 2011). If clients do present with clinically relevant spiritual and religious concerns, knowledge of these issues can guide the therapist to areas needing further exploration and can assist therapists in deciding on the appropriateness of working with such clients

(Barnett & Johnson, 2011). Assessment of spirituality and religion would determine what kind of integrative approach would be appropriate. Goals for therapy including whether spiritual concerns and resources are relevant to the client, and clarification of how these issues will be dealt with in therapy, need to be agreed upon prior to the commencement of therapy (Tan, 1996). Assessments of religion and spirituality assist psychotherapists in fulfilling these ethical and clinical obligations to their clients (Barnett & Johnson, 2011).

With regard to lacking needed competence required to integrate spirituality into psychotherapy; for any psychotherapist or mental health professional to practice ethically and competently, he/she must be aware of and sensitive to the role of religion and spirituality in the lives of clients and be informed about the impact these variables have on health, mental health, and emotional well-being (Barnett & Johnson, 2011). Therapists must also be self-aware and work to minimize biases and misconceptions that could lead to harm, as a lack of respect and knowledge for a client's spirituality and religion may contribute to the client feeling devalued. Psychotherapists must be cognizant of these issues or they will be at risk of inadvertently harming clients, and also of altering their clients' values and beliefs (Barnett & Johnson, 2011).

However, for psychotherapists who desire to use religious or spiritual interventions and to integrate spirituality and religion into psychotherapy, they first need to possess the required competency and to obtain the proper training (Barnett & Johnson, 2005; Hage, 2006; Plante, 2007; 2009). Practicing spiritually-integrated psychotherapy and using religious/spiritual interventions and techniques when not sufficiently competent can cause harm to clients, and therefore referral to an appropriately trained professional maybe

necessary. In addition, continued training is necessary to develop and maintain one's competence level and to ensure clients receive the most appropriate and effective treatment possible (Barnett & Johnson, 2011). It is also important to point out that being a member of a particular faith group or religion does not make a therapist an expert in treating clients from that or any other religious group or in religious areas that were not a part of the therapist's professional training (Plante, 2009). Formal education and study are essential before engaging in spiritually-integrative psychotherapy.

Concerning consulting and collaboration with other professionals, psychotherapists and other mental health professionals have a responsibility to consult with other professionals, with the clients' consent, when it would be in the clients' best interest, when requested to do so by a client or when facing an ethical or clinical dilemma (Barnett & Johnson, 2011; Plante, 2007; 2009). Similarly, when working with spiritually and religiously oriented clients, it may be necessary to consult and collaborate with clergy and spiritual leaders involved in the clients' spiritual and religious lives (Barnett & Johnson, 2011; Plante, 2007; 2009).

Concerning boundary issues and multiple relationships, therapists need to carefully monitor personal and professional boundaries, which can easily be blurred when religion and spirituality are integrated into psychotherapy (Plante, 2007; 2009). Unless they have the required training and credentials, therapists must remember that they are mental health professionals and not theologians or clergy (Plante, 2009). They must be respectful of the roles of religious and spiritual authorities in clients' lives (Plante, 2009) and be cautious not to usurp those roles. For those who do have the necessary training and credentials and thus

maintain both roles, as a psychotherapist and as a spiritual leader of some kind, individuals must be very clear about professional boundaries in order to minimize role confusion and ethical problems related to their dual roles, such as differing legal obligations related to limits of confidentiality (Plante, 2009).

Regarding questioning or disputing religious beliefs, Richards and Bergin (2004) believe psychotherapists need to be discriminating and not approve of all beliefs and practices, recognizing that there are healthy and constructive forms of religion but there are also unhealthy and destructive forms of religion. Fortunately, there is a body of research on religion and mental health that not only provides empirical evidence concerning the positive aspects of religion but that also helps to identify some of the destructive and unhealthy forms of religion (Richards & Bergin, 2004). When religious beliefs are intertwined or they contribute to presenting problems or emotional distress, it may be necessary to determine whether the clients' belief is in harmony with the official teachings of the clients' religious/spiritual tradition. Often clients' behaviour is much more intolerant and rigid than the official teachings of their religion (Plante, 2009; Richards & Bergin, 2004). While required to be respectful of religious traditions and beliefs, therapists are not required to be complacent or to condone destructive thoughts, feelings or behaviours (Plante, 2009). However, efforts to directly challenge or modify religious beliefs should only be attempted when the psychotherapist has substantial specialized competence in this area, the therapists should recognize that and appropriate collaboration or referral to other professionals may be necessary (Barnett & Johnson, 2011).

Other possible dangers of integrating spirituality into psychotherapy include spiritual reductionism (trying to reduce

spirituality to more basic psychological, social, or physiological processes, needs and motives) or trivializing spirituality (viewing it as just another psychotherapeutic tool, while failing to recognize that for some, spirituality is not just a tool or resource for psychotherapy, but the meaning and goal of life itself involving the most sacred of beliefs, practices, emotions, and relationships) (Pargement et al., 2005). Also, there is the danger of overemphasizing spirituality in psychotherapy and thereby misusing or abusing it, for example by focusing on and stressing religious or spiritual goals rather than therapeutic goals, avoiding painful issues in therapy by misusing or abusing spiritual resources like Scripture and prayer, or by only using spiritual interventions when medication or other medical or psychological treatments are necessary (Tan, 2003). Therapists need to avoid making religion or spirituality a preeminent focus when they are not significant concerns for the client (Barnett & Johnson, 2011).

The list of ethical issues reviewed above is not exhaustive. However, included are many of the major concerns inherent in any religious or spiritual approach to psychotherapy and as was mentioned many authors have discussed how to deal with these difficulties. Richards and Bergin (1997) have provided a cautious and comprehensive list of ethical guidelines and recommendations for religiously oriented or spiritually integrated psychotherapy. Similarly, Barnett and Johnson (2011) have proposed an ethical decision making process model to assist psychotherapists who are faced with ethical challenges and dilemmas such as those highlighted above. Steps in that model include: respectfully assessing the client's religious or spiritual beliefs and preferences, carefully assessing any connection between the presenting problem and religious or spiritual beliefs and

commitments, weaving results of this assessment into the informed consent process, honestly considering countertransference to the client's religiousness, honestly evaluating competence in the case, consulting with experts in the area of religion and psychotherapy, if appropriate, clinically indicated, and the client gives consent, consulting with client's own clergy or other religious professionals, making a decision about treating the client or making a referral, assessing outcomes, and adjusting the plan accordingly.

Training

Religious and spiritual integration and related interventions may be particularly important to highly religious and spiritual clients who fear being misunderstood or judged in secular settings (Tan, 1996). Existing research suggests that some spiritual or religious clients may be apprehensive about seeking psychotherapeutic treatment for fear of stigma or they may discontinue therapy because they feel their spiritual views are devalued or misunderstood (Gockel, 2011). Religious clients have concerns about being misunderstood by a secular therapist who fails to comprehend religious ideas or terminology and who may pathologize or ignore spiritual or religious issues (Tan, 1996).

Of course there are those who would not want to talk about spiritual concerns in therapy and these people have every right to choose not to; if the client shows no interest in spiritual and religious matters, therapists should respect the client's preferences (Tan, 1996). However, for many clients who would like to raise spiritual concerns in psychotherapy, psychotherapists and psychotherapy in general should be prepared for this discussion (Pargement et al., 2005). Psychotherapy therefore should be committed to providing informed and

sensitive care for all clients, whether they embrace religion, spirituality or neither (Worthington, 2011). Instead, many mental health professionals change the subject when the topic of spirituality is raised and completely side-step spiritual or religious questions (Pargement et al., 2005). Many are open to the spiritual dimension in psychotherapy, but do their best to avoid these areas because they are uncomfortable and unsure about how to address spiritual matters, due in part to the lack of available training (Pargement et al., 2005)

While psychologists support the inclusion of spiritual and religious education in training programs, few graduate programs do so, leading many authors to comment on the lack of adequate training in this area (Barnett & Johnson, 2011; Hage, 2006; Richards & Bergin, 2004). Generally psychotherapists do not receive the necessary training to meet clinical needs relevant to spiritual and religious concerns and research shows that these subjects are integrated into psychotherapy training programs in a very sporadic and inconsistent manner (Barnett & Johnson, 2011). Warnings of possible results of this lack of training and the impact on clients include minimizing the worth of spirituality and religion in clients' lives, pathologizing religion and spirituality, and perhaps mismanaging countertransference (emotional) reactions to clients religiosity or spirituality (Barnett & Johnson, 2011). Furthermore, clinical faculty and program leaders report minimal competency in issues such as spiritual and religious diversity and interventions, as well as very little actual integration in their training curricula (Hage, 2006). It has also been found that little effort has been made to introduce and educate students on spiritual and religious topics and supervisors and faculty members are generally not expected to be

knowledgeable about diverse spiritual and religious traditions (Hage, 2006).

Given the positive association of religious and spiritual variables to mental and physical health outcomes, therapists who lack training in religious/spiritual topics and those who lack an understanding of the role these variables play in health, may inappropriately neglect important aspects of their clients' lives (such as their spiritual or religious experience), that could be of significant therapeutic value (Hage, 2006). Ultimately then, failure to integrate spiritual and religious content into psychotherapy training can have significant consequences on the well-being of individuals and families as well as on the overall efficacy and successfulness of treatment (Hage, 2006). Psychologists who lack competency and knowledge in spiritual and religious issues and techniques, such as prayer and meditation, may fail to inform clients of these alternative treatments and interventions. Clients may not ask for these options, possibly because they are uncomfortable doing so or because they assume spiritual and religious topics are inappropriate to discuss in therapy since the therapist has not mentioned these topics in discussion. The lack of religious and spiritual training impacts the process and results of therapy, since the possible beneficial interventions available to the client are limited by the therapist's knowledge of spiritually oriented methods (Hage, 2006).

Additionally, this lack of training further risks alienating clients who have religious or spiritual concerns, especially if the therapist lacks cultural self-awareness of his/her own spiritual/religious beliefs and values. These psychotherapists may have biases and stereotypic attitudes about people of different religious and spiritual backgrounds that affect their views and judgments of people and their behaviour and

can lead to miscommunication and misunderstandings between clients and counselors (Hage, 2006).

Psychotherapists who integrate spirituality and religion into therapy must seek sufficient training before doing so. Since most mental health training programs are inadequate in training therapists in this area, many psychotherapists are on their own in ensuring they get the necessary training and supervision (Plante, 2009). Fortunately, many resources are available to assist therapists in obtaining adequate competency and training in religious and spiritual areas (Richards & Bergin, 2004). There is an extensive body of literature on the relations among spirituality, religion, mental health and psychotherapy and specialized courses and continuing education workshops on these topics are becoming more widely available (Richards & Bergin, 2004). Richards and Bergin (2004) have offered some recommendations for therapists who would like to integrate spiritual and religious perspectives and interventions into their work. Therapists should obtain training in multicultural counseling, read relevant scholarly literature in mainstream mental health journals and in specialty journals devoted to these topics and books on the psychology and sociology of religion and spiritual issues in psychotherapy. Therapists should take workshops or classes on the psychology of religion and mental health and spiritual issues in psychotherapy. Therapist should read good books or take a class on world religions and seek in-depth knowledge about religious traditions they frequently encounter in therapy. Therapists should seek supervision and/or consultation with colleagues when they first work with clients from a particular religious or spiritual tradition, when clients present challenging spiritual issues, and when they first use religious and spiritual interventions.

Richards and Bergin (2004) also encourage leaders of graduate training programs to include spiritual and religious content in graduate training curriculum and clinical training experience.

Conclusion

Since the vast majority of the world's population tends to be religious and spiritual, those who are involved with spiritual and religious issues are likely to find their way to psychologists and other mental health professionals (Plante, 2007). Therefore psychotherapists and psychotherapy in general have a responsibility to be competent in and prepared to address these issues in therapy (Pargement et al., 2005). Furthermore, the APA's guidelines to be respectful and knowledgeable of religious diversity issues call for this. However, as mentioned there is a lack of training in these areas and more and better training, clinical experience, supervision, consultation and empirical and qualitative research are needed (Tan, 2000; 2003).

Nevertheless, educational opportunities are increasing, and spiritually-integrated psychology likely has many benefits for both professionals and the public (Plante, 2007). Spiritually-integrated psychology can contribute to the progress of psychological science and practice by suggesting new theories and new ways of thinking that can contribute important insights into previously neglected characteristics of human nature, personality, therapeutic change, and the practice of psychotherapy. (Richards & Bergin, 2004).

Although there are a number of concerns that can make ethical and clinically effective treatment challenging, research can help therapists better understand how to effectively respond to the challenges of working with spiritual and religious clients (Barnett & Johnson, 2011). Closely monitoring ethical issues, being thoughtful

of ethical principles and possible ethical pitfalls and getting appropriate training can greatly help mental health professionals successfully face these difficulties (Plante, 2007). Pargament et al. (2005) believe the greater danger currently facing psychotherapy is in neglecting the spiritual domain.

Spiritually-integrated psychotherapy will enhance the ability of mental health professionals to understand and work more sensitively and effectively with their religious and spiritual clients, thereby greatly improving psychological practice (Richards & Bergin, 2004). The result will be a more comprehensive, inclusive, and integrated system of care for the diverse individuals therapists encounter in treatment, and psychotherapy, consequently, should be committed to providing informed and sensitive care for all clients, whether they embrace religion, spirituality or neither (Pargament et al., 2005; Worthington, 2011).

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Gender Differences in the Perception of Domestic Violence

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The current experimental study seeks to examine a bias between male victims and female victims in cases of intimate partner violence and its effect on the low amount of cases reported involving male victims. The bias, in short, is that females are more likely to be victims, more likely to develop negative emotions, and are more innocent than males. This bias is also examined with the influence of police response. Each participant was given a scenarios depicting differing levels of intimate partner violence, police response and victim/perpetrator gender. Independent measures were used to extrapolate the data. Significant effects were found between victim responsibility, necessity of conviction, probability of the victim experiencing personal distress. A three way interaction between victim gender, participant gender and appropriateness of police response was also uncovered.

Gender roles and gender differences are aspects of our culture that have existed for as long as there have been biological differences between the sexes. The idea of a weak female and a strong male has permeated every aspect of our society; a brave young man fighting off adversaries on the quest to save his helpless female counterpart from certain doom. This idea has been the basis of movies, video games, books, and other dramatical productions for centuries. The idea of the dominant male and the inferior female has become an unconscious bias within most of us.

Domestic violence or intimate partner violence as it is often called is quite common but is reported far less than it should be. While there is no specific crime labelled as family or intimate partner violence in the Canadian Criminal Code, perpetrators can be charged with any or several of the following, mischief, assault, sexual assault and variations within, forcible confinement, harassment, uttering threats, and attempted murder (Justice Canada, 2012). Although crime rates are continuously falling within Canada each year, the rate of women being charged in police reported crimes is continuously increasing (Brennan, 2012.) The increase in female charges though is at first puzzling because of the aforementioned bias that is

prevalent throughout our society. It is undoubtedly the effect of the average man being bigger than the average female that we usually fall to the thought that the female is always the victim of a case of between gender violence. In reality, though women are more seriously injured by men in cases of domestic assault (Carney, Buttell & Dutton, as per Serin et. al. 2011), women are also likely to engage in more minor violence (slapping, throwing something with the intention to injure) than are men (Strauss as per Serin et al. 2011.)

There also exist differences in the prosecution and outcome of intimate partner violence when there is a female victim with a male perpetrator versus a male victim and a female perpetrator. When a male was injured by a female the female was charged only 60% of the time compared with the 91% conviction rate of males injuring females. When the violence resulted in no injury the conviction rate for male perpetrators is 52% while being a miniscule 13% for female perpetrators. In cases of severe injury, men were convicted 71% of the time while females were convicted just 22% of the time (Brown as per Serin et al. 2011). The continuum of the gender differences may lead to these glaring statistics. While less than a quarter (~22%) of all domestic violence is reported to the

police (Statistics Canada, 2011), men are less likely to report being the victim of violence by a female and are less likely to testify about their case in court. This is likely because of the negative light that would be shed on them by their peers. It has come to my interest that the effects and prevalence of this social construction within the confines of domestic or intimate partner violence. What happens when a man is the victim? How is this case handled differently than that in which there is a female victim and why?

Even though domestic violence is not always reported, Statistics Canada reports “the 2009 General Social Survey (GSS) found that self-reported spousal violence remained stable from 2004, when the survey was last conducted. Similar to 2004, 6% of Canadians with a current or former spouse reported being physically or sexually victimized by their spouse in the 5 years preceding the survey (Statistics Canada, 2011). Even though 6% does not seem like a staggering figure, it is self-reported and in reality is more than likely higher than what is reported. Some literature even reports that intimate partner violence is believed to possibly be around 25-35% in Canada (Clark & Dumont, 2003, as per Belfrage et al., 2012) with upwards of one third of the population experiencing intimate partner violence, surprisingly very little in terms of help for male victims is available. There are literally thousands of venues for women to get help and protection from abusive males, such as help lines and shelters but the opposite is rare.

Hand in hand with domestic and intimate partner violence is the controversial issue of victim blame. This is the idea that the victim of a crime is fully or at least partially responsible for the committing of the crime, as in, they deserved it. The bias between male and female victims is also present here. Male victims are subject to

detrimental judgements for victim responsibility. As reported in a study on sexual crimes by Rye, Greatrix and Enright in 2006,

“A male victim tended to be blamed more for his victimization than a female victim was for hers. This was particularly true when the perpetrator was male. Generally, a female perpetrator was held less culpable for the crime than a male perpetrator was. A male perpetrator and female victim dyad resulted in the greatest perpetrator blame and the least victim blame.”

Because male victims are often perceived as being more responsible for the committing of intimate partner violence, this may also be a contributing factor for the decreased amount of female perpetrated intimate partner violence cases that are reported.

Police officers are seen as the front line of dealing with intimate partner violence. They are often the first responders and have the ability to press charges independent of victim's desire. In many instances police officers have become more proactive in dealing with IPV (Belfrage et al. 2012). Several policing agencies such as the Ontario Provincial Police, OPP have devised tools to help with the management of IPV calls. The OPP has the ODARA, *Ontario Domestic Assault Risk Assessment Guide*, which is, according to Belfrage et al. (2012), a 13 part risk assessment tool constructed from the comparison of groups of males who were convicted of intimate partner violence against a female victim? This tool may be useful in the cases with male perpetrators and female victims, it may ultimately be useless with female perpetrators and male victims. Law enforcement agencies lack tools and training based solely around female perpetrators and male victims and their training often seems

to be biased in the same way society is. This bias does make sense because the majority of the IPV calls the police receive are due to a male perpetrator. This does leave some large questions surrounding the response of the police to certain cases of IPV. If the police officers responding to calls base their response less on the severity of the situation at hand and more on the gender of the perpetrator would we see differences in their response to female perpetrators in comparison with male perpetrators? The unfortunate assumption is yes. With the numerous cases of police violence and charges against police officers for using excessive force, officers would be less inclined to subdue a female because of the gender bias. A 6 foot 4 inch, 220 pound police officer wrestling a 5 foot 3, 125 pound female subject to the ground is a lawsuit waiting to happen, regardless if said female is believed to be armed and dangerous while this police reaction to a male would be seen as appropriate.

It is upon the foundation of the female victim bias that this study is created. It is a goal to examine the perception of the public of IPV cases in which there are male and female victims. It is hypothesized that cases involving male victims will be seen as less severe, less likely to result in negative emotions as well as having more appropriate police reactions. In comparison, it is believed that participants will perceive female victims to be less responsible than male victims for the crime as well as needing more time to recover from the negative emotions that IPV will cause the victim.

Method

Participants

A total of 117 (88 females, 22 males, and 7 unidentified) people participated. Participants were accumulated via social media sites such as Facebook and Twitter. For both sites, the questionnaire

(hosted by SurveyMonkey.com) was presented under my personal profile of Mike Hayward Walsh on Facebook and as @michaelwalsh on twitter. Participants were also gathered using a mass email by Dr. Kelly Warren to the students of Grenfell Campus Memorial University of Newfoundland. Participants were also freely invited to share a link to the questionnaire. The survey was shared in this manner via other peoples Facebook pages along with personal blogs. People only of age 16 and above were permitted to participate and each participant had to provide their age. Participants were forewarned of the violent nature of the scenario they were about to read.

Materials and Procedure

The questionnaire was hosted by www.surveymonkey.com. Each participant was presented with a briefing (see Appendix A) which notified them that their participation was completely voluntary and that they could drop out at any time. This briefing also warned the participant that they would be asked to read a scenario depicting intimate partner violence upon which they would be asked to respond to several questions. The participants were not made aware that they would receive only one of six possible scenarios (see Appendix B). The scenarios were fictitious but depicted intimate partner violence between romantic couples of heterosexual adults who were in exclusive relationships. These scenarios were different in violence of perpetrator, perpetrator gender, and the police response to the scenario. A total of 6 different scenarios were used. One of them depicted a violent crime, throwing of a book, by a male at a female, in which the male was violently arrested (noncompliant and then tackled) when the police arrived. The following scenario was a female throwing the book at a male and being noncompliant with police. Then there were two scenarios alternating

between male/female victims and perpetrators where the perpetrators level of violence was lessened, locking the victim in the bathroom.

There were two different police responses that both were matched with a male victim and female victim scenario. One was an arrest being made in which the perpetrator was struggling and noncompliant with the officers. The other was a situation where the police did not make an arrest in the situation but provided advice to the couple to seek counselling to help reduce the frequency and the violence of the incident.

Upon the participants' completion of reading the scenario, they were presented with questions (see Appendix C) that were meant to gauge their reaction to the intimate partner violence depicted. These questions were aimed to reveal the participants' perception of the incident. The questions for each scenario only differed in same way that the scenarios did, (i.e. changing the names of the perpetrator and victim.) The perception of the violence of the perpetrator, the responsibility of the victim for what happened to him/her, the likelihood of long lasting psychological issues for the victim as well as the appropriateness of the police response were a few of the questions presented to the participant.

The participants were also provided with a debriefing (see Appendix D) at the end of their participation in the study. This debriefing told them that the purpose of the study was to gain insight into the perception of gender biases in both the perceived severity of the incident as well as in the perceived police response to it. Participants were also recommended to contact either myself or Dr. Kelly Warren should any negative issues arise from their participation. They were also advised of a domestic violence hotline that they could use if they found such action necessary.

Results

Table 1 shows the descriptive statistics for each question of the questionnaire. A series of independent measures ANOVAs were conducted on the data that was collected. A significant main effect was found for responsibility of participant gender for two areas. The first was victim responsibility, $F(1,98) = 6.37, p = .20, \eta_p^2 = .054$. Males scored victims as more responsible ($M = 2.84$) than females did ($M = 1.98$) with a mean difference of .867. There was also a significant difference in the length of time it would take victims to recover $F(1,98) = 4.40, p = .038, \eta_p^2 = .043$. Females ($M = 5.32$) though it would take female victims longer to recover than male victims ($M = 4.59$) with a mean difference of .73.

There was also a significant main effect for police response on several questions. When it comes to appropriateness of police reaction $F(2,98) = 25.27, p < .001, \eta_p^2 = .340$. Violent arrests ($M = 5.95$) and typical arrests ($M = 5.78$) were seen as more appropriate than the police not making an arrest ($M = 3.11$) with a mean difference between violent arrests and no arrests of 2.84. The mean difference between typical arrests and no arrests is 2.66. The mean difference between violent arrest and typical arrest was .18 and was not significant.

Likewise, police response had a significant main effect on how necessary participants saw criminal conviction to be, $F(2,98) = 4.40, p = .015, \eta_p^2 = .082$. Participants viewed conviction to be more necessary when there was a violent arrest ($M = 5.25$) compared to a typical arrest ($M = 4.42$), mean difference of .84 (nonsignificant) and compared to no arrest ($M = 3.62$) mean difference of 1.64.

Interestingly, police response also had a significant effect on how responsible participants viewed victims to be for what happened to them. $F(2,98) = 4.98, p = .009$,

$\eta_p^2 = .092$. Scenarios with no arrest made ($M = 2.93$) were viewed as having more victim responsibility than scenarios with a typical arrest ($M = 1.73$) with a mean difference of 1.20. The mean difference between no arrest made ($M = 2.93$) and violent arrest made ($M = 2.57$) was 3.58 and was nonsignificant.

There was also a main effect for victim gender for victim responsibility, necessity of conviction, and probability of future distress. When it comes to victim responsibility, $F(1,98) = 6.37, p = .013, \eta_p^2 = .061$. Male victims ($M = 2.87$) were seen as being more responsible than female victims ($M = 1.95$) with a mean difference of .93. Conviction was seen as more necessary in cases in which there was a female victim ($M = 4.85$) than in cases with a male victim ($M = 4.008$) with a mean difference of 8.41., $F(1,98) = 3.98, p = .049, \eta_p^2 = .039$. For future distress, $F(1,98) = 4.908, p = .029, \eta_p^2 = .048$, female victims ($M = 6.32$) were seen as more likely to develop psychological distress as a result of the incident than were male victims ($M = 5.61$).

There was also a significant interaction between the appropriateness of police response and victim gender for necessity of police intervention and victim responsibility. For victim responsibility, $F(2,98) = 5.58, p = .005, \eta_p^2 = .102$, it was determined that for scenarios where no arrest was made, male victims ($M = 4.21$) were seen as more responsible than females ($M = 1.65$) for the same police response. Other police responses produced no significant differences.

For necessity of police intervention, $F(2,98) = 6.259, p = .003, \eta_p^2 = .113$, it was determined that when no arrest was made with a male victim ($M = 5.21$) police intervention was seen as less necessary than with a female victim ($M = 6.56$). Typical arrests were seen as an indication that the police needed to be alerted more often to female victims ($M = 6.77$) than for male

victims ($M = 5.18$) Violent arrests were seen as an indication that police needed to get involved more with a male victim ($M = 6.42$) than with a female victim ($M = 5.30$). These factors, appropriateness of police reaction and victim gender were also a part of a three way interaction with participant gender. Figure 1 shows the three-way interaction for male participants and Figure 2 shows the three way interaction for female participants.

This three way interaction was effective for the necessity of police violence. Male participants viewed that a police intervention was more necessary when there was a violent arrest on a female perpetrator ($M = 6.50$) than when there was a violent arrest on a male perpetrator ($M = 4.00$). Male participants also perceived police response to be less necessary in cases with no arrest and a male victim ($M = 4.50$) than female victims ($M = 7.00$).

Independent measures ANOVAs that were victim gender specific also revealed significant main effect for participant gender on male victims for severity of perpetrators actions $F(1,42) = 6.64, p = .014, \eta_p^2 = .136$, necessity of conviction $F(1,42) = 5.50, p = .024, \eta_p^2 = .116$, and length of emotional and psychological $F(1,42) = 6.05, p = .018, \eta_p^2 = .126$. Female participants ($M = 5.93$) saw perpetrators actions as more dangerous than male participants did ($M = 5.02$). Female participants ($M = 4.63$) also saw conviction as being more necessary than male participants did ($M = 3.38$). Likewise, female participants ($M = 5.30$) also perceived it would take victims longer to recover from negative emotions than male participants ($M = 4.15$).

These gender specific ANOVAs also revealed a significant main effect for appropriateness of police reaction for male victims $F(2,42) = 3.85, p = .029, \eta_p^2 = .155$. It was seen that participants saw no arrest as

being more inappropriate ($M = 3.56$) when compared to violent arrests ($M = 5.63$) and typical arrests ($M = 5.26$). A significant main effect was also shown for male victim responsibility $F(2,42) = 4.09, p = .024, \eta_p^2 = .163$, in which situations where no arrest was made male victims were seen as more responsible ($M = 4.21$) than in situations with a violent arrest ($M = 2.29$) and a typical arrest ($M = 2.12$). Police response also had a significant main effect for male victims on necessity of criminal conviction, $F(2,42) = 6.94, p = .002, \eta_p^2 = .284$. Violent arrests ($M = 5.33$) were seen as having higher necessity of criminal conviction than typical arrests ($M = 3.83$) and no arrests ($M = 2.87$).

Gender specific ANOVAs for female victims reported a significant main effect of participant gender for victim responsibility, $F(1,56) = 4.48, p = .039, \eta_p^2 = .074$. Male participants viewed female victims as more responsible ($M = 2.39$) than female participants did ($M = 1.51$).

These female victim specific ANOVAs also revealed significant main effects of police response appropriateness $F(2,56) = 55.12, p < .001, \eta_p^2 = .587$. Cases in which there was no arrest were seen as less appropriate ($M = 2.67$) than cases with typical arrests ($M = 6.28$) and violent arrests ($M = 6.28$). A significant main effect was also revealed between police response and victim responsibility for female victims, $F(2,56) = 3.30, p = .041, \eta_p^2 = .108$. In this case, female victims were seen as more responsible in cases of violent arrests ($M = 2.85$) than in cases with typical arrests ($M = 1.35$) and no arrest ($M = 1.65$).

Discussion

Generally the results support the hypotheses. Male victims were seen as more responsible for what happened to them. Males were also expected to develop less negative emotions as a result of the incident than their female counterparts. Also in congruence with the hypothesis was the fact

that participants viewed female victims as less responsible for the actions of a male perpetrator. Female victims were also expected to take longer to recover from possible negative emotions. These results are the same as what is documented in the literature. Here it is possible to see the way that the perception of cases of IPV is not in the favor of male victims. This is likely an influential factor in the low, unrepresentative numbers of female on male IPV cases.

There was a surprising result in the appropriateness of police response however. It was seen by participants that a violent arrest on a female perpetrator was seen as more appropriate than a typical arrest or no arrest. This result may have a biological basis. Because women are naturally smaller than men, if a woman is angry enough to need to be arrested violently by the police, it is likely she may have been using a weapon to cause damage to the male victim. The three way interaction between participant gender, victim gender and police response accurately depicts this finding. The male participants saw that a woman who was behaving violently enough to be violently arrested was a lot more dangerous. This is where the interaction occurs; the male participants saw the female as more dangerous.

There was also interesting results in terms of when the victim is responsible in terms of police response. The data shows that victims of both genders were seen as more responsible when no arrest was made. Relatedly, male victims were seen as more responsible over all.

Future research conducted in this area could be useful in the construction of a male version of a IPV risk assessment and management tool like Ontario Provincial Police's ODARA. Research in this area could also explore ways to help male victims find help more easily. Finding ways to help

men fear judgement would also be helpful. A possible study that could be carried out is using names in scenarios that are not gender specific. Other research in this area could result in changes to laws and more fairly conducted trials.

The results of the study conclude that the male victim/ female victim bias is a

problem within our society. Male victims and female victims do not share the same starting point for getting help, sympathy or empathy. Changes need to be made within our cultures to allow IPV crimes to be more fairly perceived.

Table 1

Descriptive Statistics for Perceptions of the Questionnaire

Question	Gender		
	Male <i>M(SD)</i>	Female <i>M(SD)</i>	Total <i>M(SD)</i>
Perceived danger	5.66 (1.14)	5.94 (1.15)	5.82 (1.15)
N	50	66	116
Appropriateness of tenant response	5.88 (1.19)	6.17 (1.45)	6.04 (1.45)
N	51	66	117
Necessity of involving police	5.68 (1.42)	6.42 (1.32)	6.10 (1.32)
N	51	66	117
Severity of situation	5.76 (1.15)	6.09 (1.16)	5.95 (1.16)
N	50	65	115
Appropriateness of police response	4.88 (1.78)	5.05 (1.93)	4.97 (1.93)
N	51	64	115
Victim distress	5.84 (1.46)	6.29 (1.22)	6.09 (1.22)
N	51	66	117
Victim responsibility	2.60 (1.71)	1.55 (1.45)	2.02 (1.45)
N	51	65	116
Necessity for conviction	4.42 (1.62)	4.72 (1.64)	4.59 (1.64)
N	50	66	116
Victime recovery time	5.00 (1.13)	5.32 (1.30)	5.17 (1.30)
N	51	66	117

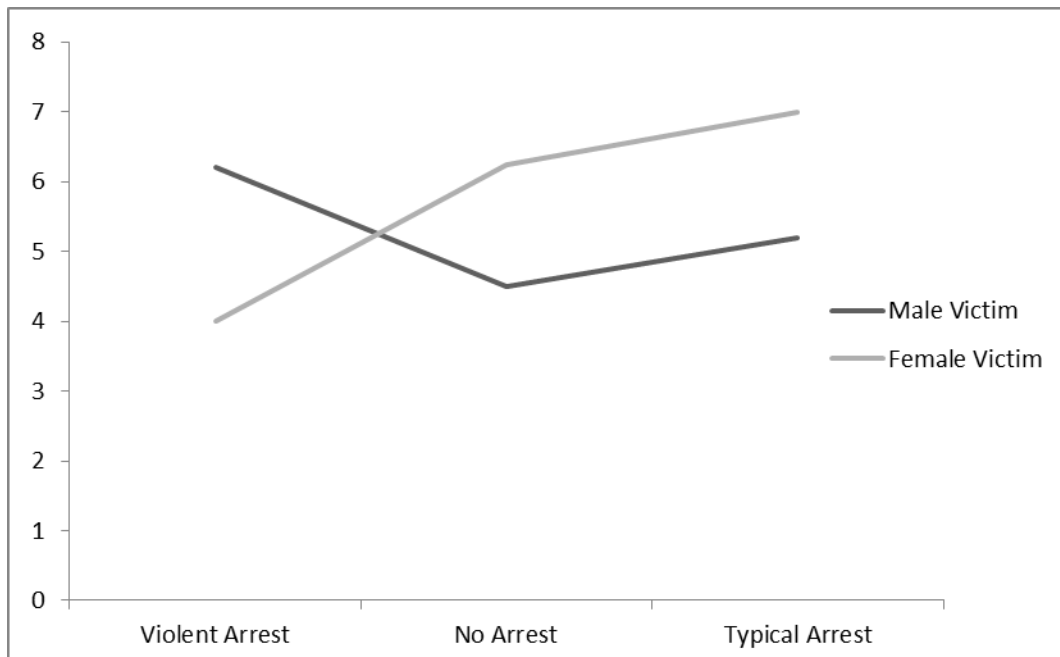
GENDER DIFFERENCES IN DOMESTIC VIOLENCE

Figure 1. Male participant perception of three-way interaction.

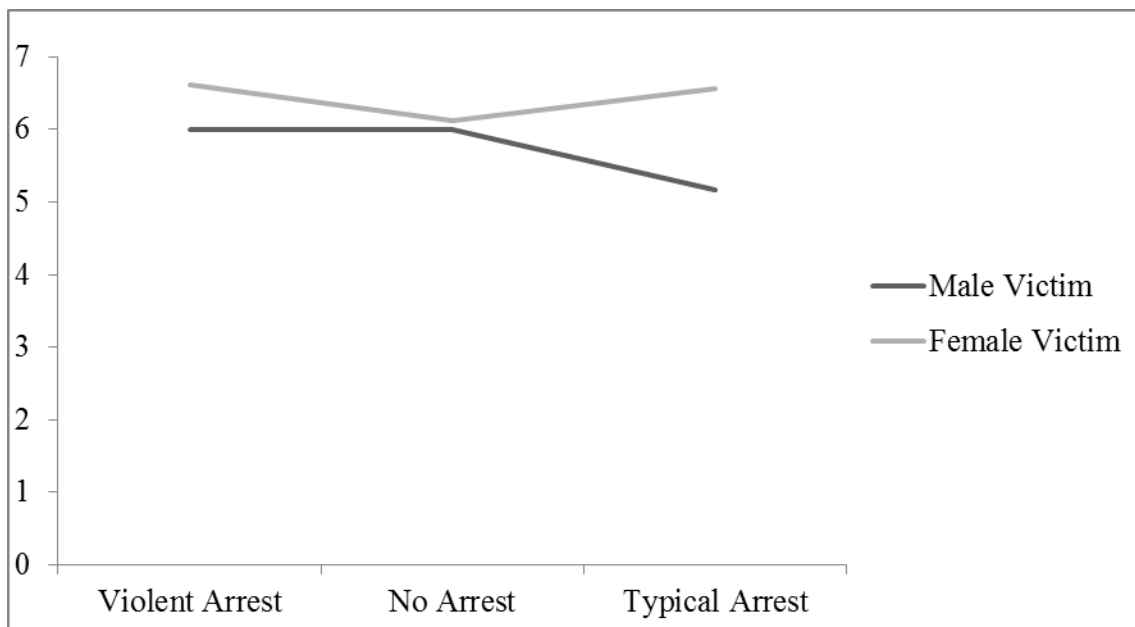


Figure 2. Female participant perception of three-way interaction.

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Appendix A

Briefing

This study is being conducted to look at how you perceive domestic violence. It is being conducted at Grenfell Campus, Memorial University of Newfoundland as

part of the requirements for Psychology 4950 (independent project in psychology) by Michael Walsh under the supervision of Kelly Warren. Upon participating you will be asked to read a scenario that depicts domestic violence. By participating in this study, your consent is assumed, and it is also assumed that you are over the age of 16-years-old. It will take approximately 10 minutes to complete the survey. There are no obvious risks or benefits involved with this study, and your responses are anonymous and confidential. No IP addresses will be collected. All information will be analyzed and reported on a group basis, and therefore individual responses will not be identified. Your participation is totally voluntary and you are free to stop participating at any time prior to finishing the survey.

Please read each question and the instructions carefully and then answer the questions as truthfully as possible.

Self-Harm Among Adolescents

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Self-harming behaviours have increased in frequency within the last few years, especially among adolescents. Self-harming behaviour is typically defined as self-injury that is not life threatening and without any suicidal intent. Previous research has consistently shown that adolescent females are engaging in self-harming behaviour more frequently than adolescent males. Some common methods of self-harming behaviours include cutting, burning, severe scratching, and drug overdosing. Some of the important precursors to one's choice to engage in self-harming behaviours involve one's experiences within his/her life; one's perception of his/her self, his/her family life, his/her social life, and the media. While there is plenty of research regarding the topic of self-harm, research is still limited in explaining why self-harming behaviour occurs and future research is needed to truly understand and be aware of the leading causes of self-harming behaviour.

Self-harm is viewed as a major public health concern with extremely high occurrence rates among adolescents. Self-harm is commonly defined as being any form of deliberate and voluntary behaviour that is not life threatening and that has no suicidal intent. (Hawton, Saunders, & O'Connor, 2012). Self-harm may also be referred to as self-destructive behaviour, non-suicidal self-injury, and self-mutilation. Although self-harm may occur at any age, adolescents are the group of individuals that usually turn to self-injury as a way of coping with their issues. Adolescence is a period of one's life that involves the transition into the adulthood and usually involves a number of physical, emotional and biological changes. Prevalence rates of self-harm have been reported to be 12-23% among adolescents, and 12-82% among a clinical population of adolescents (Washburn et al, 2012). Many theoretical models have been developed to try to explain why self-harming occurs. Psychodynamic theorists feel that people engage in self-harm as a way to gain control over certain aspects of their lives. While a folk explanation of self-harming behaviour involves concepts such as manipulation of other people, impulsiveness, and low self-esteem (Nock, 2009).

Common methods of self-injury that

many adolescents tend to engage in are self-mutilation (e.g., cutting), self-battery (e.g., banging one's head against a wall), overdosing on drugs, eating disorders, burning one's self, and/or jumping from heights which would not result in death. Researchers have found that the most prevalent form of self-injury that exists is the cutting of one's self (Hawton et al, 2012). It is commonly found that more females engage in these self-harming behaviours than males, but some studies have found similarities or no differences among genders (Laye-Gandhi & Schonert-Reichi, 2005). Females may report engaging in self-harming behaviour more than males because males fear being looked down upon in society and recognize societal views that males should be "strong" and should not show any signs of weakness. The reason behind the increase in frequency of self-harming behaviours is unclear to most researchers. However the greater availability of medication, increased stress, increased alcohol and drug consumption are seen as possible contributing factors (Hawton et al., 2012). Why do adolescents intentionally hurt themselves? Researchers have found that the majority of adolescents who engage in self-harming behaviours may also meet the criteria for a mental illness and/or a

personality disorder.

It has been noted that self-harming behaviours can serve four different functions on two different dimensions: whether the reinforcement for the behaviour is positive or negative, and whether the contingencies are interpersonal (automatic) or intrapersonal (social). Automatic negative reinforcement involves the decrease of internal states (e.g. the reduction of negative feelings and attitudes) whereas automatic positive reinforcement involves an increase in a favourable internal state (e.g. feeling satisfied after harming one's self). In contrast, social negative reinforcement involves a decrease in an external social outcome (e.g. peers stop bullying). Whereas, a social positive reinforcement involves the increased likelihood of a favourable external social outcome (e.g., social support, attention). (Nock, Teper, & Hollander, 2007).

Past research has indicated that the main precursor to one choosing to engage in self-harming behaviours is the interactions he/she experiences in his/her life. Previous research has suggested that most self-harming behaviours take place when one is placed in and/or dealing with internal or interpersonal distress as it relates to the person's perceptions of him/herself. (Hilt, Cha, & Nolen-Hoeksema, 2008). Perceptions of one's self would include one's self-esteem, self-confidence, and personality. For example, an introverted person who maintains a low self-esteem and self-confidence is more likely to engage in risky behaviours than an extroverted person who has a high self-esteem and self-confidence.

Our family and social life play a major influence at every stage of our life, but in adolescence our family and especially our peers are our major source of support for the issues and problems we may face. If someone poorly communicates with his/her

parents, he/she may not feel as comfortable discussing an important dilemma or issue that may be bothering him/her as someone who has an open, supportive relationship with his/her parents. With one's social life, we all feel the need to fit in with our peers especially during adolescence. If someone has trouble making friends he/she may be more likely to give into peer pressure which may cause him/her personal distress or to feel ashamed which may lead to self-harming behaviours.

Although, the literature discussing the phenomena of self-harm is limited, it has gained widespread attention in the media: being mentioned in popular songs, movies, and magazines, and on websites that are directed towards teenagers and young adults (Derouin & Bravender, 2004). Although the media has raised attention regarding self-harm, it can also be seen as factor that can lead to one engaging in this behaviour. The media is what often creates the stigma that surrounds the behaviours of self-harm, such as the stigma that exists suggesting those who self-harm are "emo" or "gothic" and that they are just doing it for attention. These stigmas may increase the frequency of self-harming behaviours. Also the media portrays the suggestion that there is just one type of body image that would be considered attractive. It is important to become aware of the precursors that lead adolescents to engage in self-harming behaviours such as their perceptions of themselves, their relationships with family and friends and their exposure to the media.

Perceptions of One's Self

How adolescents view themselves is probably the biggest influence in reasoning about engaging in self-harming behaviour. Clinical psychologist, Lavinia Albescu (2013) stated that there were three common ways that influence how adolescents perceive themselves, including: the notion of social comparison, how individuals evaluate

their own opinions and abilities and how individuals learn to define themselves. For example, an adolescent girl may compare her appearance to the appearance of one of the “popular” females in her age group. Self-esteem and the factors that contribute to it (i.e.: personal experiences, personality traits, etc.) influence the perception of the self, and values of the ideal self also influence the perception of one’s self.

When comparing themselves to others, adolescents are likely to use the notion of social comparison, which states that people evaluate themselves in comparison to their perceptions of others’ attitudes and behaviours, leading to a favourable sense of self (Heilbron & Prinstein, 2008). This notion of social comparison may increase one’s negative emotions and feelings of worthlessness if the adolescent is trying to live up to the expectations of that person. With the example, of an adolescent female comparing her appearance to another female who is considered “popular” amongst her peers and whom she does not match in appearance, this may lead to negative feelings of self-worth. In order to alleviate these negative feelings of self-worth, many adolescents turn to self-harming behaviours as coping mechanisms and as a way of reducing these negative emotions for a short period of time. Supporting this notion, Laye-Gindhu and Schonert-Reichi (2005) reported that half of their sample of both adolescent males and females reported negative feelings prior to the self-harm behaviour and a reduction in those negative feelings shortly after engaging in the self-harming behaviour.

One’s self-esteem can be considered fragile with many factors potentially fracturing it. With adolescents, the factors that are commonly seen to influence adolescent’s self-esteem are their physical appearance, their relationships with peers and family, and the changes they face when

moving through the transition from one stage of education to the next (e.g. elementary to junior high and then from junior high to senior high). The changes one may face when transitioning into a new stage of education may cause one to feel inferior or inadequate in his/her new surroundings. These feelings of inferiority may lead to feelings of high anxiety and uncertainty which may result in lower self-esteem. One’s physical appearance has been shown to be one of the biggest predictors in a teenager’s self-esteem, mainly due to the bodily changes that occur during the onset of puberty. Strong positive relationships with family and friends are important predictors of high levels of self-esteem in adolescents. The stronger bond one has with his/her family members or peers, the more comfortable he/she may feel about talking to family members or friends about the issues he/she may be dealing with and the less likely he/she is to turn to self-harming behaviours as a coping mechanism (Hudson, 2005).

One’s personality and the presence/absence of a personality disorder are strongly associated with self-harming behaviours. Personality disorders are not usually diagnosed before the age of eighteen because of ongoing developmental changes but an early diagnosis may be justified if symptoms are consistent (Hawton et al, 2012). Adolescents who have a perfectionist and self-critical personality might strive for flawlessness and set extremely high standards for themselves. Adolescents with this type of personality often fail to live up to their own high expectations leading to increased feelings of negative self-worth, perhaps causing these adolescents to engage in self-harming behaviours as a punishment for not reaching their own expectations and high standards. For example, an adolescent who has a perfectionist personality may set a goal to get above 90 in all subjects for the

school year. If the adolescent does not make this goal, he/she may feel a sense of failure and turn to self-harming behaviours as a form of punishment.

Family Life

Type of family environment (e.g. those living in separated or divorced families), maladaptive parenting and childhood maltreatment can influence adolescents' likelihood of engaging in self-harm behaviours. For example, families with a low economic status who are living in poverty may find it hard to provide their children with the proper necessities for living (e.g., clothing, proper education). This inability may increase negative feelings of self-worth and lead adolescents into thinking that they are bound to be failures in life because of the type of family environment they are growing up in. Multiple longitudinal studies have found that childhood socioeconomic disadvantage can predict self-harm, mental health problems, and stressful life events later in life (Skegg, 2005).

Parenting styles have been found to be linked to multiple maladaptive childhood behaviours such as delinquency, aggression, and academic underachievement. If their parents have an authoritative parenting style, where the parent is responsive and demanding then the adolescent will be more likely to do well academically and behaviourally and will be more likely to create and maintain a good, open relationship with the parent and feel comfortable coming to the parent when issues arrive in his/her life. This is usually considered the best type of parenting style. But if the parent is demanding but not responsive (Authoritarian) or if the parent is neither responsive nor demanding (Neglectful) the child will be less likely to create and maintain a strong, positive bond with his/her parent(s) which may lead him/her to feel like his/her parent(s) do not

care for him/her (Shaffer, Kipp, Wood & Willoughby, 2010). Research has found that the amount of hostility and negativity shown by parents with an authoritarian parenting style has been linked with higher rates of self-harm and suicidal behaviour (Greening, Stoppelbein, & Luebbe, 2010). A poor, maladaptive relationship between the parent and child is more likely to increase the risk of the adolescent engaging in self-harming behaviours because it may lead to interpersonal skills that are needed in order to maintain healthy relationships with peers or romantic partners (Skegg, 2005). Overall, research has consistently found that family environments that are filled with high amounts of insensitivity, inflexibility, and hostility are more likely to be associated with higher rates of self-harming behaviours among adolescents (Greening et al., 2010).

Skegg (2005) discussed numerous results from previously conducted longitudinal studies regarding the association between family life and the risk of self-harming behaviour. Results have shown that the risk of engaging in self-harming behaviour is higher for adolescents who are living in separated or divorced families. This is usually because adolescents in broken homes are more likely to blame themselves for the deterioration of their parent's marriage and are unable to cope with not having both parents living together under the same roof anymore.

Adolescents who have been victims of childhood maltreatment are also more likely to engage in self-harming behaviours. Child maltreatment is often defined as being an act or failure on part of the parent or caretaker of the child that results in serious physical or emotional harm or death of the child. There are four subgroups of child maltreatment: physical abuse, sexual abuse, emotional abuse, and neglect (Arens, Gaher, & Simons, 2012). Children who have been subjected to physical/sexual abuse are seen

to be more at risk for self-harming. Boudewyn and Leim (1995) found that children who were sexually abused were more likely to become depressed or to engage in acts of self-destructive behaviour. These authors also found that more frequent and severe the abuse, the more often the adolescent engaged in self-destructive behaviour, such as self-harming, eating disorders, and/or substance abuse. Although this study was focused on adults, it is likely that the rates would be just as high with adolescents.

Researchers have also begun looking at the suggestion as to whether or not one's family history may be associated with the engagement in non-suicidal self-injury. It is not clear whether one's choice for engaging in these self-harming behaviours is genetic, or whether it is from social learning (i.e., observational conditioning, is a form of learning where an individual learns new information and/or behavioural patterns through observing the behaviour of others). Recent research within this area has suggested that the family transmission of diagnoses and behaviours that are related to suicide, such as impulsive or aggressive traits can be helpful in explaining family history and its influence on subsequent suicidal behaviour (Deliberto & Nock, 2008).

Social Life

Adolescent's relationships with their peers may be even more influential than their family relationships because for many adolescents, their social group are their main support group when dealing with such issues. Adolescent's relationships with their peers can be viewed as being positive or negative influences. Those who adopt the positive perspective of peer influence argue that one's relationship with their peers during adolescence helps to improve their social skills and the ability to cope with stressful events. Those who adopt the

negative perspective of peer influence argue that the influence of peers often leads to delinquent and/or risky behaviour (Berndt, 1992).

One of the most obvious manners in how social factors may influence the engagement in non-suicidal self-injury is the idea that adolescents acquire the idea to engage in this behaviour from peers. Research has shown that adolescents' attitudes can be influenced through the notion of social contagion, which is defined as the idea where an individual can feel emotions that are similar and associated with those of others (Deliberto & Nock, 2008). Adolescents often face a wide variety of new behaviours to which they have not been previously exposed to. For example, an adolescent female may be trying to convince one of her peers to smoke a cigarette, this adolescent may be "spreading" new behaviours to his/her friends which may have the potential to compromise his/her health.

Peer groups have the potential to influence behaviour more than individuals realize because during adolescence people desire to fit in with their peers and to not face the possibility of being ostracized. Laye-Gindhu and Schonert-Reichi (2005) found for example that males reported self-harming in order to show their peers how strong and tough they were. Such behaviour could be attributed to society's perception that men are supposed to be tough and not show any signs of weakness. Previous research assessing social learning theories has indicated one's behavioural patterns can be developed in the notion of social constructs and prove functional in acquiring specific social benefits from one's peers. Social learning theory, predicts that individuals, especially adolescents, will conform to behaviours that they believe will earn them a higher status among their peer groups while not conforming to the social

norms of peers may allow adolescents to become subject to social exclusion or peer victimization (Heilbron & Prinstein, 2008). The idea of peer victimization has been based around the idea of weight-related teasing due to emerging body dissatisfaction that often accompanies puberty (Hilt, Cha, & Nolen-Hoeksema, 2008). Research has found that females may be more stressed regarding relational victimization because of their emphasis on peer evaluation and maintaining relationships. Whereas, males are more likely to be stressed with regards to physical victimization because of the focus on the idea of male dominance within the social hierarchy (Heilbron & Prinstein, 2010).

Individuals who have trouble making friends may not have large groups of peers to talk to when dealing with particular issues which may lead to the possibility of increasing feelings of loneliness and interpersonal isolation and may result in increased risk of engaging in self-harm associated with depressive symptoms. This is seen in both adolescent males and females but has been seen as significantly more problematic for girls, perhaps because adolescent girls may be more concerned about their weight and physical appearance (Hawton et al., 2012).

Media

Self-harm has been recently gaining widespread attention in the mainstream culture as evidenced by forms of popular media (e.g. films such as *thirteen* and *manic*). Adolescents are more vulnerable to the toxic media world where they are constantly being bombarded with images of how one should look and act, especially young girls. The attitudes and images that are perceived within the media can cause one to develop eating disorders as a form of self-punishment. There exist many social pressures that are exerted by messages from the media, particularly for girls, about the

idealized body type. The idealized body types that are praised within the media can possibly be seen as an influencing an adolescents' dissatisfaction with the self.

The influence of the media has increased in today's society because of the increase in the technology. For example, adolescents who were bullied in the past were able to get a break from the bullying once they left school, but in today's society, social networking sites allow others to keep in contact when not in the same place at the same time, allowing for increased rates of cyber bullying and thus, no escape from the torture one may receive from his/her peer group (Whitlock, 2009). With no escape from the bullying adolescents may resort to some form of self-harming behaviour.

The media not only increases the risk of engaging in self-destructive behaviour, it offers stigmas surrounding the issues of self-harm. Such stigmas include the idea that people who self-harm are "emo" or "gothic". In fact, research has proven that anyone can engage in this behaviour. Another stigma is that those who engage in this behaviour are only doing it for attention. Research has shown this is false because most adolescents who engage in self-harming behaviour hide it from people rather than telling others. (Zahl & Hawton, 2004).

Although most research regarding how the media influences adolescents has dealt with the negative perspective of the media and how it increases an adolescent's engagement in such self-harming behaviours the media can also influence an adolescent with a positive perspective that may help to increase their mental well-being. We are beginning to see many of the teen drama television shows (e.g., *Degrassi*) deal with issues such as depression, self-harming, and suicide. Within these shows, the characters usually discuss different forms of treatment options that are available, and end the show with other informational contact sources for

adolescents to reach out (either telephone numbers to organizations such as kids help phone or a website). The informational sources that are given out at the end of a television series may help someone who does not have a helpful support group around him/her to feel more comfortable to get help with his/her self-destructive behaviours. Although, the portrayal of these issues in such television series may be purposed to serve as a positive influence, adolescents may also view it as a way to help increase his/her engagement of self-harming behaviours (e.g., learning new methods/ways to harm one's self).

Assessment and Treatment

Given the dangerous increase in the prevalence of self-harming behaviours among adolescents, research regarding the assessment and treatment of such behaviour has increased. Numerous studies regarding intervention have shown effects in reducing self-harming ideation and/or behaviour in adolescents, but poor engagement within treatment is seen as a major obstacle when trying to provide help to those adolescents who have self-harmed (Ougrin & Latif, 2011). The type of treatment one receives ranges from medications to therapeutic approaches such as individual and/or social therapy. Inpatient treatment is seen as the standard treatment and care for those who self-harm but such therapy has not been shown as effective in controlled clinical trials (Slee et al., 2008). With any assessment and/or treatment, the most critical part is establishing an understanding and creating a trusting relationship between the therapist and the patient, regardless of any age. Adolescents who self-harm often have difficulty verbalizing, expressing, and coping with their emotions. Therefore, therapy often focuses on developing new ways to enhance communication and on other ways to express one's emotions and feelings. During the beginning of treatment,

therapy sessions often occur several times a week and the adolescent is monitored regularly. As therapy progresses the adolescent learns new coping mechanism, the self-harming behaviour decreases and consequently the frequency of therapy sessions decreases (Derouin & Bravender, 2004).

There are currently two types of intervention programs available for those who self-harm: cognitive behavioural therapy and dialectical behavioural therapy. Cognitive behavioural therapy (CBT) is an action oriented form of psychosocial therapy that assumes that maladaptive, or faulty, thinking patterns cause maladaptive behaviour and "negative" emotions. The treatment focuses on changing an individual's thoughts (cognitive patterns) in order to change his or her behaviour and emotional state (Slee et al. 2007). Past research regarding cognitive behavioural therapy is limited and the results are inconsistent. Some studies have found that CBT is no more effective in preventing and reducing self-harming behaviours than usual care, whereas other studies have found positive effects in the reduction of the self-harm behaviours (Slee et al., 2008).

Dialectical behaviour therapy (DBT) is a cognitive-behavioural approach that emphasizes the psychosocial aspects of treatment. The rationale behind this theory is that some people are prone to react in a more intense and out-of-the-ordinary manner toward certain emotional situations (Palmer, 2002). The DBT is a complex form of treatment that encounters elements of behavioural therapy, cognitive therapy and client centered therapy. Throughout the course of DBT the clinician works to identify the target behaviours to be changed and continually measures them. The clinician also helps to identify the consequences of behaviour to allow the client to better understand and be able to

modify consequences. Once the clinician and the client are able to distinguish the functions of the client's self-harm, they can then work together to develop other alternative behaviours to replace the previous self-harming behaviour (Nock et al, 2007). DBT has emerged as an effective treatment developed specifically for the treatment of suicidal and non-suicidal self-injury. It was first seen as effective in treating adult women with borderline personality disorder, but as since been adapted for use among adolescents and has been shown to reduce the occurrence and ideation of self-harming behaviour in both inpatient and outpatient situations. (Nock et al. 2007).

Conclusion

Self-harming is defined as engaging in risky behaviour that leads to injury but without any suicidal intent. There are many different types of self-harming behaviours for one to engage in and a number of precursors may influence an adolescent's decision to engage in behaviour from perceptions of one's self, to the effect the media plays in one's life.

Previous research regarding the precursors of one's choice for engaging in self-harming behaviour has indicated that the most common precursors for a person to engage in such behaviour are his/her own personal emotions towards the dilemma he/she is facing at the time. For example, if a person did not care about what his/her peers thought about him/her then he/she may not feel as negative towards him/herself. While there is plenty of research regarding the topic of self-harm, research is still limited in explaining why self-harming behaviour occurs and future research is needed to truly understand and be aware of the leading causes of self-harming behaviour. Understanding self-harming behaviour as it occurs in early stages of adolescent development may give researchers some

insight into the precursors and possibly provide a direction for prevention as well as intervention of these self-harming behaviours.

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An Examination of Posttraumatic Stress Disorder

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Posttraumatic stress disorder (PTSD), a debilitating condition that has both psychological and physical effects for certain individuals following their experience of a traumatic event is explored. The history, comorbid conditions, risk factors, daily impact, proposed mechanisms of trauma, screenings, treatments, and possible malingering are reviewed. PTSD was added to the Diagnostic and Statistical Manual of Mental Disorders Third Edition (DSM-3) in 1980 and quickly became one of the most diagnosed and compensated conditions, making it of high concern for the general public (e.g., Fink, 2011; Mchugh & Treisman, 2007; Rosen & Taylor, 2007). With the limited resources and staggering economic costs associated with PTSD in terms of compensation, lost work time, and treatment there has been growing concern over the perceived ease with which PTSD can be malingered (e.g., Guriel-Tennant & Fremouw, 2006; Morel, 2008; Rosen & Taylor, 2007). These concerns were born out of the widespread information available regarding the diagnostic criteria and symptoms associated with PTSD. To address this situation the DSM includes a warning specifically for PTSD regarding the necessity to rule out malingering in situations where financial remuneration, benefit eligibility, and forensic determinations play a role. This has led to the development of a multitude of screening tools that are purposely designed to detect the possibility of malingering. These can be administered quickly to ensure the limited treatment resources available are being used as effectively and efficiently as possible for the treatment of individuals who can benefit from it the most. Several of the most widely used malingering instruments are reviewed.

PTSD is a psychiatric condition that is experienced by some individuals (e.g., some military personnel and veterans, accident survivors, sexual assault victims, and those who experienced natural disasters) after exposure to an event that involves perceived life threat to the individual or to others and that elicited feelings of fear, helplessness, and/or horror (American Psychiatric Association, 2000). PTSD is characterized by multiple symptoms that are generally grouped into three clusters including re-experiencing symptoms, avoidance and emotional numbing symptoms, and hyper-arousal symptoms (Gates et al., 2012; Taylor, Frueh, & Asmundson, 2007). Re-experiencing symptoms consist of intrusive thoughts, recurrent dreams, flashbacks, distress, and physical responses upon exposure to trauma reminders (Gates et al., 2012; Taylor et al., 2007). Avoidance and emotional numbing symptoms include

avoidance of traumatic reminders, an inability to feel pleasure in things most individuals find pleasurable, detachment from others, restricted emotional experiences, and a sense of foreshortened future (Gates et al., 2012; Taylor et al., 2007). Hyper-arousal symptoms consist of sleep difficulties, irritability, anger, concentration problems, hyper-vigilance, and exaggerated startle (Gates et al., 2012; Taylor et al., 2007).

PTSD Background Information

The notion that traumatic experiences have the potential to produce mental disability is not a new phenomenon but one that has been around for hundreds of years (e.g., Mchugh & Treisman, 2007; Rosen & Taylor, 2007; Fink, 2011). During the 1870s debate was already taking place in the medical community regarding authentic and malingered conditions related to trauma experienced by railway workers (Hall & Hall, 2006). As seen with military personnel

today, railway workers were being compensated for their injuries (Hall & Hall, 2006). At this time several terms were proposed and used for such conditions such as nervous shock, posttraumatic neurosis, railroad spine, and compensation neurosis (Hall & Hall, 2006). Of note is the fact that the term posttraumatic was used differently at the time and referred only to psychiatric consequences associated with head injuries (Hall & Hall, 2006). More recently, multiple terms have been coined to describe functional and psychological changes that occur after suffering trauma including shell-shocked, post-Vietnam syndrome, war neurosis, prisoner-of-war syndrome, combat exhaustion, soldier's heart, and battle fatigue (Fink, 2011; Hall & Hall, 2006).

As the current terminology implies, military conflict was one of the main sources of concern for psychological symptoms related to trauma. Growing concern was mounting during the Vietnam war era with its anti-war philosophy over the effects of warfare on soldiers and the returning soldiers' demand to be compensated which brought PTSD to the forefront of society in general (e.g., Fink, 2011; Mchugh & Treisman, 2007; Rosen & Taylor, 2007). As a result, the present conception of PTSD was incorporated in the Diagnostic and Statistical Manual of Mental Disorders Third Edition (DSM-III) in 1980 (e.g., Fink, 2011; Mchugh & Treisman, 2007; Rosen & Taylor, 2007). The diagnosis integrated the previously mentioned conditions and expanded on them to include other symptoms (e.g., Fink, 2011; Mchugh & Treisman, 2007; Rosen & Taylor, 2007).

Debate currently exists with regards to the actual percentage of the population that is afflicted with PTSD as a result of concern over the possible over-diagnosis of patients due to secondary gain seeking (e.g., external motivators such as financial compensation, ability to miss work, obtain drugs, or avoid punishment) (Gates et al., 2012). This situation is further complicated by possible misdiagnosis with often comorbid conditions (Deviva & Bloem, 2003; Rosen & Taylor, 2007). These include conditions such as major depressive disorder, anxiety disorder, bipolar disorder, panic disorder, social phobia, avoidant personality disorder, paranoid personality disorder, obsessive-compulsive personality disorder, and antisocial personality disorder (Deviva & Bloem, 2003). Research has shown that 92% of treatment seeking individuals whose primary diagnosis is PTSD also had another active psychiatric diagnosis (Knoll & Resnick, 2006). Psychiatrists are therefore also tasked with determining whether any comorbid conditions were already in place prior to the alleged trauma (Knoll & Resnick, 2006). This is important as increased comorbid pathology effectively increases the severity of PTSD symptoms (Knoll & Resnick, 2006).

PTSD has become one of the signature injuries of active duty servicemen and women and the costs of PTSD to the individual, his/her immediate family, and society is substantial (Gates et al., 2012). The economic price alone of PTSD is estimated to be more than 6.2 billion dollars upon return from deployment for the first two years for all currently deployed troops (Gates et al., 2012). In addition to the

economic costs, individuals with PTSD also pay a huge personal price as they are more likely to experience marital/family problems, job instability, legal difficulties, and physical health problems (Gates et al., 2012). Veterans with a history of PTSD have been shown to have a higher risk of cardiovascular, respiratory, gastrointestinal, infectious, nervous system, and autoimmune disorders and they are at a higher risk of suicidal ideation and suicide (Gates et al., 2012).

Risk Factors

As the majority of individuals exposed to trauma do not develop clinical PTSD, it has been suggested that other factors must be influencing the onset and course of this disorder (Gates et al., 2012). For example, some individuals have a high level of premorbid (pre-existing) vulnerability which may make them more prone to developing PTSD (Knoll & Resnick, 2006). Risk factors for PTSD are generally divided into three categories consisting of individual level (pre-trauma) factors (e.g., younger age at trauma, prior psychiatric history, and family psychiatric history), trauma characteristics (e.g., trauma severity, perceived life threat, and combat-related injury), and post trauma factors (e.g., lack of social support and exposure to additional life stressors) (Gates et al., 2012). Knowledge of pre-trauma factors and trauma characteristics are important as they help identify populations at higher risk for developing PTSD which are more likely to benefit from screening (Gates et al., 2012). Knowledge of post-trauma factors is important as it can help to inform prevention

and treatment programs among individuals with trauma exposure (Gates et al., 2012).

A meta-analysis performed on known pre-trauma risk factors revealed that three principal factors at play are psychiatric history, family history of mental disorders, and childhood abuse (Knoll & Resnick, 2006). Personality traits have also been implicated as predictive of PTSD development with low self-efficacy and hostility being of primary importance (Knoll & Resnick, 2006). The combination of high hostility and low self-efficacy is a particularly strong predictor of PTSD development (Knoll & Resnick, 2006). In addition to the risk factors already listed, some studies have indicated that gender may play a role in PTSD development with a significantly higher risk of developing PTSD among women than men in the civilian population with women 2 to 4 times more likely to develop PTSD than men following similar trauma (Knoll & Resnick, 2006; McMillan, Williams, & Bryant, 2003).

Mechanisms of Trauma

It is generally accepted that PTSD involves the right frontal lobe and limbic system, brain regions which are associated with the fight or flight response (i.e., the production of an adrenaline surge and the associated cardiovascular and skeletal muscle effects) (Fink, 2011; McMillan et al., 2003). With PTSD, the system becomes overwhelmed when confronted with an abnormally powerful stressor (Fink, 2011; McMillan et al., 2003). The traumatic event creates an extreme stress reaction and psychological associations including fear, dread, and horror (McMillan et al., 2003). Evidence proposes that elevated stress hormone levels (i.e., cortisol and norepinephrine) produced immediately following a traumatic event may be a factor in the development of PTSD (McMillan et al., 2003). When secreted in the brain

norepinephrine results in anxiety, increased arousal, and increased vigilance (Keltner & Dowben, 2007). When combined with cortisol the behavioural results are an increase in alertness, cognition, and vigilance, and a decrease in the need for food and interest in sex (Keltner & Dowben, 2007).

The normal pattern of progression following a traumatic event is for the body to release noradrenaline once the danger has ceased in order to return the body to its previously normal state (McMillan et al., 2003). However, if the stress is severe enough, like in a combat situation, it is thought that the body produces a chronic stress response (i.e., elevated cortisol and norepinephrine levels) whereby the individual is unable to return to the pre-trauma state of calmness (McMillan et al., 2003). Prolonged cortisol and norepinephrine level elevations allow our adaptive behaviours to become maladaptive (Keltner & Dowben, 2007). For example, increased alertness can become hyperalertness and prevent sleep and healthy vigilance can become hypervigilance (Keltner & Dowben, 2007).

Lending support to this explanation, research demonstrates that elevated cortisol levels during and after trauma may cause neuronal and hippocampal damage that could explain the effects on memory associated with PTSD (McMillan et al., 2003). Reduced hippocampal volume has been reported in brain scan studies of individuals with chronic PTSD that is not present in the same individuals during the initial period following trauma (McMillan et al., 2003). This discovery indicates that reduced hippocampal volume may be a product of PTSD instead of a pre-existing condition (McMillan et al., 2003).

Recent research has also shown that genetics play a role in the development of PTSD with twin studies indicating that

approximately 30% of the variability in PTSD symptoms is linked to genetic factors (Gates et al., 2012; Rosen & Taylor, 2007). Familial studies lend support to the heritable component of PTSD while also ruling out shared family environment as a factor influencing the development of PTSD (Gates et al., 2012; Rosen & Taylor, 2007). Genetic studies have concentrated primarily on dopamine and serotonin systems and have identified variations in the dopamine receptor (DRD2) gene that appear to be linked with risk of developing PTSD in studies of combat-exposed subjects (Gates et al., 2012). Separate research has implicated the dopamine beta-hydroxylase (DBH) gene in the acquisition of PTSD by showing that those afflicted with PTSD have lower DBH activity than the general non-PTSD afflicted population (Gates et al., 2012).

Tests and Screenings for PTSD

The provision of adequate treatment is dependent on the use of accurate and reliable screening procedures to identify individuals at risk or currently affected by the disorder (Knoll & Resnick, 2006). In recent years a trend has emerged in the field of screening instrument development in attempting to create tests that are as short as possible while still maintaining their effectiveness (Gates et al., 2012). Tests currently used include the Davidson Trauma Scale (DTS), PTSD Checklist (PCL), Primary Care Posttraumatic Stress Disorder Screen (PC-PTSD), and the Startle, Physiological arousal, Anger, and Numbness test (SPAN) (Gates et al., 2012). Research indicates that biological testing including acoustic startle response and heart rate variability may also be useful in the detection of PTSD (Gates et al., 2012). Results from several studies indicate that individuals suffering from PTSD have a heightened startle response and decreased variability in heart rate (Gates et al., 2012). This has raised interest in the feasibility of

using these indicators to identify individuals with undiagnosed or pre-clinical PTSD (Gates et al., 2012). If validated, biological testing may also prove valuable as a tool to identify people attempting to exaggerate or fabricate symptoms as their biological responses would not match their reported symptoms. While the notion of using biological testing for the detection of PTSD is interesting, it should be noted that this area of study is still in the developmental stages and much more research is required to validate its screening potential (Gates et al., 2012).

Psychological and Pharmacological Treatment

Treatment for PTSD is provided in the form of psychological counselling and medications specific to symptom relief (Hembree & Foa, 2003; Sharpless & Barber, 2011). There are multitudes of diverse psychological counselling treatments for PTSD (Hembree & Foa, 2003; Sharpless & Barber, 2011). The most common and effective include psychological debriefing, Prolonged Exposure (PE), Eye Movement Desensitization and Reprocessing (EMDR), Stress Inoculation Training (SIT), Cognitive Processing Therapy (CPT), and Relaxation Training (Hembree & Foa, 2003; Sharpless & Barber, 2011).

Psychological debriefing was conceived as a means to prevent lasting adverse effects following traumatic events (Hembree & Foa, 2003; Sharpless & Barber, 2011). It can be thought of as psychological first aid whereby the intent is to neutralize the effects as soon as possible following the traumatic event and to prevent any further harm (Hembree & Foa, 2003; Sharpless & Barber, 2011). An advantage of this form of treatment is its flexibility in being able to be administered individually or in a group setting for individuals who have a common traumatic experience (Hembree & Foa, 2003). Advocates for the group format

maintain it is more useful and helpful than individually administered sessions due to the ability to learn from shared experiences and for the mutual support provided (Hembree & Foa, 2003). It has been widely used and endorsed by the military even though there is little scientific proof available supporting the perception that PTSD can be prevented via debriefing techniques (Hembree & Foa, 2003; Sharpless & Barber, 2011). Contrary evidence actually exists suggesting that psychological debriefing may have a negative impact on individuals who are not displaying active PTSD symptoms (Sharpless & Barber, 2011). This has led to reluctance among certain practitioners to use emotional processing interventions (i.e., debriefing) in the early stages of PTSD with a preference for support and psychoeducation (the provision of knowledge about the psychological condition, the causes, and the reasons why a particular treatment might be effective for reducing symptoms) instead (Sharpless & Barber, 2011).

Prolonged exposure (PE) is a therapy technique designed to decrease PTSD symptoms through changing the memory structures that lie beneath emotions associated with PTSD such as fear by helping patients confront their feared objects, memories, situations, and images (Hembree & Foa, 2003; Sharpless & Barber, 2011). PE incorporates psychoeducation as well as breathing control techniques and has been shown to be very useful in reducing PTSD symptoms (Hembree & Foa, 2003; Sharpless & Barber, 2011). Evidence suggests that PE also has the added benefit of being easily administered in community settings as well as in academic settings and is appropriate for civilian and military populations (Sharpless & Barber, 2011). PE generally involves 8-15 weekly 90 minute treatment sessions that use a combination of imagined and in vivo

exposure to reduce avoidance of situations, emotions, and memories reducing fear responses and encouraging changes in beliefs (Hembree & Foa, 2003; Zoellner et al., 2011).

As the name suggests, imaginal exposure involves having the patient use his/her imagination to visualize and explore his/her traumatic memories (Hembree & Foa, 2003; Sharpless & Barber, 2011; Zoellner et al., 2011). Patients are instructed to recite the full traumatic experience out loud in the present tense with as much detail as possible regarding events, thoughts, emotions, location, and sensations (Hembree & Foa, 2003; Zoellner et al., 2011). The patient is directed to repeat the exercise from the beginning several times during the session with the goal of decreasing the fear response via extinction processes (exposure to cues that elicit fear in a safe therapeutic environment that results in desensitization and a decrease in the severity of the fear response) (Zoellner et al., 2011). The therapist asks probing questions during this process to help highlight emotions and thoughts which guide the client into exploring the most emotionally intense areas of the traumatic memory (Zoellner et al., 2011). Processing follows each imaginal exposure session and is a period where the therapist and client discuss how the session went, allowing an opportunity for the client to process the experience (Hembree & Foa, 2003; Zoellner et al., 2011).

In vivo exposure involves systematic exposure to safe trauma related reminders in the environment (Hembree & Foa, 2003; Sharpless & Barber, 2011; Zoellner et al., 2011). In vivo exposure is generally practiced outside of therapy sessions as homework for the client and is progressive from low to high perceived difficulty and distress (Hembree & Foa, 2003; Zoellner et al., 2011). The client and therapist jointly identify commonly avoided situations in the

client's life that they feel are important for them to be able to approach or participate in (Hembree & Foa, 2003; Zoellner et al., 2011). These situations are usually ones that will improve the clients' functioning occupationally or in terms of their interpersonal relationships (Zoellner et al., 2011). For PTSD sufferers an example could be for them to attempt to reduce their avoidance tendencies by working their way up from participating in family gatherings, to participating in community events such as church, and to eventually being able to reconnect with military colleagues at the local legion that contains a far greater degree of trauma reminder.

Eye movement desensitization and reprocessing (EDMR) incorporates elements from person-centered therapy, cognitive behavioral therapy, body-based approaches, and mindfulness into a structured and manualized treatment (i.e., treatment that is conducted according to a written manual of instructions) (Hembree & Foa, 2003; Sharpless & Barber, 2011). EDMR works on the assumption that traumatic memories associated with PTSD are unprocessed and therefore are not stored as memories but instead are treated like new sensory inputs (Sharpless & Barber, 2011). EDMR employs a process called desensitization and reprocessing that requires clients to at first keep distressing images in their mind to promote desensitization followed by a period where they are instructed to keep positive images in their mind to promote reprocessing (Hembree & Foa, 2003; Sharpless & Barber, 2011). During the desensitization and reprocessing process the therapist elicits rapid eye movements by having the client track a finger rapidly waved back and forth in front of his/her face (Hembree & Foa, 2003; Sharpless & Barber, 2011). The theory behind the role of the rapid eye movements is that they somehow override or reverse neural blockage or

obstruction that was created by the traumatic event (Hembree & Foa, 2003). There is skepticism regarding some of the unique components and theory involved in EDMR (i.e., the eye movements) but a meta-analysis has confirmed that the theory is an effective treatment and it has been officially endorsed by the International Society for Traumatic Stress (Hembree & Foa, 2003; Sharpless & Barber, 2011).

Stress inoculation training (SIT) is a collection of therapies originally employed to treat anxiety symptoms and it been adapted to treat PTSD (Sharpless & Barber, 2011). SIT has a core philosophy that stress occurs as a result of the interaction of the individual with the environment in situations where the individual perceives environmental events as overwhelming his/her coping ability and presenting a threat to his/her well-being (Hembree & Foa, 2003). The theory behind SIT is based on classical conditioning whereby unconditioned stimuli associated with the trauma gain the power to trigger fear and anxiety (Hembree & Foa, 2003). SIT provides the client with coping skills to increase the client's ability to manage stress through techniques such as breathing training, in vivo exposure, relaxation training, assertiveness training, cognitive restructuring, role playing, covert modeling, and thought stopping (Hembree & Foa, 2003; Sharpless & Barber, 2011). The coping skills are directed at assisting the client to manage his/her reactions through trauma related reminders and situations (Hembree & Foa, 2003). SIT has proven effective in diverse situations including in studies of female sexual assault victims and male veterans (Sharpless & Barber, 2011).

Cognitive processing therapy is generally completed in a 12 session format and is designed to modify automatic thoughts (Sharpless & Barber, 2011). CPT also involves an exposure element that is

unlike that used in PE with reduction of self-blame being a specific treatment emphasis (Sharpless & Barber, 2011). Unlike PE, during CPT clients are required to write about their traumatic memories in detail and read them to themselves daily and out loud during sessions (Sharpless & Barber, 2011). The clinician then helps the client to identify his/her feelings and work through any sticking points in his/her account (e.g., PTSD client's may describe the traumatic event and its physical impacts but resist describing and addressing the emotional impacts) (Hembree & Foa, 2003; Sharpless & Barber, 2011). In regards to PTSD, the goal of CPT is to direct the client to identify trauma related dysfunctional or irrational beliefs that lead to negative emotions that influence his/her responses to situations (e.g., a store clerk who was beaten and robbed at gunpoint and subsequently becomes fearful of all stores and regards them as all dangerous) (Hembree & Foa, 2003). The therapist assists the client to challenge his/her irrational thoughts and fears by providing a different perspective (e.g. showing the client that all stores are not dangerous and therefore do not need to be feared) (Hembree & Foa, 2003). This allows the client to realize that the beliefs do not match reality and then to replace or modify them (Hembree & Foa, 2003). CPT has been shown through several studies to be effective in both military and civilian populations (Sharpless & Barber, 2011).

Relaxation training is one of the oldest behavioral treatments for PTSD (Sharpless & Barber, 2011). It involves employing successive muscle tension and relaxation with the objective of reducing the fear and anxiety associated with traumatic responses (Sharpless & Barber, 2011). Relaxation training is shown to be effective when used on its own and is also shown to increase effectiveness when integrated as an

element of more comprehensive PTSD treatments (Sharpless & Barber, 2011).

Psychopharmacological intervention (medication) for PTSD is symptom specific as there is no one medication that has been identified or created to address all the various symptoms of PTSD (Bajor, Ticlea, & Osser, 2011; Hembree & Foa, 2003; Sharpless & Barber, 2011). There exists significant overlap between PTSD, depression, and other anxiety disorders as well as the previously mentioned comorbid conditions which are all responsive to medication (Bajor et al., 2011; Hembree & Foa, 2003; Sharpless & Barber, 2011). Psychopharmacology is shown to be a valid treatment for PTSD with drug therapy having the advantage of being able to be administered by non-mental health professionals, being less time intensive than psychotherapy, and being far easier to maintain in an active combat situation than the previously described psychological treatments (Sharpless & Barber, 2011). Several classes of drugs have been shown to effectively manage symptoms of PTSD including serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs), and some tricyclic antidepressants (TCAs) (Bajor et al., 2011; Hembree & Foa, 2003; Sharpless & Barber, 2011).

SSRIs have been identified as the primary or first-line treatment for PTSD (Bajor et al., 2011; Hembree & Foa, 2003). They are the only medications recognized by the U.S. Food and Drug Administration for the treatment of PTSD (specifically sertraline and paroxetine) (Hembree & Foa, 2003; Sharpless & Barber, 2011). Most randomized control studies of SSRIs have identified a significant reduction of PTSD symptoms including re-experiencing, avoidance, and arousal symptoms (Hembree & Foa, 2003). SSRIs are effective in reducing comorbid conditions such as depression, panic disorder, and obsessive

compulsive disorder and they have low side-effect potential (Hembree & Foa, 2003).

MAOIs have been researched through controlled and open trials and have been shown to produce moderate to good improvement in over two-thirds of PTSD patients (Hembree & Foa, 2003). The main improvement was in sleep disturbance and re-experiencing symptoms such as intrusive thoughts, flashbacks, and nightmares (Hembree & Foa, 2003). MAOIs however do not show an improvement in other symptoms related to PTSD including depression, panic disorders, avoidance, and hyper-arousal (Hembree & Foa, 2003).

TCAs have been identified through controlled and open trials to produce moderate to good improvement in 45% of PTSD patients (Hembree & Foa, 2003). The findings are similar to those for MAOIs in that there was improvement predominantly in the reduction of re-experiencing symptoms and not in the avoidance and arousal symptoms (Hembree & Foa, 2003). Even though there have been gains in the understanding of the psychopharmacology associated with PTSD there is little knowledge regarding how to progress if the initial medications fail to bring about the desired effects (Bajor et al., 2011; Sharpless & Barber, 2011). To address this issue researchers have begun to develop a treatment algorithm that provides detailed recommendations in regards to sequencing medication when a first-line medication fails to reach treatment goals (Bajor et al., 2011; Sharpless & Barber, 2011). The algorithm consists of numbered nodes or decision points which guide the treating professional through the recommended progression (Bajor et al., 2011). The nodes are structured as a series of questions about the patient's diagnosis and past treatment history leading from the most basic (e.g., is there a diagnosis of PTSD?) to the more complex (e.g., has a trial of a SSRI been

given?) (Bajor et al., 2011). The most clinically supported medication for the specific symptom (e.g., prazosin for sleep disturbance with nightmares or night time hyper-arousal) is tried first and if that medication is deemed inadequate or ineffective the other available clinically supported options are explored using the same type of trial and evaluation process until symptom management is achieved (Bajor et al., 2011).

Malingering

Malingering is the fabrication or exaggeration of the symptoms of mental or physical disorders for a variety of secondary gain motives (Gerearts et al., 2009; Hall & Hall, 2006; Taylor et al., 2007). Included in the DSM-IV is the following warning with regards to PTSD: "Malingering should be ruled out in those situations in which financial remuneration, benefit eligibility, and forensic determinations play a role" (pp. 427, DSM-IV-TR; American Psychiatric Association, 2000). This warning was put in place specifically for PTSD as its reliance on self-report measures (i.e., questionnaires) allows it to be easily faked or exaggerated due to the widespread information concerning the diagnostic criteria and symptoms of the disorder (e.g., Guriel-Tennant & Fremouw, 2006; Morel, 2008; Rosen & Taylor, 2007). Malingering is a valid concern when it comes to PTSD as most stand-alone PTSD tests rely on face-valid self-report inventories (i.e., questionnaires which are susceptible to the possibility of exaggeration or lying as the responses provided are taken at face value with the answers provided presumed to be accurate or true and generally not verified) (e.g., Guriel-Tennant & Fremouw, 2006; Morel, 2008; Rosen & Taylor, 2007). PTSD is perceived to be the diagnosis of choice due to its unique contingency on a definite identifiable precipitating event (Guriel-Tennant & Fremouw, 2006; Knoll &

Resnick, 2006; Rosen & Taylor, 2007). Being able to identify the origin/cause enables blame to be assigned which is the gateway to financial remuneration and benefit eligibility (Guriel-Tennant & Fremouw, 2006; Knoll & Resnick, 2006; Rosen & Taylor, 2007).

Malingering has further been subdivided into three categories including pure malingering, partial malingering, and false imputation (Hall & Hall, 2006; Knoll & Resnick, 2006; Taylor et al., 2007). Pure malingering involves the situation where an individual completely fabricates a disorder that he/she does not have (Hall & Hall, 2006; Knoll & Resnick, 2006; Taylor et al., 2007). Partial malingering arises in circumstances where an individual does have genuine symptoms and intentionally embellishes/exaggerates the symptoms or maintains that past authentic symptoms still exist when they no longer exist (Hall & Hall, 2006; Knoll & Resnick, 2006; Taylor et al., 2007). False imputation arises when genuine symptoms are knowingly attributed to a cause that has no relationship to the symptoms (Hall & Hall, 2006; Knoll & Resnick, 2006; Taylor et al., 2007). For example, in terms of PTSD this could be a situation where an individual who is suffering from PTSD as a result of a previous traumatic event deceptively credits the symptoms to a current injury received on the job in order to capitalize on monetary gain (Hall & Hall, 2006; Knoll & Resnick, 2006).

In the ten years following the inclusion of PTSD in the DSM in 1980 an increase of more than 50% in personal injury lawsuits was observed (Knoll & Resnick, 2006). During the same period mental stress disorders became the fastest growing type of worker's compensation claim with insurance costs for stress claims starting to surpass those for physical injury claims (Knoll & Resnick, 2006).

There are multiple reasons identified for malingering which can generally be broken down into two categories: avoidance of difficult situations or punishment and obtaining compensation or medications (Knoll & Resnick, 2006; Taylor et al., 2007). Financial gain in the form of such things as government disability benefits or worker's compensation claims is considered the principal motivating factor for malingering (Knoll & Resnick, 2006; Taylor et al., 2007). Secondary reasons are diverse and include the desire for notoriety by combat survivors who want others to think they were involved in service that was more severe than it actually was (Knoll & Resnick, 2006; Taylor et al., 2007). Another motivation is the desire to save face regarding personal life crises and poor decision making by being able to justify things like financial troubles, marriage breakdown, and job loss as a result of an official diagnosis like PTSD (Knoll & Resnick, 2006; Taylor et al., 2007). Malingered PTSD may also represent a second chance to receive compensation following an injury for which a personal injury claim has been unsuccessful (Knoll & Resnick, 2006). A final strong motivation for malingering occurs in forensic settings where PTSD may be malingered in an attempt to avoid criminal responsibility in terms of an insanity plea/mental disorder defense or to receive a reduced punishment (Taylor et al., 2007).

Screening for Malingering

With such a heavy economic price and limited treatment resources, it is of paramount importance now more than ever to develop and employ tests for malingering (Hall & Hall, 2006). Appropriate treatment plans are dependent on correct diagnosis and it is crucial that the limited treatment resources available be utilized by those individuals who actually require them and can benefit the most from them (Knoll &

Resnick, 2006). However, in the politically charged military system these tests/screenings have only just been contemplated due to reluctance to implement screenings for malingering out of fear of offending the men and women of the armed forces who are justly regarded as national heroes (Knoll & Resnick, 2006). Other reasons clinicians are hesitant to diagnose malingering are fear of misdiagnosis which can potentially result in the denial of required care and humiliation that is irreversible (Hall & Hall, 2006; Knoll & Resnick, 2006). Clinicians are also leery of diagnosing malingering due to the possibility of retaliation from the client in the form of litigation or physical assault (Hall & Hall, 2006; Knoll & Resnick, 2006).

The situation is further complicated as the clinician may be uncertain of his/her own ability to spot malingering of PTSD, is fearful that conflict will hamper the therapeutic relationship, and feels the need to tend to other psychiatric symptoms (Hall & Hall, 2006). Several screening tools have been developed for the detection of malingering in PTSD including the Moral Emotional Numbing Test (MENT), Personality Assessment Inventory (PAI), Trauma Symptom Inventory (TSI), Quick Test for Posttraumatic Stress Disorder (Q-PTSD), Minnesota Multiphasic Personality Inventory – II (MMPI 2), and Miller Forensic Assessment of Symptoms (M-FAST) (e.g., Arbisi, Ben-Porath, & McNulty, 2006; ; Calhoun, Earnst, Tucker, Kirby, & Beckham, 2000; Elhai, Gold, & Freuh, 2000).

The MENT is a relatively simple test which at its core requires individuals to identify the emotions associated with facial expressions (Gerearts et al., 2009). The MENT is a forced-choice task designed to detect response bias in PTSD assessments (Gerearts et al., 2009). In essence test takers are presented with three series of tasks

which combine to a total of 60 two-alternative items whereby the test takers are asked to match the appropriate emotions with pictures of individuals' faces provided (Gerearts et al., 2009; Morel, 1998). As part of the testing process the participants are advised that research has suggested that PTSD sufferers may have difficulty identifying facial expressions (Gerearts et al., 2009; Morel, 1998). The MENT is designed such that individuals with undamaged visual and neurocognitive functioning will receive nearly perfect scores unless they are attempting to simulate illness (Morel, 1998). The premise is that individuals attempting to malingering will intentionally produce more errors on this simple test (Gerearts et al., 2009). Independent testing has shown that using the MENT as a screen is 92% effective in ruling out PTSD in those tested who did not actually have the disorder (Gerearts et al., 2009).

The PAI is a multiple scale objective self-report inventory consisting of 344 items containing a total of 22 non-overlapping clinical, treatment, interpersonal, and validity scales (Guriel-Tennant & Fremouw, 2006). This instrument is particularly useful in the detection of malingering due to its built in validity indicators that may be used to detect dishonest or biased self-report (Scragg, Bor, & Mendham, 2000). The PAI currently contains six indicators relevant to determining whether the test has been deliberately distorted or faked (Scragg et al., 2000). On the PAI, malingering is primarily assessed on three separate scales (Scragg et al., 2000): the Negative Impression Management (NIM) scale which measures the inclination of individuals to depict themselves in an undesirable or pathological light (Scragg et al., 2000); the Malingering Index (MI) which contains eight criteria used to identify two factors of the PAI profile that have been detected in subjects

who are instructed to simulate a mental disorder (i.e., the endorsement of severe and uncommon psychotic symptoms without the associated characteristic symptoms and a predisposition of test takers toward describing themselves and their environment very negatively) (Calhoun et al., 2000); and the Rogers Index which is a discriminant functional analysis that differentiates the PAI profiles of authentic patients from those who are malingering (Scragg et al., 2000). The PAI has been verified as 80% successful in identifying malingerers through either producing an elevated but invalid profile or failure to produce a PAI profile consistent with PTSD (Guriel-Tennant & Fremouw, 2003).

The Trauma Symptom Inventory (TSI) is an objective self-report instrument created for PTSD evaluations that assesses psychological symptoms commonly associated with traumatic experiences (Guriel-Tennant & Fremouw, 2003; Knoll & Resnick, 2006). The TSI is a multi-scale instrument comprised of 100 questions in a self-report format that can be administered in approximately 20 minutes (Guriel-Tennant & Fremouw, 2003; Knoll & Resnick, 2006). The TSI possesses 10 clinical and three validity scales that are unique as they are purposely created to evaluate response style (Guriel-Tennant & Fremouw, 2003). These three validity scales are directed at the detection of malingered PTSD by identifying atypical responding, inconsistency, and response level (Guriel-Tennant & Fremouw, 2003; Knoll & Resnick, 2006). The TSI provides the ability to detect an individual's inclination to over-report uncommon or abnormal symptoms or to reply to items in an inconsistent or erratic manner which can be indicative of someone attempting to malingering (Knoll & Resnick, 2006).

The Q-PTSD is a self-report questionnaire scored on a five point scale

which consists of eight statements (Morel, 2008). These statements were chosen as a result of clinical experience and reviewing documentation on the symptoms and effects of PTSD (Morel, 2008). These statements consist of behavioral statements that do not display any known PTSD symptoms or comorbid characteristics that are generally associated with PTSD (Morel, 2008). At its core, the Q-PTSD is designed as a quick list of distinguishing characteristics devised to measure response bias giving clinicians the capability of identifying genuine answers versus attempts to deceive (Morel, 2008). The result is eight statements which quickly allow for the distinction between individuals with legitimate PTSD symptoms and individuals who are attempting to malingering (Morel, 2008).

The MMPI-2 is made up of 567 true or false questions upon which a variety of clinical and validity scales are extracted (Efendov, Sellbom, & Bagby, 2008). There are four validity scales derived from the MMPI-2 which are expressly directed to identify over reporting of psychopathology (Efendov et al., 2008). These scales are the Symptom Validity scale (also known as the Fake Bad Scale) (FBS) which assesses implausible somatic (i.e., bodily) or neurocognitive symptoms (e.g., a reduction or impairment of cognitive function), Infrequency- Psychopathology scale (Fp) which is an indicator of over-reported symptoms of severe psychopathology, Infrequency scale (F) which is a general over-reporting indicator, and Infrequency-Back scale (Fb) which is used to detect negative response bias associated with symptom exaggeration (Efendov et al., 2008; Sellbom, Wygant, Toomey, Kucharski, & Duncan, 2010; Wygant et al., 2010). The MMPI-2 is the most regularly used test for speculated malingering and is reported to be the most proven psychometric

method for detecting malingering (Knoll & Resnick, 2006).

The Miller Forensic Assessment of Symptoms (M-FAST) was purposely designed as a shortened version of the widely used Structured Interview of Reported Symptoms (SIRS) and is not restricted to use with PTSD assessment (i.e., it is capable of quickly measuring and evaluating response style to screen for malingered mental illness in general) (Guriel-Tennant & Fremouw, 2003; Knoll & Resnick, 2006). The M-FAST is a very concise structured interview comprised of 25 items which can be administered in only 10 to 15 minutes (Guriel-Tennant & Fremouw, 2003; Knoll & Resnick, 2006). The M-FAST provides an overall score along with seven subscale scores and is designed to measure atypical symptoms, excessive reporting, and rare symptom combinations (Guriel-Tennant & Fremouw, 2003; Knoll & Resnick, 2006). Over-all scores greater than 5 on the M-FAST are indicative of a dishonest response style (Guriel-Tennant & Fremouw, 2003).

Conclusion

While there is currently some controversy regarding the true prevalence of PTSD due to concern over the possibility of malingering for various personal gain reasons some comfort can be gained from the new generation of screening tools developed for the detection of malingering. As with the screening tools currently in place to diagnose PTSD, the responsibility falls at the feet of the practitioner to do his/her due diligence when making a diagnosis. It is his/her responsibility to be competently trained in the administration and interpretation of available screening tools not only to rule out those that may attempt to take advantage for personal gain but to also be a steward for the precious treatment resources available to ensure that

they are used where they can provide maximum benefit.

Screening tools are only one source of information or evidence that should be explored when it comes to such a complex and multi-faceted disorder as PTSD. There will likely never be a 100% effective method to ensure malingering is eliminated with regards to PTSD or any other psychiatric illness where personal gain is a possibility. As such practitioners must make use of all available evidence to make as informed a decision as possible to ensure that each client receives the treatment that he/she requires. It is better to err on the side of caution when it comes to malingering as it is far easier to justify the compensation of a small portion of individuals seeking treatment who are malingering than it is to erroneously withhold treatment or compensation from an individual who actually requires and deserves it.

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The Cancer Experience and Post-Traumatic Stress Disorder

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Cancer patient survival rates have steadily increased over the last fifty years thanks to significant advancements in diagnostic equipment, treatment protocols, and an increase in the health education of the public and practitioners. With this rise in survival rates comes the growing need to address the mental health of the cancer patient both during and after treatment protocols. Post-Traumatic Stress Disorder is among the most prevalent mental health concerns for the cancer patient community (Bush, 2009). The symptoms of PTSD are divided into three categories, (i) intrusive memories, (ii) avoidance and numbing, and (iii) increased anxiety or emotional arousal, also known as hyper arousal (Ganz et al., 2002). Research into cancer patients suffering from PTSD has revealed that as many as 40% of individuals display such symptoms (Gold et al., 2012). Patient risk factors have been identified as pre-existing psychiatric issues, younger patient age, female gender, lower socio-economic status, lack of social support, and loss of physical functioning (Kangas et al., 2002). Cancer risk factors for PTSD are an advanced stage of cancer, multiple relapses, immediacy of treatment, and painful, invasive disfiguring types of cancer (Kangas et al., 2002). The earlier the risk factors are identified in an individual patient the earlier therapy can be implemented to lessen the toll taken on the patient and to decrease the likelihood of the development of PTSD (French-Rosas et al., 2011).

Post-Traumatic Stress Disorder (PTSD) is a mental health condition that can be brought about or triggered by a terrifyingly traumatic event or period of immense fear and stress experienced by an individual. A person experiencing PTSD may suffer from symptoms that include flashbacks, nightmares, severe anxiety, or uncontrollable thoughts about the traumatic episode (Kangas, Henry, & Bryant, 2002). All individuals will almost undoubtedly experience at least some form of a frightening or traumatic event during their lifetimes and thereafter experience difficulty with coping and adjustment. Most individuals, if they take proper care of themselves, will experience an improvement in symptoms as time from the event passes and their lives return to a normal routine (Kangas et al., 2002). Unfortunately there are other individuals whose symptoms do not improve or whose symptoms may even become progressively worse lasting for months or even years and causing severe detriment to their quality of life. These individuals are likely to be diagnosed as

suffering the effects of post-traumatic stress disorder.

The symptoms of PTSD are divided into three broad categories: i) intrusive memories, ii) avoidance and numbing, and iii) increased anxiety or emotional arousal, also known as hyper arousal (Ganz, Raz, Gothelf, Yaniv, & Buchval, 2010). Intrusive memories can include flashbacks or reliving the traumatic event for anywhere from a few minutes up to days at a time (Kangas et al., 2002). Examples of avoidance and numbing by a patient include memory problems, trouble concentrating, avoiding activities he/she once enjoyed, a feeling of hopelessness about the future, resistance towards talking or thinking about the traumatic incident, feeling emotionally numb, and having difficulties in maintaining close relationships (Kangas et al., 2002). A patient with increased anxiety or emotional arousal may experience feelings of overwhelming guilt or shame, have trouble sleeping, be irritable or very quick to anger, be easily frightened or startled, and may partake in self destructive behavior such as binge drinking. In some cases patients may

experience audio and/or visual hallucinations (Kangas et al., 2002).

For most people within the greater population, the first groups of individuals expected to potentially suffer post-traumatic stress disorder are military personal returning from active duty in war zones such as Afghanistan, victims of violent crimes (e.g. physical assault or sexual assault and rape), or perhaps emergency first responders such as paramedics, police or firemen who deal with horrific, potentially lethal automobile accidents or industrial accidents where lives have been lost. The symptoms of post-traumatic stress disorder are not always present or constantly impacting an individual's daily life (Kangas et al., 2000). Many symptoms manifest during times of immense stress or are due to an external trigger, for example a soldier may hear a sound similar to a gunshot and begin to relive experiences during combat. In the case of an assault or rape victim, he/she may hear of or see a media report of a rape and become overwhelmed by memories of his/her own assault incident. While groups such as combat veterans, emergency first responders, or assault victims may be the most well-known groups who are believed as likely to experience and suffer from PTSD, they are not the only ones. Further research into PTSD causes and effects has shown another large group of people that are in danger of experiencing post-traumatic stress disorder. Cancer patients receiving treatment and cancer patients that are said to be in remission following the apparently successful completion of treatment protocols are also at a high risk of developing PTSD.

The survival rates of patients with most forms of cancers have steadily increased over the last few decades thanks to important breakthroughs on multiple fronts including treatment methods and diagnostic equipment. These breakthroughs are thanks to the earlier detection of cancer due to a

greater understanding of the early warning symptoms of many forms of cancer. The knowledge of symptoms combined with revolutionary diagnostic procedures and equipment such as Positron-Emission Topography or PET scans has increased early detection of cancerous cells in patients. These PET scans use radioactive sugar molecule tracers to reveal live cancer cells in the patients' bodies which would have only appeared as an undifferentiated mass using older diagnostic scans. This earlier detection, combined with advancements in the effectiveness of treatment regimes, including new chemotherapy drugs, improved radiation treatment protocols, and the newest form of cancer treatment available, the autologous or allogeneic stem-cell transplant procedure have all lead to increasing survival rates of those diagnosed with cancer (Mundy, 2000).

With the immediate physical threat of the cancer dealt with it is important to attend to further knowledge and research involving the physiological and psychological wellbeing of the patient. Every part of the battle against cancer a patient undergoes; from the possibility of an initial diagnosis, to the diagnostic tests undergone, to enduring the treatments and their possible complications, to completion and assumption of remission, to years of survivorship, can be incredibly stressful and each stage contains its own unique stressors. These stressors can individually and in combination, cause a patient to develop symptoms of, or complete occurrence of cancer related post-traumatic stress disorder.

Cancer in all its forms and subtypes affects millions of people around the world no matter their age, race, sex, or socio-economic status and for this reason ongoing research into effective diagnosis and treatment has been at the forefront of medical science. Now that those successful inroads have helped us to understand and

contend with the physical health of the patients, it is time to also understand and treat the psychological health of patients both during and following their battle to survive such an indiscriminant and lethal disease.

How and Why Cancer Leads to PTSD Symptoms

In 1994 the DSM-IV added life-threatening illness as a potential traumatic event, with Post-Traumatic Stress Disorder increasingly recognized as an additional potentially lethal danger among cancer patients (Mehnert & Koch, 2006). This stressor causes different reactions and can impact individual patients differently along the entire span of their illness, from the first detection of symptoms, to receiving the actual diagnosis, to undergoing treatment, and ultimately to the entrance into palliative care (Mehnert & Koch, 2006).

Individuals who were young, had no prior serious illness and who reportedly thought they were perfectly healthy may react to a diagnosis of cancer with tremendous fear and horror, many also report experiencing feelings of immense helplessness (Bush, 2009). All of these feelings may lead to the development of post-traumatic stress disorder.

Individuals who are diagnosed with and treated for diseases such as cancer are at a higher potential risk for psychological distress and conditions such as post-traumatic stress disorder (Gold et al., 2012). Many people may understandably interpret an initial cancer diagnosis as a life threatening event regardless of the type or stage of cancer and consequently maybe prone to develop partial or full blown symptoms of PTSD. For example in a study of Hodgkins Lymphoma, a form of cancer with a relatively high survival rate, 32% of patient survivors suffered from PTSD and reported quality of life scores that were significantly lower than those seen in patient

survivors who did not suffer from PTSD (Gold, et al, 2012). One study followed newly diagnosed cancer patients and community control groups for a period of twelve months and found that 14.3% of cancer patients showed severe PTSD symptoms in their first year following diagnosis, compared to only 5.7% of participants in the control group (Robatille, 2010). This same study found that there was an increase in PTSD symptoms over time for the cancer patient group with early incidences of symptoms strongly predicting later occurrences of PTSD in those same patients. Though the symptoms did increase over time and severity it is interesting to note that the type of symptoms changed from initial and early diagnosis through to the later months in the year-long inquiry. While avoidance and denial were the most prevalent post-traumatic symptoms expressed during the earliest months of study, these symptoms gradually gave way to intrusive thoughts and memories as the most frequently occurring symptoms (Robatille, 2010). This increase in severity of PTSD symptoms has been found in most studies examining cancer patients' well-being at time of initial diagnosis and follow-up interviews and examinations. For example, a study of 46 female breast cancer survivors who underwent evaluation at initial diagnosis and one year post-treatment found no significant decrease in post-traumatic stress disorder symptoms and in fact showed that 13% of the women had experienced an increase in PTSD symptoms (Fench-Roass, Moye, & Naik, 2011).

The expression of post-traumatic stress disorder symptoms is significant cause for alarm given the detrimental effects to any individual, let alone a cancer patient whose physical/medical health has been greatly diminished due to adverse treatment effects, and who must endure a great deal of psychological stress. As these symptoms are

so dangerous, it is important for medicine and psychiatry to identify any predictors of developing post-traumatic stress disorder a patient may already exhibit. French-Roass et al., (2011) identified two factors that increase the risk of cancer patients developing PTSD; these were individual factors and cancer factors. Individual factors consisted of: a pre-cancer psychiatric disorder, younger patient age, female gender, an emotionally reactive temperament, an avoidant coping style, low socioeconomic status, poor social support, high dissatisfaction with medical care, and a loss of physical functioning. The cancer factors identified included an advanced stage of cancer, more than one cancer recurrence (of either the same or another type of cancer), the immediacy of cancer treatment at the time of assessment for PTSD, and a more invasive, painful, or disfiguring type of cancer (French-Roass et al, 2011). One of the strongest predictors of future PTSD in patients was found to be a pre-existing psychiatric disorder with these patients being 14 times more likely to develop PTSD as opposed to cancer patients without a pre-existing disorder (French-Roass, 2011).

Some personality traits have also been found to predict patient development of post-traumatic stress disorder symptoms. In another study involving breast cancer patients, it was found that neuroticism predicted the presence of intrusive recollections by patients one year following the completion of treatment (Elklit & Blum, 2010). Negative affect was found to be a strong predictor of the severity of PTSD symptoms and increased the overall risk for a patient reporting cancer related PTSD. It is believed that this neuroticism increases the patients' risk of developing PTSD due to the cancer trauma-related stimuli being cognitively appraised and experienced as negative and upsetting emotions (Elklit & Blum, 2010).

In cancer patients specifically identifying the traumatic stressor can be difficult due to the multiple crises the patient is subjected to throughout the entire process of living through the cancer experience, with intensity, duration, and controllability affecting the development of PTSD (Bush, 2009). Along with the medical and psychological status of patients, it is important to take into consideration the warning signs and potential risk factors of objective stress that the patient faces and the patients' means to confront and deal with them. These include the treatment, anxiety, uncertainty and fears following the diagnosis, then post treatment realities such as the financial burden, possible forced changes in occupation, family role changes, as well as possible difficulties pertaining to sexual relationships and intimacy. As one cancer patient, herself a nurse practitioner, explained:

now common sleepless nights, I was still bald, the peripheral neuropathy in my hands and feet remained crippling, and the aromatase inhibitor I had been prescribed made me feel like I had arthritis from head to toe...I could not physically, emotionally, or cognitively do the work in fairness to myself or my patients. I resigned a rewarding job I cherished and I began to feel like I was drowning (Bush, 2009, pp. 396).

All of these issues have the potential to become triggers for suffering chronic PTSD and its symptoms (Bush, 2009). The number of serious traumatic events a patient has experienced before the cancer diagnosis and during treatment protocols is also important in assessing risk of PTSD development due to the exasperation of the patients' understandable fears of having their lives prematurely cut short from a reoccurrence of cancer later in life or

experiencing a relapse shortly after reaching remission status.

New research has begun to examine the neurobiological effects, causes, and consequences of post-traumatic stress disorder in cancer patients. A study by Hakamata et al. (2007) used magnetic resonance imaging or MRIs of the brains of Japanese breast cancer survivors with PTSD and then compared them to MRIs of the brains of cancer survivors without PTSD as well as to those of a control group of non-cancer survivors. Results showed the right BA11 gray matter volume of breast cancer survivors with PTSD was significantly smaller than that same region in the brains of the control group and in the brains of the survivors without PTSD (Hakamata et al., 2007). Accumulations of cross-sectional studies have revealed a common finding of smaller hippocampal gray matter volume. The hippocampus, amygdala, the prefrontal cortex, anterior cingulate cortex (ACC), and orbito-frontal cortex (OFC) have also shown dysfunctional activation during fMRI studies (Hakamata et al., 2007). Researchers have suggested that given the OFC role in the extinction of fear conditioning and the emotional retrieval of autobiographical memory, the lower grey matter volume may account for the hardship cancer survivors with PTSD have in letting go of the haunting fear-conditioned memories of their cancer experiences. This means that it becomes too easy for a cancer patient with PTSD to frequently retrieve and repeatedly relive those emotional experiences (Hakamata, 2007). These findings point to a possible PTSD neurobiological basis at least as it pertains to the grouping of intrusive symptoms.

The Fear of Relapse

Relapse...for a cancer patient there is no word, thought, or possibility that is more soul crushing and terrifying than that of a reoccurrence of his/her former cancer or of

another type of malignancy. In fact a study by Elkit and Blum (2011) revealed that 78% of their patients reported that the possible recurrence of cancer was even more distressing than the initial diagnosis. Different cancer types have higher patient relapse rates than others, and unfortunately the likelihood of a patient developing a different; separate form of cancer during his/her lifetime greatly increases with each diagnosis as a result of either the cancer itself or as a side effect of certain treatment protocols (Kangas et al., 2000). For example, receiving radiation treatment in the upper chest area has the potential to lead to cancers of the heart, while radiating areas of bone marrow production such as the lower spine or pelvic area increases the chance of developing bone and/or forms of blood cancers such as leukemia or the lymphomas.

At initial diagnosis of Hodgkin's Lymphoma in most patients, depending on stage and other intervening variables, has an approximate survival chance of 80% (Vakkkaanka & Link, 2011). However following the event of a relapse of the cancer during a patient's supposed remission, the survival rate decreases substantially, plummeting to 50%, and further declines with each additional relapse or reoccurrence of another form of cancer.

An example of the later manifestation of the post-traumatic stress disorder symptoms in patients considered to be in remission following successful completion of treatment protocols is a case study by French-Rosas et al., (2011) in which a patient known as Mr. M was reported as follows,

At 12 months after his diagnosis and with his cancer in remission, Mr. M stated that he was experiencing only minimal disturbing memories related to cancer, although he did have a sense of a foreshortened future and was worried about

recurrence...When Mr. M was re-assessed 18 months after diagnosis, his cancer-related PTSD symptoms had again increased, and he was experiencing significant numbing and hyper arousal (pp. 270).

This fear of relapse or of recurrence appears to show patients' perceptions of the cancer as being a serious current threat to themselves and as a belief that there is no concrete measure of time in which they can nullify the threat (Black & White, 2005). This appraisal of threat raises the chance of a patient experiencing Post-traumatic Stress Symptoms though not necessarily exemplifying full PTSD measurements, for example exhibiting only two of the three major symptom groups (Black & White, 2005).

Cancer Treatment

There are four common types of cancer treatments currently practiced; including chemotherapy, radiotherapy, stem cell transplantation, surgical procedures, or combinations of two, three, or even all four procedures. Each cancer patient has a treatment routine based specifically on the form and sub-types of cancer he/she is diagnosed with, and the stage of the cancer (e.g., a patient diagnosed with stage 2-A B-cell Hodgkins Lymphoma). Many factors are taken into account when doctors determine the best course of action to optimize the potential for a successful outcome.

Chemotherapy is the administering of chemicals, either orally or intravenously in an attempt to destroy and eliminate aggressive, quickly multiplying cancerous cells in one or more regions of a patients' body (Vakkalanka & Link, 2011). These drugs may be given separately or more often in combinations which have been tested to determine optimum amounts of each drug to maximize effectiveness. As in the case of the treatment of Hodgkin's Lymphoma the

preferable form of initial treatment is known as ABVD chemotherapy (Vakkalanka & Link, 2011). The four drugs, Adriamycin (doxorubicin), Bleomycin (bleomycin), Velban (vinblastine) and DTIC (dacarbazine) are administered one after another intravenously through an IV in the patients arm or in a surgically attached port in the chest. The drugs are administered in cycles approximately every 2 to 3 weeks (Vakkalanka & Link, 2011). These cycles of treatment are referred to as "rounds" of chemotherapy, ABVD chemotherapy; generally consists of 8 to 12 rounds. Each patient has a treatment plan specifically tailored to his/her stage and type of cancer as well as to other factors such as height, weight, any preexisting medical conditions, and general overall health.

Doctors, nurses, and pharmacists all do their best to minimize and treat the harmful side effects of chemotherapy which may worsen the longer the patient undergoes treatment due to the diminished ability of the patient to "bounce back" after progressive rounds. Complications are always a danger for a patient due to his/her compromised immune system. A simple infection has the potential to quickly turn septic and potentially fatal if not recognized and treated immediately. While side effects can vary across chemotherapy drugs, these also vary greatly from one individual to another. Some with higher pain tolerances more easily endure the needle punctures, the burning or freezing feelings as the drugs flow from IV bags through lines into the veins at great speeds. Some of the most easily recognizable side effects of many chemotherapy drugs are hair loss, weight loss, nausea; vomiting, fatigue, pain; impaired memory and ability to focus are also common though for the majority only temporary. Chemotherapy has not been found to be a direct cause of post-traumatic stress disorder but it does greatly increase

stress for the patient increasing the likelihood of post-traumatic stress symptoms and eventually full PTSD.

Radiation

Radiation therapy or radiotherapy as it is also known involves the use of high level radiation to shrink tumors and/or kill cancer cells. Approximately 350,000 patients undergo some form of radiotherapy each year (Peck & Boland, 1977). The radiation can be delivered in several ways. First is by a machine that focuses a beam on a specific area of the patients' body, second is by inserting radioactive material into the patients' body on or around the cancer cells, and the third is by systematic radiation therapy where a radioactive substance is administered orally or intravenously and travels to tissues throughout the patients' body (Peck & Boland, 1977). The radiation kills the cancer cells by breaking down their DNA, causing them to no longer be able to reproduce. Unfortunately, the radiation therapy destroys the DNA of not only cancer cells but also normal healthy cells. Patients in the past viewed radiotherapy as a treatment "only reserved for the unlucky or advanced cases" (pp.183) or a "Catch-22" of having treatment that may cause another form of cancer (Peck & Boland, 1977). Continuing research has led to safer practices aided by doctors now knowing the safe radiation threshold for the entire body and by improved machinery such as cobalt therapy delivered silently, and the use of CT scans to allow tumors to be pinpointed and treated. Currently only about 4% of patients develop another form of cancer from the radiotherapy (Bush, 2009).

While radiotherapy treatment is safer and more effective it is the actual experience of undergoing the radiation treatment that provides the danger of developing PTSD symptoms. The radiotherapy becomes a strong challenge to the individual patient's coping mechanisms when those mechanisms

are potentially at their most taxed. Even though it may not be a direct cause of post-traumatic stress disorder, radiation therapy can influence its development following treatment by increasing stress levels prior to and after protocols, 60% of patients report anxiety prior to radiation therapy and 80% report anxiety afterwards (Peck & Boland, 1977).

Autologous/Analogous stem cell transplant

One of the latest procedures available to patients and healthcare teams is the Autologous and Analogous stem cell transplants. The autologous stem cell transplant uses the patients' own stem cells collected either from his/her bone marrow or the peripheral harvesting from his/her own bloodstream. This is often the preferred option because the patient's body is less likely to reject his/her own cells as opposed to donor stem cells from an analogous transplant that was matched to the patient from a family member or a bone marrow donor matched through an existing network. While these procedures are potentially dangerous, there exists a 5% fatality rate due to the high dose chemotherapy destroying the patient's immune system and the transplanted stem cells being rejected and failing to revive the bone marrow production and immune function of the patient (Mundy, 2000). While undergoing these transplant procedures can cause immense stress for the patient, studies conducted so far have failed to find a direct causality of post-traumatic stress disorder from the stem cell transplant (Mundy, 2000). These studies have however found that a higher percentage of bone marrow and stem cell transplant patients (41%) experience post-traumatic stress disorder compared to control groups and to non-transplant cancer patients (30%) undergoing different forms of treatment (Mundy, 2000).

Surgery

For some cancers the best option for a patient is the surgical removal of a tumor or malignant tissue from his/her body. This can involve the removal of the cancerous tissue only, or of the cancerous tissue as well as the healthy tissue surrounding it as a means to improve the likelihood of the surgeon getting all the cancerous tissue. In some cases however, it may be deemed necessary to remove an entire organ, limb or body part, as in the surgical amputation of an arm or leg to stop the metastasizing of a cancer, or breast cancer patients undergoing single or double mastectomy or testicular cancer patients having one or both testicles removed. Perhaps the most well-known example was Terry Fox who had his right leg amputated to stop the spread of cancer from his leg up into his organs, sadly though the amputation did not do so and he died after attempting to run across Canada. For surgery patients, the time before surgery has been found to be the most stressful as patients face the anxiety of an unknown outcome (Kangas et al., 2002). This has been found to be true even when the surgical procedure is being performed to determine initial diagnosis, such as in gynecologic cancers (Posluszny, Edwards, Dew & Baum, 2010). The relation between perceived threat and PTSD symptoms in women undergoing surgery for both gynecologic cancer and benign conditions found that prior to surgery and immediately following surgery, the benign condition patients and the early stage cancer patients had nearly identical rates of meeting PTSD criteria, 15% for the benign patient group compared to 16% for the early stage cancer group (Posluszny et al, 2010).

For some patients the treatment of cancer can at times seem as though it is harder to endure than the disease itself, pain, vomiting, chemo brain, radiation burns, surgical scars and amputations, combined

with the fear of having to endure it all again can leave a patient with lasting trauma as one patient notes:

Quickly I learned that there are no magic potions to relieve long-term side-effects from cancer treatments. I had dreams of reliving chemotherapy appointments, of being caught in MRI Scans, or being burned by the radiation accelerator...I would look in the mirror and not recognize myself, I was grieving the loss of self-image, my energy, my confidence (Brown, 2009, pp. 397).

Patient Age

Cancer patients are divided by age into several groups; Pediatric cancer including children and adolescents, Young Adult (20-39) patients, and Adult patients aged 40 and up (Ganz, Raz, Gothelf, Yavin & Buchval, 2010). The number of pediatric cancer survivors has greatly increased from 58% for those treated from 1975- 1977 to 80% for those treated between 1996 and 2003 (Ganz et al, 2010). These patients are some of the most likely to develop post-traumatic stress disorder later in life with figures ranging from 5%-21% with specific cancers such as Hodgkin and Non-Hodgkin Lymphoma, two of the most prevalent childhood cancers with a rate as high as 32% (Ganz et al, 2010).

Adult cancer patients are hypothesized to have a lower incidence of suffering from PTSD in part because they have had more life experiences to draw upon and have better learned how to deal with stress through the use of finer honed coping skills and using more mature defense mechanisms (Elkit & Blum, 2010). Defense mechanisms are activated when an individual feels threatened either physically or emotionally (Elkit & Blum, 2010). Mature defense mechanisms are humor, sublimation, and anticipation while immature defense mechanisms consist of

denial and repression (Elkit & Blum, 2010). Younger patients are more likely to use denial and repression as opposed to older patients leading to the interference with the younger patient cognitively processing the trauma of cancer which can increase the potential development of post-traumatic stress disorder and its symptoms (Elkit & Blum, 2010). As more children diagnosed with cancer are surviving the disease and maturing into adulthood thanks to improved diagnostics and treatment protocols, more attention is being directed at the long term psychological effects of cancer (Ganz, et al., 2010).

Therapy

A meta-analysis of cross-sectional studies has shown that cognitive behavior therapy has been moderately successful in treating post-traumatic stress disorder (Kangas et al., 2002). Cognitive behavior therapy involves management of anxiety, cognitive therapy, and exposure. Relaxation techniques such as meditation and visual imagery have been found to be effective in lowering anxiety while exposure can decrease stress and anxiety in patients who return to the places of experienced fear and or pain during different treatment protocols and diagnostic procedures (French-Roass et al., 2011) for instance having a patient slowly return to their hospital ward or outpatient chemotherapy unit, as a way to extinguish the fear and stress associated with those locations. This is tailored to the individual and performed in slow increments as not to overwhelm the patient.

When treating a patient for cancer related post-traumatic stress symptoms it is important to acknowledge that patients will often suffer from other comorbid psychological disturbances (Kangas et al, 2002). The possible presence of depression, grief, substance abuse, anxiety disorder, and adjustment disorders means that clinicians must treat these disorders at the same time

as they treat the PTSD or following PTSD treatment. This decision is determined by several factors: competing demands of cancer treatments, the degree of effect of the comorbid conditions, how well the patient can cope with the different psychological stressors, and finally how much of an effect the comorbid disorders have on the treatment of the primary PTSD causes (Kangas et al, 2002). Unfortunately large numbers of cancer patients suffering PTSD have not utilized the mental health services that are available to them. In fact only an estimated 10% of patients who report distress receive psychosocial therapy (French-Roass et al., 2011). The same study noted that 90% of patients interviewed would have sought psychiatric help if they had been aware of suffering a psychological or emotional problem. Patients who have a discussion about mental health services with their healthcare team prior to or at the time of diagnosis are the group most likely to seek some form of mental health service (French-Roass et al., 2011).

The early identification of patients who are suffering post-traumatic symptoms and are likely to be experiencing adjustment problems is of great importance due to increased stress leading to increased pain levels, more disabilities, and an even greater desire to die (French-Roass et al., 2011). This identification is aided by the identification of any psychiatric vulnerability patients may already have and by examining their previous coping styles during difficult times in their lives. Due to the intense nature of many medical procedures, any psychiatric treatment should be eased as to not cause over exertion of the patient during the most arduous phases. An example of the physical health trumping concern for the psychological concern for the patient is while a stem cell transplant patient receives high dose, potentially lethal, chemotherapy in the days preceding the

reinfusion of previously harvested stem cells.

Once a cancer patient has completed treatment protocols or is in an extended lull between procedures, it is recommended that adaptive coping and cognitive restructuring be attempted as a means for the patient to better understand and analyze his/her new reality (French-Roass et al., 2011). They may have continuing problems reevaluating previous life goals and reintegrating into their family, social, and professional environments. This is especially true if the patient has undergone surgical procedures to his/her mouth, tongue, larynx, or esophagus that may have resulted in reduced or modified speech ability, as well as any new physical limitations experienced as a result of treatments and their side effects (Kangas et al., 2002).

Cancer induced or related post-traumatic stress disorder and its symptoms have been found to be effectively treated using psychotherapy in an individual or group setting, psychological education, and pharmacological means (French-Roass et al., 2011). Any pharmacological treatment must be acutely overseen to identify and prevent any potentially harmful interactions between psychotropic and cancer medications.

Conclusion

Cancer associated PTSD is unlike most other forms of PTSD in that it is not a single traumatizing event such as an assault or accident but rather a protracted experience that changes throughout. The patient is continually exposed to the cancer while undergoing treatments, protocols, routine diagnostics such as blood tests and CT scans, and the continued screenings that follow the end of actual treatments. All of this can impair or decrease the patients cognitive processing and evaluation of the trauma brought about by the cancer experience (French-Roass et al., 2011). The post-traumatic symptoms expressed by a

patient will fluctuate over the course of the cancer experience. For example when patients were reevaluated 12 months after completion of treatment, patients exhibited a decrease in avoidance and hyper-arousal while at the same time showing an increase in intrusive thoughts (Kangas et al, 2002).

As a stressor for post-traumatic symptoms, cancer is again unlike the majority of other stressors in that the cancer experience is internally based, where most other stressors are often an immediately threatening external discrete event, for instance a car accident, an assault, or combat scenario (Kangas et al, 2002). This realization is important because it exemplifies the uniqueness of cancer related PTSD and helps explain why the number of patients suffering PTSD symptoms tend to increase after the completion of treatment protocols compared to that at initial diagnosis and at the beginning of the cancer experience.

Among the three major symptom groups of PTSD is the patient suffering hyper-arousal which can have accompanying feelings of immense guilt. Unique to cancer survivors is the condition known as survivors' guilt. Survivors' guilt is when a patient who has successfully underwent treatment protocols and is now considered to be in remission experiences feelings of tremendous guilt over his/her surviving the ordeal when other patients have died as a result of cancer. These feelings can be even greater for survivors who have had close friends and loved ones pass away after losing their own battles with the disease.

The prevention and treatment of cancer is a worldwide issue even though some cancer types are a more serious problem in one population group compared to others because of environmental, lifestyle, or genetic factors (Kangas et al., 2002). Cancer is a worldwide issue, which makes

continuing expansion of research examining PTSD and the symptoms experienced by cancer patients living in countries all over the world necessary. In North America (Psluszny et al., 2010) Japan (Hakamata et al., 2007) Germany (Mehnert & Koch, 2006) Denmark (Elkit & Blum, 2010) Great Britain (Black & White, 2005) Australia (Kangas et al., 2002) and Israel (Ganz et al., 2010) research is being conducted.

While researchers around the world have studied PTSD in cancer patients, many of these studies have been cross-sectional analyses which pose a difficulty in identifying the specific stressor of the cancer experience which causes PTSD (Kangas et al., 2002). This means the contributions of the diagnosis, treatment procedures, treatment side effects, and changes in prognosis are all understood to be stressors but the exact impact of each is unknown. This unknown degree of overlap between stressors offers a continued area of study available to researchers along with the continued push to develop successful treatment and therapies for those patients currently suffering from the symptoms of PTSD.

Along with the cross sectional nature of many previous studies, there is also a possible bias in the conclusions as they relate to gender. The majority of cancer related PTSD occurrences in women studies have used female breast cancer patients (Mehnert & Koch, 2006) and gynecological cancer patients (Posluszny et al, 2010). There have been obvious advantages to using these sample populations because of the relatively high survival rates, large patient populations, and variation in patient age. Past studies found that significant percentages of patients did suffer from PTSD and its symptoms, however these results may have artificially over emphasized female gender as a risk factor for development of PTSD in cancer patients.

Along with the possible resulting female biases, a methodological parallel has taken place involving male cancer patients. As studies on female patients have involved breast and gynecological patients, PTSD studies in men have primarily been comprised of male patients diagnosed with testicular and lymphatic cancers (Kangas et al., 2002). The results of these studies have also revealed PTSD in a significant number of patients, however given the comparatively larger number of studies examining breast cancer patients, there is a possibility that the female gender has been too heavily weighted as a PTSD risk factor.

The key to increasing the likelihood of a patient surviving cancer is the earliest possible diagnosis of cancer following the identification of symptoms of malignancy, such as sudden weight loss, constant fatigue, enlarged lymph nodes, and so on, followed by effective treatment protocols such as chemotherapy, radiotherapy, bone marrow/stem cell transplantation or some combination thereof. This early detection formula holds true in cancer patients experiencing PTSD as a result of their own cancer experience, recognition of PTSD symptoms, early identification of patients who belong to high risk groups, (e.g. female sex, younger age, lower socio economic status, late stage cancer diagnosis, and other known risk factors) (French-Rosas et al., 2011). Increased education regarding risk factors for healthcare professionals combined with increased patient education on how to identify possible PTSD symptoms they are experiencing during and after their cancer experience (diagnosis, treatment, and remission) can aid in beginning a successful therapy process for cancer patients. This increase in mental health education would be of particular benefit to those patients who are of a lower socioeconomic status and would therefore be less likely to have a prior knowledge or experience with the

therapeutic options available to them such as counselors, psychiatrists, and psychologists, as compared to patients from a higher socioeconomic background.

Cancer is an indiscriminant disease consisting of many subtypes which currently affect millions around the world. This fact is both a bane, as well as a boon for patients affected, on one hand the disease is global and lethal, and on the other hand the extent and danger of the disease has led to an incredibly large amount of ongoing research and study into the identification, treatment, and prevention of cancer. In the past few decades, breakthrough technology such as PET scans have greatly aided the early detection of cancerous cells while huge leaps in treatment protocols such as bone marrow and stem cell transplants have saved the lives of patients who would have succumbed to the disease only a generation ago. With these breakthroughs in identification and treatments comes the growing need of addressing the next stage of patient care, the mental health of the cancer patient. These increases in patient survival rates have led to the identification of PTSD which has developed during and after the cancer experience as a potentially deadly condition that needs to be further understood and taken into account when addressing the full scope of a cancer patients' health.

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