

**THE SHIFT FROM NORMAL SIBLING RIVALRY TO EMOTIONAL
MALTREATMENT AND ITS IMPACT ON LATER PSYCHOLOGICAL WELLBEING**

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ABSTRACT

While sibling abuse is a predominant form of family conflict, discussion of severe sibling rivalry representing a form of emotional maltreatment has not received the attention it warrants. This thesis examines the nature of sibling rivalry, severe rivalry as a form of emotional maltreatment, the developmental shift from normal to abusive rivalry, and its consequent psychological effects as perceived by emerging adults ($n = 414$). The findings suggest age, gender, living in separate homes, parental differential treatment, athletic ability, and academic success, influence perceived sibling rivalry. Statistical analysis reveals that severe sibling rivalry significantly resembles emotional maltreatment and is related to decreased psychological wellbeing. Also, the developmental stage where the shift from normal to abusive rivalry exists was not identified. In conclusion, severe sibling rivalry resembles sibling abuse and should be taken seriously, where if it goes unnoticed it is suggested to negatively affect self-esteem and self-concept.

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CHAPTER 1: Introduction

One of the longest lasting relationships an individual will experience within their lifetime is the sibling relationship (Cicirelli, 1980; Cicirelli, 1982). Considering close to 90 percent of the Western population has some form of sibling (Milevsky, 2019), this relationship has a strong impact on psychological wellbeing and development (Whipple & Finton, 1995). As the sibling relationship is typically life long, negative interactions between siblings growing up have been linked to decreased psychological wellbeing in regard to self-esteem and self-concept in adulthood (Zervas & Sherman, 1994). Unlike other interpersonal relationships, siblings are forced to interact with one another, and are subject to social comparison and competition (Newman, 1994). Sibling relationships characterized by competition and conflict are commonly labeled as sibling rivalry, and lead to unsatisfactory relationships and communication (Bevan & Stetzenbach, 2007). When this communication begins to attack the emotional or intellectual aspects of a sibling, it is important to recognize the shift from normal sibling rivalry to emotional or psychological maltreatment (Hart & Brassard, 1987). Although the literature has an abundance of research surrounding sibling rivalry and its contributions to negative sibling relationships, this study aimed to identify severe sibling rivalry as a form of emotional maltreatment.

Studies examining rivalry look at either actual or perceived rivalry. Actual rivalry is often studied using data from both siblings and focuses on real experiences of rivalry (Mackey et al., 2010). Whereas perceived rivalry focuses on one sibling's perception of their remembered experiences of rivalry within their sibling relationship (Yeh & Lempers, 2004; Stocker, Lanthier, & Furman, 1995). This study chose to examine perceived rivalry as it has been linked to

increased rivalry in the relationship and decreased psychological wellbeing Salovey, 1991; Salovey & Rodin, 1984; Yeh & Lempers, 2004).

There are gaps in the literature discussing the impact of perceived sibling rivalry in emerging adults, and the potential impact severe rivalry has on the psychological wellbeing of individuals at this developmental stage. Emerging adulthood includes individuals aged eighteen to twenty-five and is characterized by neither adolescence nor adulthood (Arnett, 2000). It is a developmental stage that does not align with normative expectations or social roles as it is subject to great demographic variability (Arnett, 2000). Commonly, emerging adults leave home during this period and encounter diverse living situations and new responsibilities, which in turn creates a large stage of change in the sibling relationship (Arnett, 2000; Cicirelli, 1995). As several changes occur during emerging adulthood, there is a surprising lack of literature on the impact of perceived sibling rivalry on psychological wellbeing at this developmental stage.

Given the gaps in the literature regarding the effect of severe sibling rivalry on psychological wellbeing, this study sought to identify the shift from normal sibling rivalry to emotional maltreatment, and how that shift affects self-esteem and self-concept depending on when in life it occurs.

CHAPTER 2: Literature Review

Sibling Relationships

The sibling relationship consists of individuals who share a common parent and interact verbally and non-verbally with each other (Caffaro & Conn-Caffaro, 1998). A sibling may be biological (share the same parents), adopted (from a different set of parents), half (share one biological parent), step (related through marriage of parents), or foster (related through a shared home) (Whipple & Finton, 1995). As the sibling relationship is a life-long interaction, siblings

play a large role in influencing one another in personality development and in understanding the outside world (Devita-Raeburn, 2004). Specifically, this relationship is reported as one of the most unique and impactful forces in social development (Rowe & Gulley, 1992; Snyder et al., 2005). Positive sibling relationships and a close sibling bond have beneficial impacts on development and psychological wellbeing in adulthood (Cicirelli, 1995; Milevsky, 2005), whereas negative sibling relationships have been shown to impact adult development and psychological wellbeing adversely and is often characterized by hostility and aggression (Katz & Hamama, 2018). The literature investigating sibling relationships has primarily focused on childhood, adolescence, and older adulthood (Milevsky et al., 2005). Given the changes occurring within emerging adulthood (Cicirelli, 1995), the investigation of how these individuals perceive their past sibling experiences at this developmental stage is warranted.

Psychological Wellbeing

Psychological wellbeing refers to a person's capacity to function positively, such as developing a strong sense of purpose, potential, and control over one's life (Huppert, 2009). A person's psychological wellbeing becomes compromised when negative emotions interfere with their ability to psychologically function, which commonly presents as a psychological disorder (Huppert, 2009). As conflict within sibling relationships commonly results in developing decreased self-esteem and self-concept, the current study investigates psychological wellbeing in regard to those two constructs (Zervas & Sherman, 1994). Self-esteem gives information to how individuals feel about themselves as represented through self-perpetuating thought patterns regarding positive and negative self-evaluations (Roberts & Bengtson, 1993). In sibling relationships, self-esteem is enhanced as a result of positive sibling interactions whereas low self-esteem is a consequence of internalizing negative emotions and suggests future

maladjustment (Yeh & Lempers, 2004). Alternatively, self-concept encompasses how individuals see themselves and consists of definitional and evaluative self-orientations (Roberts & Bengtson, 1993). Self-concept is a crucial component of psychological wellbeing, as someone with strong self-concept feels good about themselves and their abilities which in turn allows them to be more functional compared to individuals with lower self-concept (Craven & Marsh, 2008). In addition, self-concept has been shown to facilitate other aspects of psychological wellbeing which include happiness, anxiety, depression, motivation, and more (Craven & Marsh, 2008). Given the importance of these constructs on psychological wellbeing in conjunction with the literature supporting the vulnerability of an individual's self-concept and self-esteem within sibling relationships, the current study measured the concept of psychological wellbeing using these two facets. It is important to note that the concept of psychological wellbeing encompasses several aspects referring to an individual's capacity to function, for the purpose of not repeating self-esteem and self-concept continuously throughout the paper, psychological wellbeing will represent these terms.

Sibling Rivalry

There are prominent definitional issues of sibling rivalry in the literature, where some researchers define it as the competition between siblings for parental love and attention (Leung & Robson, 1991; Phillips & Schrod, 2015), and others define it as feelings of envy, jealousy, and competitiveness that exists between siblings (Volling et al., 2010). Accordingly, some researchers interchange the terms jealousy, conflict, and competition to define rivalry (Whiteman et al., 2013; Kolak & Volling, 2011; Volling, 2003), while others discuss conflict and rivalry as separate constructs (Stocker et al., 1997). In the current study, sibling rivalry is defined as the

competition that exists between siblings, and will encompass the terms jealousy, competition, comparison, and conflict as contributing constructs.

Contributing Family Factors Leading to Rivalry

The competition resulting from sibling rivalry is differentially impacted by birth order, age gap, gender, family size, economic status, and parental marital status (Milevsky et al., 2005). There is an abundance of research on these variables, however when exclusively analyzing their impact on emerging adult's perceptions of sibling rivalry and its severity, the research is tapered.

Birth Order. In accordance with previous literature, older siblings in a rivalrous dyad are commonly considered to be increasingly competitive as a result of the need to outperform younger siblings and compete for parental attention (Leung & Robson, 1991). Older siblings regularly see younger siblings as receiving more love and protection from their parents, and as thieves of the privileges and attention that was once theirs (Leung & Robson, 1991). Contrarily, younger siblings tend to compare themselves to older siblings and may perceive them to get better privileges, such as going to school or staying up later at night (Aktürk & Ozlen Demircan, 2018; Leung & Robson, 1991). The research on birth order in relation to rivalry varies depending on the contributing factors that trigger its severity (Leung & Robson, 1991). As per the literature on birth order, rivalrous behaviour often occurs as a by-product of parental differential treatment (PDT) and refers less to the other contributing factors.

Age Spacing. Sibling rivalry is reportedly most severe between siblings that are close in age, specifically between 1 and 4 years apart (Buhrmester & Furman, 1990; Leung & Robson, 1991; Minnett et al., 1983). Siblings that are close in age tend to share several commonalities in their daily lives, which in turn leads to competition and jealousy (Minnett et al., 1983).

Consequently, one sibling strives to de-identify from the other and that results in a perception of

dissimilarity and a lack of closeness between them (Milevsky, 2011). Additionally, the literature on the impact of age spacing and sibling rivalry corresponds with its effects on sibling relationships, where further spaced siblings experience less conflict compared to siblings close in age (Buhrmester & Furman, 1990; Furman & Buhrmester, 1985; Koch, 1960; Minnett et al., 1983).

Gender. Sibling rivalry is reported more frequently in same-sex siblings as competition arises out of their shared desires, interests, and attributes (Bawkwyn & Bawkwyn, 1972).

Goodwin and Roscoe (1990) specifically reported same-sex dyads to commonly pick on one another and complain about sharing clothing, which was particularly seen in female dyads. The likelihood of same-sex siblings comparing themselves aligns with previous research on jealousy, rivalry, and sibling relationships as well (Jensen et al., 2013).

Family Size. There is contradicting research regarding the influence of family size on sibling rivalry. Goodwin and Roscoe (1990) reported greater sibling rivalry in larger families, as siblings were found to compete over limited parental attention. Contrarily, a study by Leung and Robson (1991) discussed sibling rivalry to be less intense in large families as a result of siblings turning to each other for attention due to limited parental love. Moreover, siblings gained the opportunity to comprehend differential parental attention in large families as new children would join the family, which in turn resulted in a stronger sibling bond (Bawkwyn & Bawkwyn, 1972). As research regarding this variable lack's consensus, the current study included family size in the questionnaire to observe whether it was a contributing factor to the existence of sibling rivalry, but it is not the focus of this study.

Economic Status. The impact of family economic status on sibling relationships is common within sibling relationship literature, where siblings that come from lower economic

households tend to compete for materialistic possessions compared to families with a higher financial status (Leung & Robson, 1991). Additionally, siblings growing up in wealthier families are found to have more positive sibling relationships, where siblings from a lower economic class report having a weaker sibling bond (Dunn et al., 1994; Milevsky et al., 2005).

Parent Marital Status. Generally, siblings that come from divorced parent households are found to have more conflict within their relationship (Amato, 1996; Amato & Keith, 1991; Milevsky, 2019). The influence of unequal treatment experienced by siblings as a result of divorce has been shown to cause rivalry, specifically as a function of the different custody agreements (Milevsky & Heerwagen, 2013). In particular, when siblings are separated from each other in different homes, one sibling may receive more lenient rules and punishments compared to the other, causing rivalry and conflict within the relationship (Milevsky & Heerwagen, 2013). Additionally, the living situation of siblings who have divorced parents can resemble reduced parental investment of one sibling compared to the other (Leung & Robson, 1991).

Parental Attention

The terms parental differential treatment, favoritism, and attention will be used interchangeably in the discussion of sibling's perceptions of the unequal distribution of parental resources and treatment between siblings (Jensen et al., 2013). As a result of several researchers examining rivalry exclusively as the competition for parental attention, it is apparent that parents play a prominent role in the investigation of sibling rivalry (Leung & Robson, 1991; Phillips & Schrod, 2015). Specifically, in a study by Ross and Milgram (1982), 71% of siblings reported rivalry to be initiated by a parent or other adult figure. Siblings perceive parental differential treatment as favoritism and unfair, which in turn creates a competitive environment among them (Whiteman et al., 2011). A common antecedent of sibling rivalry is the arrival of a new sibling

into the family, where parents direct most of their attention to the new child and the older sibling feels left out (Leung & Robson, 1991). Rivalry also occurs as a result of the unequal parental distribution of emotional, social, and physical resources towards siblings (Phillips & Schrodt, 2015). This inequality of resource distribution sometimes results from a parent's tendency to identify siblings in pairs of good versus bad (Dunn & Plomin, 1991; Whipple & Finton, 1995). Consequently, parental favoritism is perceived, and the bad sibling competes and compares themselves to the good sibling (Dunn & Plomin, 1991; Whipple & Finton, 1995).

Parental favoritism has been shown to impact the perception of sibling rivalry and be detrimental to their relationship long-term (Phillips & Schrodt, 2015). Phillips and Schrodt (2015) found that young adults who perceived that either themselves or their siblings received parental differential treatment felt less close with their sibling and were more likely to perceive a rivalry as a result. Additionally, Furman and Buhrmester (1985) found parental differential attention to intensify sibling rivalry as the perception of varied treatment fostered antagonism and increased conflict between siblings. During emerging adulthood, parental treatment takes a slightly different approach where their resources go towards supporting their offspring in establishing independence (Aquilino, 2006). Moreover, financial and emotional resources become the premise for siblings' perceptions of differential treatment (Aquilino, 2006). As these resources are not always distributed equally, the lesser treated siblings are keenly aware of the difference in allocation of resources which generates intensified rivalry (Aquilino, 2006; Fingerman et al., 2012).

In a study with college-students, Zervas and Sherman (1994) found siblings who perceived themselves as the sibling who received less parental attention to have lower self-esteem compared to the students who perceived themselves as the favored sibling. Conversely,

studies assessing positive perceptions of sibling relationships and parental closeness revealed the impact of having positive family interactions on self-image and self-esteem (Yeh & Lempers, 2004). With that, it is important to note how siblings' perceptions of parental differential treatment contributes to sibling rivalry and impacts self-evaluation and self-worth (Loeser et al., 2016). An abundance of the rivalry research struggles to detach parental attention from jealousy when discussing important contributing factors to the occurrence of rivalry within the sibling relationship (Furman & Buhrmester, 1985; Zervas & Sherman, 2004). Although parental attention plays a prominent role, sibling rivalry is additionally impacted by the desire to outperform and compare one another for other instrumental reasons (Myers & Bryant, 2008).

Jealousy

Several researchers consider sibling rivalry as a manifestation of envy, jealousy, and competitiveness between siblings (Howe & Recchia, 2008; Volling et al., 2010). As jealousy cannot be defined exclusive of social context, it is a perceived reaction to an alleged threat of a valued relationship where an outside individuals' involvement is contrary to the jealous person's definition of their relationship (Hansen, 1991). Because an element of the sibling relationship requires enforced interaction on a daily basis, siblings have been shown to consistently compare their behaviors, talents, abilities, interests, feelings, and thoughts with one another (Myers & Bryant, 2008). When this comparison escalates into the need of one sibling to outcompete the other, there is a likelihood that rivalry will occur (Leung & Robson, 1991). According to the jealousy complex and the social triangle, there are three individuals involved in the occurrence of jealousy, the jealous individual, the rival, and the beloved (Volling et al., 2002). Thus, jealousy between siblings may involve the competition for the attention of peers, parents, teachers, or even themselves as the beloved relationship that is compared to (Loeser et al., 2016). The

information on jealousy and the jealousy complex has its bearings in sibling rivalry research, however the jealousy complex in and of itself is out of the scope of this paper.

Jealousy can occur as a result of perceived or actual experience, and typically remains stable over time (Legerstee et al., 2013; Volling et al., 2002; Volling et al., 2010). Although it can be discrete through an apparent change in behaviour and emotional expression, the continuity of jealousy can be seen in the underlying organization of communication (Volling et al., 2002). Moreover, once siblings reach emerging adulthood and are not interacting on a daily basis anymore jealousy may appear as reduced, however an underlying aggression and antagonism within their responses may indicate something different (Volling et al., 2002). In circumstances when siblings no longer live in the same household, their perceptions of sibling rivalry in early childhood have been shown to persist into adulthood and cause ruptures in the sibling relationship (Volling, 2003). For instance, when a sibling is perceived to be more competent or privileged compared to the other, that feeling of jealousy is carried over into adulthood and may have several effects on rivalry and wellbeing (Legerstee et al., 2013; Volling et al., 2010).

A study by Suls et al. (2002) discusses social comparison between siblings and its association with the development of sense of self and self-worth. Specifically, that there is a motivation to compare themselves to their sibling in order to better understand and evaluate aspects of the self (Suls et al., 2002). With that, it is important to note the relationship between aspects of jealousy and psychological wellbeing, and specifically how the severity of sibling rivalry might affect that association. In addition, and as mentioned above, there are several variables within an environment that contribute to the degree of competition, such as the number of resources available in a family due to economic status (Newman, 1994). In emerging

adulthood, as individuals aspire to become more independent, they are likely to move out of the home away from their parents and focus on post-secondary education or entering the workforce (Arnett, 2000). Siblings obstructed from developing this independence may become jealous of their sibling's freedom, and in turn increase the competition within their relationship (Arnett, 2000).

Family constellation variables, parental differential treatment, and jealousy will be used in the current study to measure the existence of rivalry between siblings, and in turn will give information to its severity. Although the current paper is exploring sibling rivalry in its most severe form, it is important to understand the nature of normal sibling rivalry. This identification will aid in recognizing when that behaviour changes to becoming maladaptive.

Normal Sibling Rivalry

Sibling rivalry is common in most families, if not all, and is considered to play an important role in development (Aktürk & Ozlen Demircan, 2018). Specifically, healthy competition among siblings for family resources leads to social, cognitive, and interpersonal skills, and is known to benefit development into adulthood (Leung & Robson, 1991). Through normal sibling rivalry, siblings can learn life skills such as ways to constructively solve disagreements, gain empathy skills, and effectively regulate positive and negative emotions (Howe & Recchia, 2006). Although normal sibling rivalry has its benefits, it is important for parents, teachers, and clinical professionals to acknowledge when rivalry may begin to have the opposite effect.

Sibling Maltreatment

Sibling abuse is the most common form of family violence, yet it is the least investigated (McDonald & Martinez, 2019). The term sibling maltreatment encompasses both abusive and

neglectful elements of behavior between siblings and is typically underrecognized due to it commonly being perceived as normal sibling rivalry (Khan & Rogers, 2015; McDonald & Martinez, 2019; Rowntree, 2007). Consequently, some studies suggest victims themselves do not label their abusive experiences as maltreatment, and generally do not acknowledge it as abusive until adulthood (Hardy, 2001; Hardy et al., 2010). Aligning with previous studies, childhood maltreatment in the context of the sibling relationship entails scapegoating a sibling for abuse/neglect, witnessing abuse/neglect of a sibling, a sibling forced to perpetrate the victim sibling by another perpetrating sibling, or a sibling taking on the role of perpetrating or rescuing the victim sibling (Katz & Hamama, 2018). As a result, sibling maltreatment has been found to have long-term consequences well into adulthood (Garey, 1999; Goodwin & Roscoe, 1990; Kiselica & Morrill-Richards, 2007; Wiehe, 1998; Wiehe, 2000). Therefore, sibling maltreatment is a larger problem than recognized, and is in need of further investigation.

The body of research encompassing sibling maltreatment and intrafamily violence focuses largely on physical and sexual abuse (Monahan, 2010; Simonelli et al., 2002). Emotional abuse is consistently examined as cooccurring with physical and sexual abuse, and thus has little research of its impact on sibling relationships independently (Monahan, 2010; Simonelli et al., 2002). Additionally, the definitional issues surrounding sibling abuse and emotional maltreatment have been found to influence reported prevalence in relevant research as well (Mackey et al., 2010).

Emotional/Psychological Maltreatment

The term psychological maltreatment, or more currently known as emotional maltreatment, refers to the abuse or neglect that attack both emotional and intellectual properties of the victim (Hart & Brassard, 1987). Emotional maltreatment is represented through words and

actions that express degradation and contempt, which in turn deprives the victim of self-worth and negatively impacts their self-esteem (Whipple & Finton, 1995; Wiehe, 1997). Whipple and Finton (1995) indicate that the impact of emotional maltreatment is dependent on the age at which it occurs, and the degree of the victim's sense of self at that time. However, as emotional maltreatment is minorly recognized due to its lack in physicality, it is generally dismissed as normal sibling rivalry when it does occur (Caffaro & Conn-Caffaro, 2005; McDonald & Martinez, 2019). Consequently, the prevalence of emotional maltreatment within a sibling relationship tends to persist throughout life, as the sibling relationship is typically life-long (Monahan, 2010).

Prevalence

In a study analyzing perpetrators and victims of emotional abuse, 97% of participants perpetrated minor emotional abuse on a target sibling, and 80% perpetrated severe emotional abuse (Mackey et al., 2010). This study found a positive correlation between emotional abuse and sibling rivalry (Mackey et al., 2010). In another study conducted by Wiehe (2000), 150 adult survivors of sibling abuse were assessed and 78% of them reported experiences of emotional abuse. In college students, Simonelli et al. (2002) found 89% of men and 98% of women reported being emotionally abused by a sibling. Although several studies on emotional maltreatment are convoluted with other forms of abuse, research analyzing the impact of psychological maltreatment on mental health and risk outcomes revealed its importance as an independent form of childhood trauma, and as a strong predictor of negative outcomes in adulthood (Spinazzola et al., 2014).

Categories of Emotional Abuse

McDonald and Martinez (2019) conducted a study assessing different forms of emotional maltreatment occurring between siblings and identified eight categories of abuse. Body shaming is the first category and was commonly reported as negative comments referring to physical appearance and body odor by a sibling (McDonald & Martinez, 2019). The second category, attacking a sibling's intelligence, entails a sibling calling the victim sibling stupid or worthless (McDonald & Martinez, 2019). Often, this attack on the victim's competence was done in public which leads to the third category, public humiliation (McDonald & Martinez, 2019). Emotional maltreatment often persists outside the home and is increasingly impactful when victims are perpetrated in front of friends, family members, and others (McDonald & Martinez, 2019). The fourth category of emotional abuse considers rejection, where participants reported a common sense of exclusion by their sibling in several aspects of life (McDonald & Martinez, 2019). The fifth category of emotional abuse entailed lying about adoption and neglecting a sibling's place in the family (McDonald & Martinez, 2019). Threats of parental discipline is the sixth category, which includes threats to get the sibling in trouble (McDonald & Martinez, 2019). Lastly, the seventh and eighth categories include gender and sexual identity shaming (McDonald & Martinez, 2019). Although research on sibling emotional abuse is relatively scarce, these categories can aid in a better identification of emotional maltreatment as well as help to better understand the causes behind it (McDonald & Martinez, 2019). Furthermore, the current study will use these categories as a means of identifying whether emotional abuse exists within the relationship, as well as investigate its relation to the severity of the existing sibling rivalry.

Verbal Aggression

The degree of verbal aggression can be viewed as a form of emotional abuse as it is displayed through communication that intends to deliver psychological pain and is detrimental to

one's self-concept (Infante & Wigley, 1986). Often verbal aggression results in a form of humiliation, embarrassment, reduced feelings of worth, and depression (Infante, 1995). Verbal aggression is conveyed through teasing, ridiculing, threatening, or antagonizing an individual's character, competence, background, physical appearance, or ability (Infante, 1987; Infante & Wigley, 1986; Myers & Bryant, 2008). In a study investigating emerging adulthood and verbal aggression, seven categories of verbally aggressive messages were revealed when assessing sibling communication, they were name calling, insults, withdrawal, physical acts or threats, repudiating, unfair comparison, and negative affect (Myers & Bryant, 2008).

Name calling was the most common between siblings, where one sibling used an offensive term to refer to the other sibling (Myers & Bryant, 2008). Correspondingly, antagonistic interactions such as name calling, teasing, or manipulation are verbally combative in nature and have been found to increase conflict in the sibling relationship (Goodwin & Roscoe, 1990). Insults were the second most common between siblings, and the premise of the insults included attacks on intelligence, abilities, and physical appearance (Myers & Bryant, 2008). Withdrawal was used to convey a lack of interest and value in their sibling's presence (Myers & Bryant, 2008). Physical acts or threats whether reported as perceived or real, involved one sibling threatening to hurt the other (Myers & Bryant, 2008). Repudiating the relationship was reported as siblings conveying a sense of rejection or denial regarding the other sibling or questioning the sibling's existence in their family (Myers & Bryant, 2008). Unfair comparison was reported as another area of verbal aggression where siblings compared themselves to each other in a way that was perceived as inaccurate by one of the siblings (Myers & Bryant, 2008). The seventh most common verbally aggressive message was negative affect, which indicated siblings conveying a sense of hatred, dislike, or general contempt (Myers & Bryant, 2008).

Although all these messages are verbally aggressive, their severity can be determined by the victim's perception of intent and hurtfulness conveyed by the message (Vangelisti & Young, 2000).

As verbal aggression in all its forms attacks some personal quality of the sibling or the state of the relationship, previous studies have utilized verbal aggression to reflect the complexity and rivalry within the sibling relationship (Bevan & Stetzenbach, 2007; Myers & Bryant, 2008). The current study used verbal aggression, perceived hurtfulness, and perceived intent as indicators of the severity and existence of sibling emotional maltreatment.

Neglect

In most studies, neglect is intertwined with abuse when assessing behaviors as abusive (Caffaro & Conn-Caffaro, 1998; Whipple & Finton, 1995). As sibling rivalry is the competition between siblings, it can be expected that when siblings fail to recognize what the other sibling requires, rivalry is enhanced (Ross & Milgram, 1982). Emotional neglect can be shown through siblings withholding support and by simple rejection and exclusivity (Myers & Bryant, 2008). The current study will explore the effects of emotional neglect and abuse as a form of severe sibling rivalry on psychological wellbeing in emerging adults.

Consequences of Emotional Maltreatment

As most emotional maltreatment experiences go unnoticed, victims tend to internalize those abusive messages and experiences and carry them throughout life (McDonald & Martinez, 2019; Whipple & Finton, 1995). In turn, the internalization of emotional maltreatment has been shown to impact self-perception and social interactions (McDonald & Martinez, 2019). When these experiences are conveyed aggressively, the victim can perceive them as severely hurtful and result in feelings of devaluation, emotional insecurity, and contempt (Myers & Bryant,

2008). In general, as emotional maltreatment is characteristic of attacks on emotional and intellectual aspects of the self, low self-esteem is one of the most notable consequences (Wiehe, 1990). Other negative outcomes include difficulties forming and maintaining social relationships, creating irrational defenses, and behaving inappropriately (Garbarino, 1987). In addition, internalizing problems such as aggression, withdrawal, depression, and emotional maladjustment are other consequences of emotional maltreatment (Yeh & Lempers, 2004).

Rivalry as a Form of Emotional Maltreatment

Several studies have found a relationship between sibling rivalry and sibling abuse (Kolak & Volling, 2011; Leung & Robson, 1991; Mackey et al., 2010). The competitive nature of sibling rivalry often leaves one sibling feeling angry, which leads them to react aggressively (Kolak & Volling, 2011). Specifically, when aggression takes the form of a verbal or non-verbal attack on the sibling's self-worth, it has transitioned from normal sibling rivalry to emotional maltreatment (Whipple & Finton, 1995).

There is difficulty surrounding the recognition of when normal sibling rivalry ends, and abusive rivalry begins (Whipple & Finton, 1995). Crucial elements to the identification of this shift includes the severity and intent of an act, as well as a clear identification of one sibling taking the role as the aggressor and gaining control over the other (Morrill-Richards & Leierer, 2010; Whipple & Finton, 1995). Commonly, parents minimize emotional maltreatment between siblings and label it as normal sibling rivalry (Wiehe, 1997). Wiehe (1997) found this normalization of abuse to negatively impact its severity and frequency and is assumed to contribute to the lack of research on sibling victimization, compared to other forms of family violence (Kiselica & Morrill-Richards, 2007; Wiehe, 1997). According to Goodwin and Roscoe (1990), parents frequently overlook sibling rivalry as abusive. Some parents perceive rivalry as a

valuable and inevitable part of growing up, which in turn leads to parents only getting involved when it escalates into a major conflict (Goodwin & Roscoe, 1990). Some parents perceive rivalry as beneficial in providing life skills regarding how to manage aggressive behavior in the real world (Goodwin & Roscoe, 1990). Similarly, emotional maltreatment is characterized as less severe by parents due its lack of physicality (Caffaro & Conn-Caffaro, 2005). Therefore, both the normalization of sibling rivalry and the minimization of emotional maltreatment within the sibling relationship generally contributes to its lack of attention (Goodwin & Roscoe, 1990).

The mismanagement of sibling emotional abuse as a result of rivalry has been shown to cause long-term psychological consequences (Leung & Robson, 1991; Whipple & Finton, 1995). Wiehe (1990) discusses how parent's denial or avoidance of sibling maltreatment can affect the victim sibling's perception of that abuse and result in passive acceptance. Due to the longevity of the sibling relationship, this mindset consequently leads to an internalization of the maltreatment and can have long-term effects on the victim (Morrill-Richards & Leierer, 2010; Newman, 1994; Whipple & Finton, 1995). As emotional maltreatment and rivalry are suggested to occur most prevalently in the childhood years (Hardy, 2001; Volling, 2003), the current study examines emerging adults and their perceptions of when rivalry became abusive. Conversely, the prolonged effects of sibling abuse, sibling rivalry, and emotional abuse as separate constructs are clear (Goodwin & Roscoe, 1990; McDonald & Martinez, 2019; Whipple & Finton, 1995), however the studies linking severe sibling rivalry as a form of emotional abuse is warranted. Furthermore, the exact period of life where rivalry shifts from normal to abusive, and its corresponding impact on later psychological wellbeing needs investigation.

Erikson's Theory of Psychosocial Development

Literature suggests the quality of sibling relationships and the existence of rivalry in childhood tends to extend into adolescence and adulthood (McDonald & Martinez, 2019; Yeh & Lempers, 2004). Additionally, emotional maltreatment has been shown to begin at an early age and persist throughout the sibling relationship as victims do not tend to label their experiences as abusive until later (Hardy, 2001; Hardy et al., 2010). McDonald and Martinez (2019) found the most common occurrences of emotional abuse between birth and 15 years of age. Although the onset of rivalry and emotional maltreatment are common in childhood years, it is unclear in which stages of life rivalry shifts from normal to abusive behavior, as well as, if there is a specific developmental period that most severely impacts later psychological wellbeing.

To measure the time where these occurrences are most impactful, Erikson's (1963) psychosocial stages of development were used. Erikson's (1963) theory of psychosocial development considers the impact of social experiences across the lifespan, and how specific interactions influence human development. Erikson proposed eight psychosocial stages and associated crises which are, basic trust vs. basic mistrust, autonomy vs. shame and doubt, initiative vs. guilt, industry vs. inferiority, identity vs. identity confusion, intimacy vs. isolation, generativity vs. stagnation, and integrity vs. despair. Each psychosocial stage proposes specific themes that are likely to exist within that developmental period as well as a crisis that needs to be resolved (Erikson, 1963; Graves & Larkin, 2006). According to Erikson, the crisis presented within each stage provides the individual with increased vulnerability and potential, thus the more success resolving a crisis at each stage the healthier the individual will be (Erikson, 1963; Graves & Larkin, 2006). Erikson's theory indicates that the successful completion of each crisis will lead to the development of basic senses and attitudes, which in turn allow an individual to better cope with age-appropriate decisions and developmental tasks (Munley, 1975). Contrarily,

individuals who fail to resolve a crisis at a developmental stage might fail to develop the necessary skills in building a strong sense of self (Erikson, 1982). It is important to note that the developmental maturation and corresponding resolution of the psychological crisis informs the already existing developed stages, as well as the stages still needing to be accomplished (Erikson, 1982). Depending on the developmental stage in which normal rivalry shifts to emotionally abusive, the consequences associated with not resolving the crisis and its additive effects are expected to underlie the impact of severe sibling rivalry on self-esteem and self-concept in later life.

Erikson's Stages of Psychosocial Development

As the current study investigated emerging adults and their perceptions of sibling rivalry up until that point, only the first six developmental stages were examined. Additionally, the six stages surround the sibling relationship as compared to the parent-child relationship.

Basic Trust vs. Basic Mistrust. Erikson's first stage of psychosocial development occurs from birth to one year of age and is described as the infant's first experience of social engagement and trust (Erikson, 1950). The general state of trust involves the infants' learned reliance on a caregiver's sameness and continuity of care, as well as the infants' trust of oneself (Erikson, 1963). Trust is successfully developed when the child can rely on a caregiver's integrity, and experiences comfort, predictability, and a feeling of inner security (Graves & Larkin, 2006). Moreover, the successful fulfillment of this crisis provides the child with feelings of safety and security regarding others and creates a sense of integrity to not fear death (Erikson, 1950). Caregivers presenting as inconsistent or emotionally unavailable to the child results in the child's failure to develop trust (Erikson, 1950). Thus, the development of mistrust leaves the

child feeling hopeless and attributing fear and unpredictability to adults and the outside world (Erikson, 1982).

Autonomy vs. Shame and Doubt. Erikson's second psychosocial stage occurs in early childhood, between ages two and three (Erikson, 1982). Within this stage, the child begins to move away from the trusting environment and explores independence (Graves & Larkin, 2006). Often this occurs through introspection of observing the behavior of others and unconscious internal desires where the child attempts to gain personal control (Erikson, 1963). As outside influences of this stage begin to encourage the child's sense of independence, they also protect them from experiencing extreme shame and doubt (Graves & Larkin, 2006). If a child lacks this support in their environment, they are likely to over manipulate themselves and develop a precious conscience (Erikson, 1963). Moreover, they become obsessed with power, perceive an excessive sense of control, and tend to test limits to gain knowledge of their rigidity (Erikson, 1963). The failure to develop autonomy at this stage results in the development of shame or doubt (Erikson, 1963). If children are overly controlled, or not given opportunities to experiment and learn how to survive independently in the world, the child will not successfully develop autonomy (Erikson, 1963). Contrarily, the child might feel inadequate, create a dependence on others, lack self-esteem, and feel a sense of shame or doubt regarding their abilities (Erikson, 1950). As autonomy entails a child's independence and personal control, this stage concentrates on shunning potential rivals (Erikson, 1963). Moreover, when rivals exist there is a jealous rage usually directed towards the intrusions of younger siblings (Erikson, 1963).

Initiative vs. Guilt. The third psychosocial developmental stage occurs in the preschool years (Erikson, 1963). Erikson describes this stage as vigorous unfolding, where the child begins to grow within his person and his body, appearing to be more themselves. A crucial element of

this developmental period includes increased social interaction, which allows the child to build interpersonal and play skills among other children (Erikson, 1963). If the child does not successfully develop initiative where they feel comfortable in these interactions, they develop a sense of guilt (Erikson, 1963). In turn, the child's guilt may take the form of aggressive manipulation and coercion outside of their control (Erikson, 1963). In relation to rivalry, this stage may account for an anticipated rivalry with older siblings, as they may be occupying the area that the younger sibling's initiative is directed (Erikson, 1963). The corresponding rivalry and internal rage create a competitive environment where siblings compete for the favored position with the caregiver, and the unfavored sibling is left with feelings of guilt, anxiety, and resignation (Erikson, 1963).

Industry vs. Inferiority. This stage occurs during early school years, typically between the ages of 6 and 11 (Erikson, 1963). Erikson's crisis of developing industry within this stage includes the introduction and adjustment of the child into the tool world. Specifically, through systematic instruction, the working principle of attention and diligence, and tools and skills, the child can develop a sense of industry (Erikson, 1963). There is less emphasis on the parental role within this stage, as teachers and the child's peer group gain greater significance and are more impactful to the child's self-esteem (Erikson, 1982). Erikson revealed the importance of competence within this stage, particularly the child's desire to demonstrate competencies that are valued by society (Erikson, 1982). On the other hand, if a sense of industry is not developed, the child is likely to feel inadequate and inferior (Erikson, 1963). As a result of the child's failure to develop the demanding skill of society and a sense of competence and mastery, a sense of inferiority and inadequacy leads to an excessive desire to outcompete others (Erikson, 1963; Erikson, 1982).

Identity vs. Identity Confusion. The fifth stage of Erikson's theory occurs during adolescence, typically between 12 and 17 years old (Erikson, 1963). Transitioning from childhood, adolescents are now faced with the task of developing a sense of self and personal identity (Erikson, 1963). Adolescents are commonly subject to comparisons during this developmental stage, as there is a primary concern of how they appear to others, and how they feel about themselves (Erikson, 1963). Like the first stage, adolescents search for a new sameness and continuity in their lives that they can attach to their final identity, whether that is the securement of certain people in their lives or a social role (Erikson, 1963). Often in the search for identity, adolescents become less dependent on their family and invest more interest in peer relationships (Buhrmester & Furman, 1987). This transition essentially affects the sibling relationship, as increased involvement in peer or intimate related relationships lead to less socioemotional investment towards the sibling (Buhrmester & Furman, 1990). Additionally, it is during this stage where adolescents explore where their passions lie in terms of certain values, beliefs, and goals (Erikson, 1982). The alignment of their passion and beliefs in turn leads adolescents planning towards the future, deciding how they want to fit into society, and which roles they desire to occupy as an adult (Erikson, 1982). If adolescents are not successful in establishing personal identity, they run into the problem of identity confusion (Erikson, 1963). Identity confusion can be expected to enhance rivalry between siblings, as social comparisons become extremely prevalent during the adolescent period (Loeser et al., 2016). Particularly, adolescents consider social comparisons to play a large role in self-evaluations, specifically including the construct of self-worth (Loeser et al., 2016). Thus, it can be expected that when one sibling establishes personal identity and the other does not, rivalry may occur as a result of social comparison and jealousy.

Intimacy vs. Isolation. Erikson's sixth stage regards young adults, where in his original work ranges from 18 to 40 years old (Erikson, 1963). The current study will use this stage to measure emerging adulthood, which will be defined as participants aged 18 to 25 (Arnett, 2000). Erikson (1963) defines this stage as the merging of a young adult's identity with that of others. A sense of intimacy is developed if the individual is eager and willing to fuse their identity with another individual who proves themselves complimentary in work, friendship, and sexuality (Erikson, 1982). The danger of this stage is isolation, where an individual may feel separated or unrecognized and fears remaining that way (Erikson, 1982). An excessive sense of isolation might represent the reliving of the identity confusion in the previous stage and place focus on the earliest conflict with a potential rival (Erikson, 1982). Erikson notes the importance of acknowledging the presence of some exclusivity within developing intimacy, however if there is too much the crisis will not be resolved and isolation will occur (Erikson, 1982). Additionally, depending on the circumstances and the individual, isolation can be vastly self-destructive (Erikson, 1982).

Through a developmental psychology lens, psychological wellbeing is conceptualized as the progression of growth throughout one's life (Ryff, 1995). Thus, each of Erikson's psychosocial stages of development can give information to why severe sibling rivalry occurring at a specific age may differentially impact self-esteem and self-concept when measured in emerging adulthood.

Purpose

Previous literature investigates sibling rivalry as an element among others that contribute to the quality of the sibling relationship and is commonly assessed exclusively regarding parental differential treatment (Jensen et al., 2011; Phillips & Schrodt, 2015). As literature also suggests

rivalry to have unique effects on the sibling relationship, the current study is interested in exploring the variables that contribute to its existence, severity, and impact on psychological wellbeing (Leung & Robson, 1991; Milevsky, Smoot, Leh, & Ruppe, 2005; Milevsky & Heerwagen, 2013; Whipple & Finton, 1995). The competition between siblings has been shown to occur depending on family constellation variables, parental differential treatment, and enhanced jealousy (Leung & Robson, 1991; Phillips & Schrodt, 2015; Volling, 2003). These contributing variables are analyzed in the current study to give information to the existence of rivalry within the sibling relationship.

Normal competition between siblings is expected to shift to emotionally maltreated rivalry when siblings perceive their competition to evoke emotionally and intellectually hurtful behavior (Hart & Brassard, 1987). As sibling and emotional maltreatment are relatively under recognized forms of abuse, it is important to identify how sibling rivalry begins to personally attack one's psychological wellbeing (Hart & Brassard, 1987; Whipple & Finton, 1995; Wiehe, 1997). Respectively, some literature suggests emotional maltreatment can be identified by matching sibling victim experiences to the eight categories of emotional abuse, as well as through the exploration of verbal aggression (Infante, 1995; McDonald & Martinez, 2019). Additionally, the severity of rivalry can be examined by the identification of perceived intent and hurtfulness conveyed by the victim sibling (Myers & Bryant, 2008). Thus, while investigating the severity of sibling rivalry, it is expected that during these reported instances rivalry will resemble a form of emotional maltreatment. In addition, the time at which emotional maltreatment occurs and its differential impact on adjustment and psychological development is important (Whipple & Finton, 1995).

As sibling rivalry and emotional maltreatment tend to persist throughout life, Erikson's (1963) psychosocial stages of development represent as a good measure of how experiences within a certain stage of life can have differential effects on psychological wellbeing. Specifically, whether the perception of severe rivalry at a specific psychosocial period corresponds with the consequences of not resolving the crisis at that stage or the ones that preceded it might give information to the time at which severe rivalry is most detrimental. In the current study, the age at which rivalry is perceived to be the most severe is predicted to have a differential effect on psychological wellbeing depending on which stage of life it occurs within.

Research Questions

The current study was a retrospective exploratory study, where sibling's perceptions of sibling rivalry were examined to better understand its impact on psychological wellbeing in emerging adulthood. Aligning with previous studies on factors contributing to sibling rivalry, this study examined the influence of family constellation variables, parental differential treatment and jealousy on the existence of rivalry. As the details of sibling rivalry in its most severe form have not warranted much attention, this study also investigated a sibling's perception of its severity and its resemblance to emotional maltreatment. Particularly, severe sibling rivalry was expected to resemble emotional maltreatment when it aligned with the categories of emotional maltreatment and verbal aggression. Additionally, participants who perceived their experience as intentionally and severely hurtful aided in the identification of severe rivalry existing within the relationship. Although research indicates several long-term effects of child abuse and negative sibling relationships on self-esteem and self-concept (Garey, 1999; Goodwin & Roscoe, 1990; Wiehe, 2000) the current study was interested in identifying the shift from normal to severe rivalry and its differential impact on later psychological wellbeing.

Three research questions were conducted. Firstly, the study wanted to know what factors showed a significant contribution towards the occurrence of normal sibling rivalry. Secondly, the study was interested in whether severe sibling rivalry resembled a form of emotional maltreatment and sibling abuse. Thirdly, it examined whether severe rivalry affected psychological wellbeing, and if that effect was different depending on when perceived rivalry began and transitioned to severe rivalry.

CHAPTER 3: Methods

Participants

The current study used a convenience sampling technique, where participants were pulled from an accessible and general population. Specifically, participants were recruited through several community advertisements by posting a link to the online Qualtrics survey on Facebook forums and by putting up posters. The link to the study was posted on University Facebook webpages and subsequent student coordinated pages. The University of Lethbridge and the University of Calgary agreed to post the study link. Additionally, student pages surrounding buying/selling textbooks, apartments/house renting pages, and accepted pages for specific graduating years also agreed to post the link to the study. This study was also distributed by the University of Lethbridge's SONA system for undergraduate psychology students to earn one bonus credit for completing the study.

To recruit non-students, the study was advertised by word of mouth and posters in common community establishments throughout Ontario. Specifically, posters were put up on street poles at common intersections in Toronto and were given to a few local retail stores. The conditions of the study required participants to have at least one sibling (biological, half, step, adopted, or foster) that they grew up with. The only exclusion criterion included participants who

were physically or sexually abused by their sibling, as this study aimed to investigate emotional maltreatment in isolation of other forms of abuse. Participants are a mix of students and non-students, and all genders were considered. As the current study explored emerging adulthood, participants are mostly between the ages of 18 and 25 years old. However, if participants were 26 or older, they were not excluded from the study to account for those who recently exited emerging adulthood. There was no minimum or maximum capacity of participants, 634 participants were recruited, and 220 participants were lost due to missing data. The online survey identified as a quantitative study which included two open-ended questions. The survey was constructed using Qualtrics.com and was administered using the same software. This study follows the university's research ethics standards and was administered to the public after being reviewed and approved by the University of Lethbridge Human Participant Research Committee (HPRC Protocol# 2020-031).

Measures

Through an online quantitative survey, self-report measures were used to examine perceptions of sibling rivalry. Items for each measure can be observed in the appendices.

Demographic Information. The demographic portion of the study includes three sections regarding the participant, their family, and a sibling of interest (see Appendix B). In part one, the participant was asked to indicate their age, gender, and education. In part two, the participant was asked to indicate their family's socioeconomic status, parental marital status, whether they lived with one parent or the other, number of siblings and their birth order. The third demographic section asked participants to choose a sibling whom they are closest to in age or got along with the least, and are asked to indicate that sibling's age, gender, degree of relatedness, if they lived together growing up, and whether they live(d) with one parent or the

other. Demographic information was collected primarily to assess the circumstances that contribute to sibling rivalry, and specifically to observe whether they aligned with previous literature.

Parental Differential Treatment/Attention/Favoritism. In this section, participants were asked to compare their perceptions of parental differential treatment to that of their chosen sibling. They were specifically asked to think about both their relationship and their sibling's relationship with their parents, as well as their family dynamic when they grew up. The questions used to measure perceptions of parental differential treatment were derived from the Adult Sibling Relationship Questionnaire (ASRQ; Stocker, Lanthier, & Furman, 1995). Questions were specifically pulled from the Rivalry subscale ($\alpha = .88$, $r = .87$), which measured maternal and paternal rivalry. Participants were prompted to indicate their experience with parental differential treatment in addition to how they perceived their sibling to respond to the same question (e.g., “do you think your father favors you or this sibling more” and “does this sibling think your father favors them or you more?”). This section had a total of 12 questions, where 6 pertained to maternal rivalry and 6 pertained to paternal rivalry. At the beginning of this set of questions participants were additionally told to indicate a neutral response if one or both of their parents are deceased, or to answer to their best ability by reflecting on when their parent(s) were alive.

Jealousy. Researcher constructed questions of jealousy were included to give information to what specific elements were causing jealousy in the relationship (e.g., popularity, degree of success, physical appearance, etc.). One researcher constructed question was provided with several options within it. An additional short answer question was asked to gain information about other factors that may have also contributed to the competition within the sibling relationship.

Perceived Sibling Rivalry. Perceived sibling rivalry was also measured using the ASRQ, but questions were derived from the Conflict subscale ($\alpha = .93, r = .89$) where questions specifically measured competition, jealousy, and performance ($\alpha = .85, r = .88$). Following the same structure as the Rivalry subscale, participants were asked to indicate how they perceive(d) competition within the sibling relationship from both perspectives (e.g., “How competitive are you with this sibling?” and “How competitive is this sibling with you?”).

Severity of Rivalry and Emotional Maltreatment. At the beginning of the section participants were given a definition of sibling rivalry and were asked to indicate how they were treated by their sibling due to the competition and comparison within their relationship. This measure was intended to convey how normal sibling rivalry can escalate into emotional abuse, which in turn will indicate its severity. The questions within this section aligned with the eight categories of emotional maltreatment and forms of verbal aggression. There was a total of 16 questions pertaining to emotional maltreatment, with one question per category of abuse, and two questions each in regard to teasing, ridiculing, threatening, and antagonizing as forms of verbal aggression.

There are two sections, where the first section included questions measuring emotional abuse and verbal aggression, and the second section aimed to measure emotional neglect. Participants were asked to indicate how often each of the identified experiences occurred on a 5-point Likert scale from “always” to “never”. The questions were created in association to the eight categories of emotional maltreatment (e.g., “My sibling would embarrass me in public” or “My sibling would call me worthless or stupid”) and verbal aggression (e.g., “My sibling would threaten me” or “My sibling would call me names”). Additionally, this section included six questions specific to neglect (e.g., “My sibling would tell me not to speak to them in public”).

Participants were also asked how hurtful they perceived this behaviour to have been, as well as whether they thought their sibling intended to hurt them when they treated them that way. A “this does not apply to me” response was included into this section to exclude participants who did not experience such behaviours within their sibling relationship. As the current study attempted to explore the perceived versus actual rivalry that occurred, the questions were asked from the victim sibling’s point of view (e.g., “My sibling would call me fat or ugly”).

Erikson’s Stages of Psychosocial Development. To investigate the relationship between when rivalry was most abusive and later psychological wellbeing, participants were asked specifically when they perceived rivalry to have begun, and at what point they thought it was the most severe. To measure psychosocial stages, participants were given the options Infant (Birth to 1 year of age), Toddler (2-3 years of age), Preschool (4-5 years of age), Elementary school (6-11 years of age), Adolescence (12-17 years of age), and Early adulthood (18-25 years of age). Participants were additionally given a text box to indicate what sibling factors made their relationship worse at that time. Participants were not given a word limit, and thus some wrote long stories whereas others wrote a few words.

Psychological Wellbeing. Self-esteem is measured using Rosenberg’s Self-Esteem Scale ($\alpha = .77$; Rosenberg, 1965), where ten questions measuring how the participant currently feels about themselves were asked (e.g., “I feel I do not have much to be proud of”). Five of these questions are positively worded (e.g., “I feel good about myself”) and the other five are negatively worded (e.g., “I certainly feel useless at times”). Participants indicated whether they “strongly agreed to strongly disagreed” to the statement provided on a 4-point Likert scale.

Questions were researcher constructed to measure self-concept. Six questions were created to assess how the participants currently viewed themselves (e.g., “I see myself as

beautiful”) Participants were given a 5-point Likert scale ranging from strongly agree to strongly disagree to respond to the statements provided.

Procedures

After recruitment, participants completed the 77-item online survey, which took approximately 15 minutes to complete. Participants were first exposed to a consent page entailing the details of the study, and the use and confidentiality limits of their data. After an indicated willingness to partake, participants were asked three questions surrounding the exclusion criteria. Participants then entered the first section of the study where common questions about individual and family demographics were asked (see Appendix B). To examine the contributing factors towards the occurrence of sibling rivalry, participants were then questioned about their own, along with their sibling’s perceptions of parental differential treatment and jealousy within the sibling relationship. Next, participants answered questions pertaining to the characteristics of rivalry. To investigate the severity of sibling rivalry, the participant proceeded to answer questions about emotionally abusive behaviors that may or may not have occurred because of rivalry. Next, the participant was asked to indicate when in their lives they perceived rivalry to have begun and when it was at its worst. The participant then answered questions about current psychological wellbeing, which surrounded self-esteem and self-concept. At the end of the study, participants were debriefed and were given information about the true purpose of the study, and further use of their data. Additionally, as this study had the potential to evoke an emotional response from the participant, a corresponding link and number for psychological support was provided as well. After the desired sample size was collected, the study became inactive, and the data was exported from Qualtrics to IBM SPSS Statistics (Version 27) (SPSS) for statistical analysis.

Chapter 4: Method of Analysis

The current study resembles a quantitative analysis where both parametric and non-parametric tests were used to analyze the data. Reliability and validity tests were conducted using the three continuous dependent variables and separate composite indexes were created for further analysis. To examine research question one, descriptive and frequency statistics were run, and a Kruskal Wallis H test was used. Descriptive statistics were used to identify collective properties of the data using means, standard deviation, and frequency. With that, frequency statistics were used to give information to the distribution and patterns within the sample data. The Kruskal Wallis H test is a rank-based nonparametric test that is used to determine any statistically significant differences between two or more groups of independent variables on a continuous dependent variable (Kruskal-Wallis H Test using SPSS Statistics). This analysis was used to identify the factors that significantly contributed to the occurrence of sibling rivalry. The second research question was measured using a one-way analysis of variance (ANOVA) and a simple linear regression. The ANOVA test was conducted to identify the factors that have an effect towards emotional maltreatment. This analysis is used when the dependent variable consists with scale measurements and the independent variable consists with ordinal or nominal measurements (One-way ANOVA in SPSS). The ANOVA specifically measured the effect of perceived intent and degree of hurtfulness on emotional maltreatment. An ANOVA was also used to measure research question three, where the effect of the age of beginning of rivalry and the age of most intense rivalry on psychological wellbeing were investigated. A correlation and simple regression analysis were carried out for research question two and three to identify a relationship and effect between the independent and dependent variables. For research question two, perceived sibling rivalry and emotional maltreatment were examined and followed the

simple regression formula, $y = \beta_0 + \beta_1 X + \epsilon$ (Bevans, 2020). In this equation, y is the dependent variable which is emotional maltreatment, and X is the independent variable, which is perceived sibling rivalry, β_0 is the predicted value of y when x is 0, β_1 is the regression coefficient, and ϵ is the error rate (Bevans, 2020). Similarly, a simple regression was run to analyze research question three, where the independent variable was emotional maltreatment, and the dependent variable was emotional wellbeing. A Tukey HSD post hoc was additionally conducted to find the significant differences between the developmental periods where perceived severe rivalry occurred and its differential effect on psychological wellbeing. As mentioned previously, all analyses were carried out using SPSS.

Chapter 5: Results

The purpose of this study is to identify the shift from normal sibling rivalry to emotional maltreatment, and how that shift affects psychological wellbeing later in life. In this chapter, the findings are described and used to address the research questions using both parametric and non-parametric analyses. Non-parametric tests included an analysis of descriptive variables, Kruskal Wallis H test, and categorical frequency analysis. Parametric analyses included reliability and validity tests, ANOVA, simple regression, Pearson correlation, and Tukey HSD. The following research questions were tested:

- 1) What factors show a significant contribution towards the occurrence of normal sibling rivalry?
- 2) Does sibling rivalry in its most severe form resemble emotional maltreatment?
 - a. Hypothesis: Participants who perceive their experience of sibling rivalry as verbally aggressive and intentionally hurtful resemble the shift from normal rivalry to emotional maltreatment.

3) Does severe sibling rivalry affect psychological wellbeing, and is this effect different depending on when rivalry began or became abusive?

- a. Hypothesis: The developmental period at which sibling rivalry was perceived to begin and become more severe will have a significant effect on psychological wellbeing.

Data Screening

Data was directly entered from Qualtrics to SPSS Statistics. To ensure all data was entered correctly, data was downloaded three times and checked by the researcher. The data set was also checked for outliers using an analysis of scatterplots. Analysis of the data was conducted using SPSS.

Missing Data

During the informed consent process at the beginning of the survey, participants were informed that they were free to decline completion of the study at any time without penalty as per the involved ethics boards. Participants who did not complete every section of the survey were excluded. Additionally, this study was advertised to psychology students at the University of Lethbridge using a psychology credit platform which allowed for credits to be assigned without full completion of the study. The combination of participants declining or not completing the study on their own terms and the errors of the university's psychology credit platform, led to 220 participants being excluded for analysis.

Distribution

One of the assumptions for most parametric tests to be reliable is that the data is approximately normally distributed. A Shapiro Wilk test of normality was conducted to measure the distribution of data over the three research questions. The null hypothesis states that the data

is normally distributed and is only rejected when the p value is less than the alpha value (0.05) (Ghasemi & Zahediasl, 2012). Thus, when the p value is higher than the alpha value, the normality assumption is satisfied (Kwak & Park, 2019). In an examination of the first research question, the Shapiro-Wilk test showed a significant departure from normality, $W(414) = 0.98$, $p = 0.0$. Regarding the second and third research questions, when testing the variables there were a variety of normal and non-normal distributions as per the Shapiro-Wilk test. The current study will however refer to the central limit theorem, where studies obtaining more than 30 participants will automatically obtain a normal distribution of data (Kwak & Kim, 2017). The central limit theorem clearly states that for larger samples, the sampling distribution of the mean is always normal regardless of how values are distributed in the population (Kwak & Kim, 2017).

Descriptive Statistics

Descriptive statistics were calculated for all variables relevant to this study and are listed in Table 1. Table 1 includes mean scores, standard deviations, minimum and maximum values, and the sample size for each variable.

Table 1

Descriptive Statistics for All Variables Relating to the Occurrence of Perceived Sibling Rivalry

	N	Minimum	Maximum	Mean	Std. Deviation
Age	414	1	9	4.19	2.480
Gender	414	1	5	1.82	.518
Current_Education	414	2	7	3.38	1.020
Education_Completed	414	1	4	1.34	.732
Parents_MaritalStatus	414	1	6	2.05	1.537
SeperateHome_Livedwith	186	1	3	1.87	.958
Number_of_Siblings	414	1	8	2.14	1.372
Birth_Order	414	1	8	2.01	1.124
FamilySocioeconomic_Status	414	1	9	4.98	1.492
Sibling_Age	414	1	4	2.58	.662
Sibling_Gender	414	1	4	1.50	.520
Sibling_Relation	414	1	6	1.18	.568
Sibling_SameHome	414	1	5	4.65	.846
Sibling_DifferentHome	414	1	4	3.39	1.023
Mother_Favours_You	414	1	5	3.07	1.352
Mother_Favours_Sibling	414	1	5	2.54	1.291
Father_Favours_You	414	1	5	3.00	1.355
Father_Favours_Sibling	414	1	5	2.81	1.310
Mother_Supports_Sibling	414	1	5	2.88	1.173
Mother_Supports_You	414	1	5	3.28	1.097
Father_Supports_Sibling	414	1	5	2.88	1.145
Father_Supports_You	414	1	5	3.15	1.080
Mother_Closer_Sibling	414	1	5	2.67	1.340
Mother_Closer_You	414	1	5	2.78	1.371
Father_Closer_Sibling	414	1	5	3.02	1.247
Father_Closer_You	414	1	5	3.12	1.266
Valid N (listwise)	186				

The variable of perceived sibling rivalry was measured using the competition, jealousy, and performance variables of both the respondents view and their perception of how their sibling would respond. Table 2 demonstrates the mean, standard deviation, and minimum and maximum values for the variables measuring perceived sibling rivalry. Additionally, factors contributing to perceived sibling rivalry demonstrated competition as a large antecedent which commonly surrounded academic success (27%), physical appearance (17%), and popularity (15%) as common contributing factors.

Table 2

Descriptive Statistics for The Variables Used to Measure Perceived Sibling Rivalry

	N	Minimum	Maximum	Mean	Std. Deviation
Competition_You	414	1	5	2.64	1.058
Competition_Sibling	414	1	5	2.86	1.189
Jealous_Sibling	414	1	5	2.67	1.174
Jealous_You	414	1	5	2.11	1.052
Performance_Sibling	414	1	5	2.64	1.284
Performance_You	414	1	5	2.59	1.233
Valid N (listwise)	414				

Severe sibling rivalry as a form of emotional maltreatment was measured using the variables Degree of Hurtfulness, and Intent of Hurtfulness (see Figure 1 and 2). Additionally, the shift from normal to abusive rivalry was investigated using the variables Age of Beginning of Rivalry, and Age of Most Intense Rivalry (see Figure 3 and 4).

Figure 1

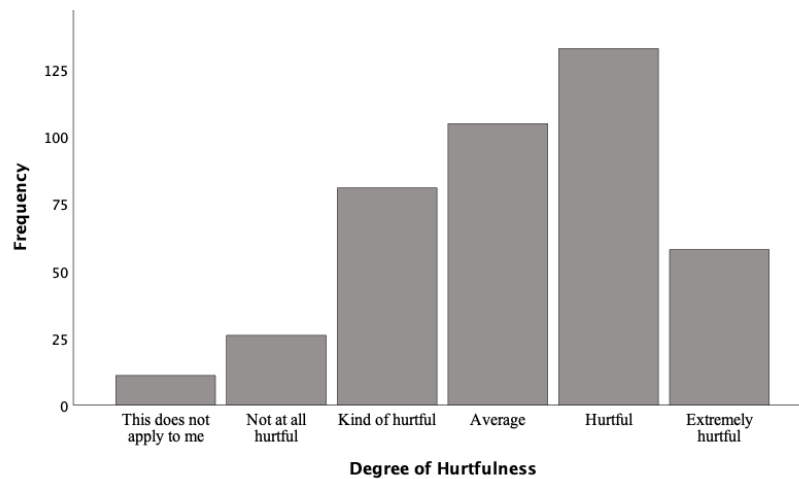
Degree of Hurtfulness Frequency Bar Graph

Figure 2

Intent of Hurtfulness Frequency Bar Graph

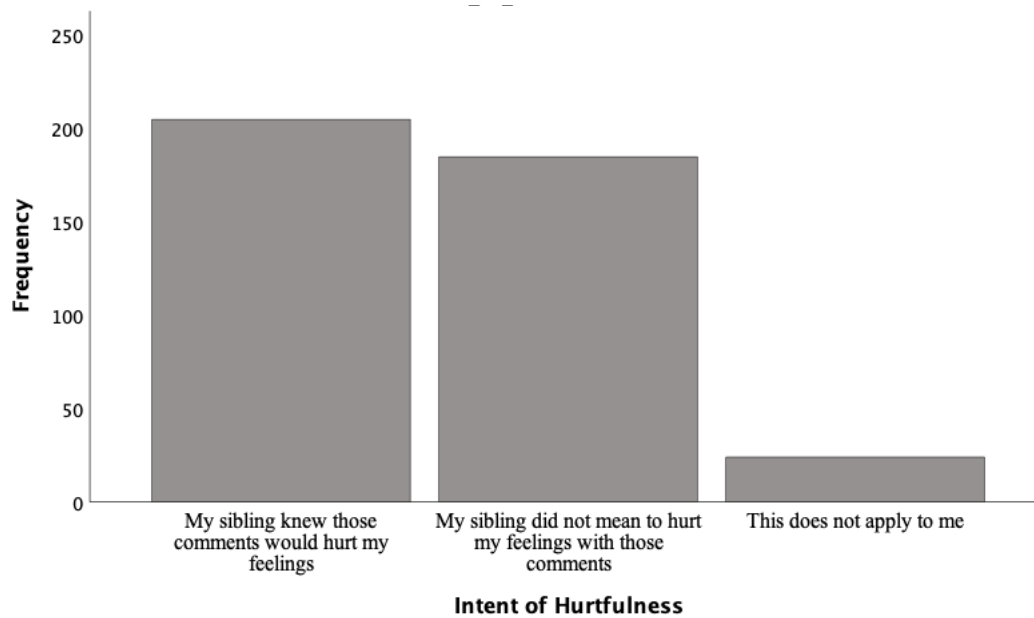
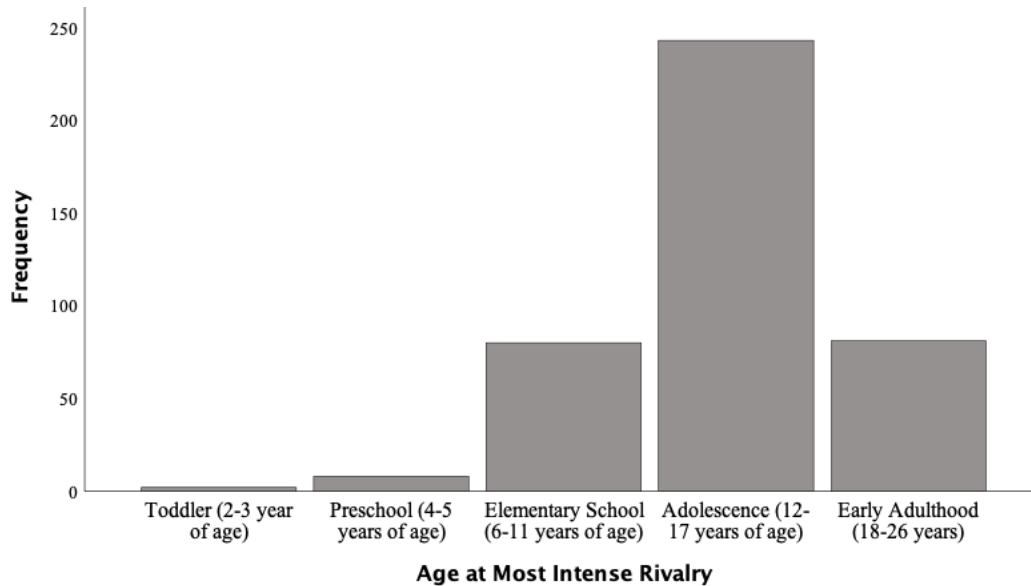


Figure 3:

Reported Age When Perceived Sibling Rivalry Began



Figure 4
Reported Age When Perceived Sibling Rivalry Was Most Severe



Frequency Statistics of Family Constellation Variables

Descriptive and frequency findings provided information regarding the variables underlying the participant and their perception of sibling rivalry. Most participants were female and reported experiencing rivalry with a male biological sibling. Most participants had one or two siblings, married parents, came from a medium socioeconomic class family, and were either the first or second born. The age gap between siblings ranged between 1 and 10 years. The highest number of respondents reported biological siblings between the ages of 21 and 30, and the second highest ranged between 11 and 20 years old. More than 80% of respondents indicated that their siblings always lived in their same house, and if parents lived in different homes the respondents most often lived with their mother. More than 80% of respondents were university undergraduates, and respondents who were not currently in school were the second most popular response.

Frequency Statistics of Parental Differential Treatment Variables

Respondents were asked to report whether their parents treated them differently from their own personal perspective versus how they perceive their sibling would respond. Thus, two questions were asked per category of PDT. Respondents indicated that their mother favours neither of them the most, whereas their sibling thinks their mother favours the respondent more. All other categories of PDT showed no substantial differences in frequency of response.

Categorical Frequency Analysis

As the current study included two open-ended questions, categorical frequencies were used to analyze these responses. This method of analysis allowed the researcher to summarize categorical data from the open-ended questions (Rumsey, 2015). Categories or themes were detected from each response and individuals who fell under each category were tallied to represent the frequency.

The first short answer question aimed to investigate what factors caused competition within the sibling relationship, and the second explored the participants' perception of why rivalry shifted from normal to emotional maltreatment. Themes detected regarding the competition within the relationship were most reportedly connected to athletic ability, academic success, and PDT.

While investigating why participants perceived their rivalry to shift from normal to maladaptive, categorical frequency analysis demonstrated that most participants attribute severe sibling rivalry to competition, jealousy, stage of life, and emotional maltreatment. Other themes identified were comparison tendencies, PDT, unstable household, lack of sibling support, personal differences, and experiencing change. Jealousy was identified as a major contributing factor which included sub themes surrounding social acceptance, life accomplishments, personal

insecurities, academic success, and parental attention. Stage of life, or the developmental period of one sibling versus the other, was indicated as a primary reason for intense rivalry as well. One respondent stated, “I was in the annoying kid phase, and she was in the bratty teenager phase”, whereas another respondent stated, “I was going through puberty and was experiencing mood swings, aggression, and hormonal changes”. Several respondents mentioned themes relating to maturity, puberty, and the age gap or difference in developmental period as factors contributing to severe rivalry. It is important to note that most participants reported several themes within one entry, thus each theme is reported as a contributing factor to severe sibling rivalry but is not the independent source. Another popular theme was emotional maltreatment which included responses surrounding verbal aggression, mean spirited and uncalled for behaviour, bad attitude, neglect, control/manipulation, etc. Emotional maltreatment was exemplified through a response such as,

“She regularly 'gaslighted' and manipulated me and did everything in her power to isolate me from friends and family, and to monitor and supervise my behaviors with constant questioning and shaming me from calling and speaking to outsiders/friends/family members she did not approve of.” See Table 3 for all themes and subthemes reported by respondents.

Table 3

Themes Identified from Open-ended Responses Surrounding Contributing Factors to the Occurrence of Severe Sibling Rivalry

Theme	Subtheme
Competition	General Competition Academic Success Social Pressure/Acceptance Accomplishments Parental differential treatment (Attention, Support) Shared milestones Athleticism To Be the Best, or to Win Career/Job Success Romantic Relationships
Comparison	General Comparison Similar Lifestyles Spent too much time together Twins Shared Milestones Parental Differential Treatment Body Types
Parental Differential Treatment (PDT)	General PDT Love Support Favouritism Trust
Jealousy	General Jealousy Parental Attention Academic Success Social Success/Acceptance Romantic Relationships Physical Appearance Athletic Ability Freedom Personal Insecurities Music Ability Resiliency Accomplishments/Success
Unstable Household	Unstable Household Absent Parent(s) Parents Fighting Parent(s) Abandonment Abusive Parent(s) Alcoholic Parent(s) Separation or Divorce Grief Living in separate homes Estrangement Financial Issues Different Parent as Sibling

Stage of Life/Developmental Period	General Puberty High School University Maturity Age Gap Birth Order
Undiagnosed Health Issues	Mental Illness Trauma Related Responses/Behaviour Physical Illness Hormone Imbalance
Sibling Support	General Lack Of Bad or Absence of Communication Number of siblings Sibling Blame
Emotional Maltreatment	Verbal Aggression Bad Attitude Bullying due to Body Weight or Insecurities Bullying due to Gender Used Sibling for Own Gain Sibling Told to Kill Themselves Neglect Controlling Behaviours Manipulating Behaviours Threatening Behaviours Animosity Public Embarrassment Shame and Blame Teasing Name Calling Destroying Possessions Insults
Differences	General Differences Perspective (Values, Interests) Time Apart Personality (extrovert/Introvert) Resiliency Sensitivity Comparing to Others Respect Gender differences
Experiencing Change	General Moving Countries Moving to University New Stepparent(s) New Relationships

Composite Indexes

Separate composite indexes were created for all three dependent variables, Perceived Sibling Rivalry, Emotional Maltreatment, and Emotional Wellbeing, for further analyses. These variables were measured using the scale measurement, which in turn led to reliability and validity analyses (see Table 4).

Table 4

Reliability and Validity of the Dependent Variables and Number of Statements used to Measure Each One

	Number of Items	Reliability (Cronbach Alpha)	Validity (KMO)
SR_PCA	6	.726	.678
EM_PCA	22	.922	.920
EW_PCA	9	.798	.853

The reliability test was carried out using the Cronbach alpha. Values should be greater than .7 in order to be reliable for further analysis. The validity analysis was conducted using the Keyser Meyer Olkin (KMO) value. Values should be greater than 0.6 to be considered valid. As seen in Table 4, each of the variables satisfied the reliability and validity thresholds. However, in the first reliability test of the emotional wellbeing variable, it showed a Cronbach alpha value of .360. Given that, a few statements were eliminated, and the reliability was tested again. As reliability and validity thresholds were met, the dependent variables were used to carry out further analyses. The perceived sibling rivalry index included statements pertaining to perceived competition, performance, and jealousy. The emotional maltreatment index consisted of statements pertaining to the eight categories of emotional abuse/neglect and the seven categories of verbal aggression. Lastly, the emotional wellbeing index was comprised of Rosenberg's self-esteem statements and the researcher constructed self-concept statements. The principal component analysis method was used to create the composite indexes.

Research Question One

To examine which variables significantly contributed to the existence of sibling rivalry from the participants perspective, a Kruskal Wallis H test was conducted. The Kruskal-Wallis H test was used to determine if the occurrence of sibling rivalry was affected differently by family

constellation factors (age, gender, socioeconomic status, living situation, family size, birth order, and parental marital status from both the respondent and their sibling's perspective), and parental differential treatment factors (love, support, closeness, and favours), which together make up the independent variables.

For the Kruskal-Wallis H test, if the significance value is less than 0.05, we assume that there is an effect of the independent variable towards the dependent variable. According to the results, as seen in Table 5, age of the respondent, age of the sibling, gender of the sibling, sibling lives in different home, mother favoring respondent, father favoring for respondent, father favoring for sibling, father supporting respondent and father closer to respondent variables have a significant effect towards the presence of sibling rivalry. All other variables did not have any significant effect on the occurrence of sibling rivalry.

Table 5
Kruskal Wallis H Test

	N	H	df	P
Age	414	16.22	8	.004
Sibling_Age	414	10.48	3	.015
Sibling_Gender	414	9.88	3	.02
Sibling_DifferentHome	414	7.98	3	.05
Mother_Favours_You	414	14.35	4	.01
Father_Favours_You	414	17.05	4	.00
Father_Favours_Sibling	414	9.75	4	.05
Father_Supports_You	414	12.75	4	.01
Father_Closer_You	414	12.69	4	.01
P <0.05				

Research Question Two

To investigate the resemblance of severe sibling rivalry and emotional maltreatment, an ANOVA was conducted. This analysis can be used when the dependent variable is continuous, and the independent variables are ordinal or nominal measurements. This analysis was significant, $F(5, 408) = 23.24, p = .00$. As the p-value is less than the alpha value (.05) we reject the null hypothesis which indicates that there is no effect of degree of hurtfulness towards emotional maltreatment. It can be concluded with a 95% confidence level that the degree of hurtfulness significantly affects emotional maltreatment.

Since the literature identifies the intent of hurtfulness as a defining factor of emotional maltreatment, an ANOVA was conducted to measure the effect of the intent of hurtfulness on emotional maltreatment. The p-value (.00) is less than the alpha value (.05) which indicates that there is a significant effect of intent of hurtfulness on emotional maltreatment, $F(2, 411) = 57.17, p = .00$.

To examine the relationship and effect between perceived sibling rivalry and emotional maltreatment, a simple regression was carried out. The Pearson correlation coefficient was used to check the relationship between sibling rivalry and emotional maltreatment. According to the results shown in Table 6, a significant moderate positive relationship exists between sibling rivalry and emotional maltreatment.

Table 6

Correlation of Sibling Rivalry and Emotional Maltreatment

		Emotional_Maltr eatment	Sibling_Rivalry
Emotional_Maltreatment	Pearson Correlation	1	.430**
	Sig. (2-tailed)		<.001
	N	414	414
Sibling_Rivalry	Pearson Correlation	.430**	1
	Sig. (2-tailed)	<.001	
	N	414	414

** Correlation is significant at the 0.01 level (2-tailed).

Given a significant relationship between the variables, the effect was then identified by conducting a simple linear regression. Results of this test indicated that perceived sibling rivalry significantly predicts emotional maltreatment, $F(1, 412) = 93.64, p < .01$. The equation, $\text{Emotional_Maltreatment} = 7.527 + (0.899) \text{Sibling_Rivalry}$, implies that when the effect of sibling rivalry increases by one-unit, emotional maltreatment will also increase by .899, as both variables have a positive relationship.

Research Question Three

To measure the effect of severe sibling rivalry on psychological wellbeing and its developmental impact, a simple regression, ANOVA, and Tukey HSD post-hoc test were run. It is important to note that at this stage within the statistical analysis, it can be assumed that emotional maltreatment resembles severe sibling rivalry. As a result, a simple regression was used to test the relationship and effect of severe sibling rivalry on emotional wellbeing. As per Table 7, the Pearson correlation coefficient was used to check the relationship between emotional wellbeing and emotional maltreatment. A weak significant negative relationship between emotional maltreatment and emotional wellbeing was identified.

Table 7

Correlation of Emotional Maltreatment and Emotional Wellbeing

		Emotional_Maltr eatment	Emotional_Well being
Emotional_Maltreatment	Pearson Correlation	1	-.179**
	Sig. (2-tailed)		.000
	N	414	414
Emotional_Wellbeing	Pearson Correlation	-.179**	1
	Sig. (2-tailed)	.000	
	N	414	414

** Correlation is significant at the 0.01 level (2-tailed).

The simple regression identified an effect of emotional maltreatment towards emotional wellbeing since the p-value (.000) is less than the alpha value (.05). Results of this test indicated that emotional maltreatment significantly predicts emotional wellbeing, $F(1, 412) = 13.62, p < .01$. The equation, $\text{Emotional_Wellbeing} = 17.07 + (-0.084) \text{Emotional_Maltreatment}$, implies that when the effect of emotional maltreatment increases by one-unit, emotional wellbeing will decrease by -.084, as both variables have a negative relationship.

To examine the developmental impact of when perceived rivalry began and shifted to emotional maltreatment on psychological wellbeing, an ANOVA and Tukey post-hoc were conducted. The ANOVA measured the effect of the age of beginning of rivalry towards emotional wellbeing and indicated no significant effect, $F(5, 408) = 0.747, p > .05$. Contrarily, the ANOVA assessing the age of most intense rivalry towards emotional wellbeing found a significant effect. Since the p-value (.049) is less than the alpha value (.05) we reject the null hypothesis which indicates that there is no effect of age of most intense rivalry on emotional wellbeing (see Table 8). Accordingly, it can be concluded with 95% confidence level that the age of most intense rivalry has a significant effect on emotional wellbeing.

Table 8

The Effect of the Age of Most Intense Rivalry towards Emotional Wellbeing

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	80.358	4	20.090	2.410	.049
Within Groups	3409.844	409	8.337		
Total	3490.202	413			

Given the significant relationship between emotional maltreatment and emotional wellbeing, as well as an effect of the age of intense rivalry occurring on emotional wellbeing, a Tukey HSD post-hoc test was used to investigate where the differences between the developmental stages existed. The Tukey HSD revealed no significant differences between the developmental periods of most intense rivalry as influential on psychological wellbeing.

Chapter 6: Discussion

Within this section, a summary of the major findings from this study is presented and interpreted while paired with a discussion of relevant previous literature. This study aimed to investigate the shift from normal to emotionally abusive sibling rivalry and explore its effects on psychological wellbeing.

Interpretation of Results

The first research question intends to examine the variables that contribute to the existence of sibling rivalry. Aligning with perceived sibling rivalry research, it was expected that the occurrence of rivalry would be affected by family constellation variables, PDT, and enhanced jealousy and competition (Leung & Robson, 1991; Phillips & Schrod, 2015; Volling, 2003). The results of this study suggest this hypothesis was correct.

Research Question One

This study's findings extend previous research regarding factors that contribute to the presence of sibling rivalry within the sibling relationship. In the examination of family

constellation variables, descriptive statistics suggest that perceived sibling rivalry most commonly occurs when siblings are close in age, opposing genders, living in the same home, and come from small family sizes with one or two siblings. Most participants reported coming from a medium socioeconomic class, however money and limited resources were not recognized as contributing factors.

Birth Order

Frequency statistics revealed most participants as either the oldest sibling or the second born, and the Kruskal-Wallis H test revealed no significant effect of birth order on the occurrence of perceived sibling rivalry. Birth order research surrounding sibling rivalry largely refers to the concept that siblings have a need to outcompete each other for parental attention (Aktürk & Ozlen Demircan, 2018; Leung & Robson, 1991). The current study found no significant effects of birth order on the occurrence of rivalry within the sibling relationship, and it is presumed that independent of other contributing factors birth order does not largely influence perceived rivalry.

Age Gap

Referring to the themes identified from the categorical frequency analysis, results revealed underlying details surrounding the influence of family constellation variables on perceived sibling rivalry. For instance, previous literature surrounding age spacing between siblings suggests there is less conflict between siblings aged further apart (Buhrmester & Furman, 1990; Koch, 1960; Furman & Buhrmester, 1985; Minnett et al., 1983). Whereas in this study, some participants indicated increased rivalry due to larger age gaps. This was reported as a result of existing in different generations and obtaining dissimilar perspectives, values, and opinions. Alternatively, siblings who were close in age reported sharing several commonalities in

their daily lives which intensified their need to compete, compare, and become jealous of one another as well. The findings suggest that siblings closer in age are more susceptible to perceiving sibling rivalry, yet siblings substantially further apart in age are also at risk.

Gender

Literature suggests a high likelihood of sibling rivalry occurring between same-sex dyads due to increased commonalities in interests, belongings, and attributes (Bawkwini & Bawkwini, 1972; Jensen et al., 2013). There were no specific themes identified that surrounded rivalry because of gender, however the frequency and descriptive statistics revealed that most participants were female, and their rivalrous sibling was male.

Family Size and Parent Marital Status

Most participants reported having a small family with only one sibling, and the majority of other responses indicated 2-4 siblings. Quantitatively, family size had no significant effect towards the occurrence of sibling rivalry. Participants coming from a large family were outliers in this study, therefore future research should explore the effects of this variable on severe sibling rivalry. There was a lack of detail surrounding this variable shown by categorical frequency findings as well, however some participants stated growing up in an unstable household to negatively influence their sibling relationship. This included experiencing their parents' divorce, bouncing from one parent to the other, or having one or more parents struggle with addiction (see Table 3 for more themes underlying an unstable household). Aligning with recent literature surrounding the effects of parent marital status and conflict within the sibling relationship, it is possible that perceived sibling rivalry in this study existed as a consequence of the stress within the family relationship as well (Milevsky & Heerwagen, 2013).

Parental Differential Treatment (PDT)

This study examined the influence of PDT on the occurrence of rivalry, and findings suggest that favouritism, support, closeness, attention, and comparison from one or both parents towards one sibling are significant contributors. Findings suggested that there was no significant effect of one parent's treatment as more influential to the occurrence of rivalry over the others. As per the Kruskal Wallis H test, PDT statistically contributes to the occurrence of rivalry, however some participants did not report it as an influential factor to their perception of rivalry. Categorical frequency analyses revealed some participants to leave PDT out in their responses all together. In the investigation of what enhanced competition within the sibling relationship, 16% of participants indicated themes related to PDT. Like previous research, respondents indicated unequal treatment from parents to have fostered increased antagonism, conflict, competition, and comparison between siblings (Furman & Buhrmester, 1985). Several participants indicated a need for their parents' approval, and competition would often occur for attention. Responses lacked themes surrounding the impact of PDT on perceived rivalry that were specific to emerging adulthood, rather most themes of PDT appeared to surround earlier stages in life and did not drastically change over time.

Jealousy

In the examination of jealousy within the sibling relationship, both quantitative and qualitative findings indicated jealousy as a significant contributor to the occurrence of sibling rivalry. In accordance with the jealousy complex and the social triangle, this study's findings reveal jealousy within the sibling relationship to commonly surround a need for attention, acceptance, and approval externally (Loeser et al., 2016). Common themes underlying jealousy included a need for social and parental acceptance and approval, and a tendency to compare themselves to their siblings based on physical ability, talent, success, and accomplishments.

Categorical frequency analysis revealed 19% of participants stated jealousy to surround academic success, whereas 16% suggested it to result from differences in life accomplishments or success. As most participants are university students and in emerging adulthood, it is possible that jealousy was also a result of one sibling gaining independence and freedom as compared to the other (Volling et al., 2002). Future research is needed to investigate the specific impact of sibling rivalry in emerging adulthood, whereas this study's results surround the details of sibling rivalry at its worst.

The findings related to the first research question suggest that perceived sibling rivalry consists of more than just the need for parental love and attention, but is also largely affected by competition, comparisons, and jealousy between siblings. In reference to sibling rivalry research, this study suggests that perceived rivalry can occur in the absence of, or with relatively little competition for parental love and attention, and sibling rivalry should not be exclusively defined by that factor. The most common responses revealed through categorical frequency analysis indicated that rivalry was most often perceived as intense due to factors irrelevant to PDT, but because of competition, jealousy, developmental period, and emotional maltreatment.

Research Question Two

The second research question examined sibling rivalry in its most severe form and its resemblance to emotional maltreatment. Emotional maltreatment was measured using the eight categories of emotional abuse/neglect and seven categories of verbal aggression. The identification of sibling rivalry as a form of emotional maltreatment was measured through the respondent's perception of verbal aggression and perceived intent of hurtfulness portrayed by their sibling's behaviour towards them. In addition, the shift from normal to abusive rivalry occurs when the severity and intent of an act, along with a clear identification of one sibling

taking the role of the aggressor is recognized (Morrill-Richards & Leierer, 2010). As mentioned previously, it was expected that when siblings perceive rivalry to evoke emotionally and intellectually hurtful behaviour, it shifts from normal to abusive sibling rivalry. This study hypothesized that when participants perceive their sibling's behaviour as intentionally severe and hurtful, their experience begins to resemble emotional maltreatment. The results of this study suggest the hypothesis is correct.

The ANOVA results suggest that participants' perceptions of their sibling's behaviour towards them was seen as severely and intentionally hurtful. This insinuates that the competition, comparison, and jealousy within the sibling relationship will escalate at times and resemble a form of emotional maltreatment. Given the significance surrounding the respondent's perception of their experience of rivalry, it is possible that severe sibling rivalry occurring as a form of emotional abuse is more common than often recognized. Previous research on emotional maltreatment is often paired with physical and sexual maltreatment, which is presumed to be a result of parents or other figures only getting involved when a situation escalates into a visible conflict (Goodwin & Roscoe, 1990). Similarly, sibling rivalry literature shows that emotional maltreatment is minorly recognized because of its lack in physicality which leads to its dismissal as normal sibling rivalry (Caffaro & Conn-Caffaro, 2005; McDonald & Martinez, 2019). Given the results of the simple regression, findings indicate there is a significant relationship between sibling rivalry and emotional maltreatment. It is suggested that when sibling rivalry is enhanced there is a large possibility of emotional maltreatment also occurring. With that, the prevalence of dismissal from parents or other important persons has a high likelihood of encouraging internalization of maltreatment and leading to long term psychological effects (Morrill-Richards & Leierer, 2010; Newman, 1994; Whipple & Finton, 1995).

Research Question Three

The third research question investigated the effect of severe sibling rivalry on psychological wellbeing, and whether it is differentially impacted depending on when in life it occurs. Given the previous research surrounding Erikson's developmental stages, it was expected that the perception of severe sibling rivalry occurring at one stage of life versus another, would have different effects on later psychological wellbeing.

Firstly, the results suggest there is a significant negative relationship between emotional maltreatment, or severe sibling rivalry, towards psychological wellbeing. As emotional maltreatment increased within the sibling relationship, psychological wellbeing decreased. These findings suggest that independent of the developmental period, severe sibling rivalry will significantly be associated with decreased self-esteem and self-concept. In efforts to obtain information about whether the stage at which rivalry began and the stage at which rivalry shifted to emotional maltreatment had differential effects on the participants current wellbeing, an ANOVA and Tukey HSD post-hoc were run. The ANOVAs revealed that the age at which rivalry begins does not significantly affect psychological wellbeing, whereas the age where the shift occurs does have an effect. These findings suggest that normal sibling rivalry does not negatively affect psychological wellbeing. Moreover, it is possible that at this time siblings perceived their rivalry as normal healthy competition and as a common experience within the sibling relationship (Leung & Robson, 1991). Although the ANOVA findings suggest that severe sibling rivalry will differentially affect psychological wellbeing depending on when participants indicate it to be most intense, the Tukey HSD post-hoc test showed no significant differences between the developmental periods. These results indicate a significant effect of the age at which

rivalry shifts from normal to abusive on psychological wellbeing, yet it is unclear what specific developmental periods significantly influence it.

Simply looking at the descriptive statistics, most participants identified elementary school as the age that sibling rivalry began within their relationship. Whereas adolescence was the most popular response surrounding when rivalry shifted from normal to severe. Given these trends, participants recognize a clear difference between when rivalry was normal and when it became abusive. Interestingly, adolescence was the second most reported developmental period to define the beginning of rivalry as well. This suggests that some participants perceived rivalry beginning and shifting to emotional maltreatment within the same developmental stage.

Erikson's (1982) work on psychosocial development indicates that the skills necessary to build a strong sense of self are developed within each stage by successfully completing its respective crisis. This study expects the psychosocial stage at which normal rivalry shifts to abusive to be a consequence of siblings not resolving that stage's crisis as well as the additive effects from the stages before it. Although there were no significant results surrounding which developmental stages influence psychological wellbeing more or less, the descriptive results can be explored in relation to previous literature on the topic and Erikson's stages of psychosocial development.

Elementary School

Results assessing the perception of when rivalry began demonstrated that 41% of respondents identified it to begin in elementary school. Elementary school falls within Erikson's Industry versus Inferiority stage where a failure to complete the crisis results in a sense of inadequacy and a desire to outcompete others (Erikson, 1963; Erikson, 1982). Parental influence plays a minimal role at this stage, whereas the desire to be approved and accepted by others is

the focus (Erikson, 1982). Given the results of the first research question, sibling rivalry was perceived to exist due to the competition, comparison, and jealousy within the sibling relationship that surrounded acceptance and approval from others. Thus, normal sibling rivalry is presumed to occur within this psychosocial stage however its effect on psychological wellbeing at this stage is still warranted.

Adolescence

Transitioning from childhood, adolescents are challenged with the task of developing a sense of self and personal identity (Erikson, 1963). Previous literature suggests that when siblings are close in age and are particularly experiencing identity confusion, rivalry is expected to be enhanced because of increased comparison and jealousy (Buhrmester & Furman, 1990; Loeser et al., 2016). Conversely, the stakes for approval and acceptance are heightened at this stage and siblings attribute less investment into the sibling relationship (Buhrmester & Furman, 1990). As the rivalry increases, experiences of emotional maltreatment are expected to increase as well, especially in the teenage years (McDonald & Martinez, 2019). In the current study, 59% of respondents perceived their experiences of rivalry as most severe within the adolescence stage. It is possible that due to the importance placed on one's sense of self at this stage, emotional maltreatment is primarily damaging to the self and to the self's view of the world (Hart et al., 1998; Shaffer et al., 2009). Relevant literature additionally suggests emotional maltreatment at this stage to negatively impact emotional health, self-esteem, and maladjustment (Shaffer et al., 2009). The current study's findings extended research surrounding the effect of severe sibling rivalry as a form of emotional maltreatment and its effect on psychological wellbeing, however the specific influence of severe rivalry occurring in adolescence and its effect on self-esteem and self-concept needs further investigation.

The current study is one of few that examined the relationship between severe sibling rivalry and emotional maltreatment. Previous literature links emotional maltreatment to conflict within the sibling relationship but fails to identify the shift from normal sibling rivalry to emotional maltreatment. Additionally, there is an abundance of literature surrounding the effect of maltreatment on psychological wellbeing, yet a gap exists when investigating emotional maltreatment separate from physical and sexual abuse, and those specific effects on psychological wellbeing within the sibling relationship. This study identified severe sibling rivalry as a form of emotional maltreatment and was successful assessing emotional maltreatment as an independent form of abuse. Extending sibling rivalry research, results suggest there is a significant effect of severe rivalry on emotional wellbeing, and this effect can differ depending on when it shifts from normal to abusive. Due to research limitations, the specific developmental periods where this shift occurs and its differential impact on psychological wellbeing needs further investigation.

Implications for Practitioners and Therapists

The results of this study show that factors contributing to severe sibling rivalry go beyond PDT. Although having awareness of how love, support, favouritism, and closeness are distributed among children, it is crucial to recognize the other contributing factors that increase perceived rivalry within the sibling relationship as well. The current study found severe sibling rivalry to surround a desire for approval, acceptance, and success from others, commonly due to the siblings' close age gap and similarities in their daily lives. In this study, perceived sibling rivalry most occurred between siblings one year apart or significantly spaced apart. Aligning with previous research, it is suggested that if parents can control the age gap between siblings, children should be preferably spaced at least two to three years apart for a decreased chance of

perceived sibling rivalry occurring (Leung & Robson, 1991). For less controllable factors, it is suggested that parents educate themselves on sibling rivalry and increase their awareness of their children's behaviour when interacting with each other, themes surrounding conflict situations, and the amount of time siblings spend together. Several themes in this study demonstrated competition occurring as a result of the similarity between siblings and a lack of time apart. Erikson's (1950) work on psychosocial development states that young children strive to define themselves as individuals and if their exploration is hindered as a result of too much time spent with their sibling, they will not successfully develop autonomy. As a result, jealous rage is directed towards the rival or the individual who obstructed them from completing this crisis (Erikson, 1963). Although PDT is not the exclusive factor contributing to perceived sibling rivalry, parents can play a prominent role in the prevention of severe rivalry within the relationship by educating themselves on how it exists in the first place.

As this study's findings suggest perceived rivalry to surround accomplishments and social acceptance, it is presumed that the education system and school setting may also play a large contributing role. Erikson's (1982) work demonstrates that teachers and peer groups are most influential to the child's self-esteem at the elementary school stage. Given this, the comments and behaviour received from teachers may be internalized and lead to increased competition or comparison within the sibling relationship or decreased psychological wellbeing in subsequent psychosocial stages. Future research surrounding the influence of the school system on severe sibling rivalry would give more information to this concept. Individuals of authority who work with children should be educated on Erikson's developmental stages and the crisis needed to be completed within each one. If teachers, day care providers, and other health care clinicians are aware of the importance of these developmental milestones towards later

psychological wellbeing, it is possible severe sibling rivalry would be identified sooner and children would not have as much time to internalize its negative effects.

As stated previously, healthy competition among siblings is known to benefit development into adulthood, and thus acknowledging when healthy competition transitions to emotional maltreatment is crucial. As suggested by previous research, emotional maltreatment is generally overlooked and underrecognized compared to physical or sexual forms of maltreatment (Caffaro & Conn-Caffaro, 2005; McDonald & Martinez, 2019; Shaffer et al., 2009). This study adds to the accumulating empirical evidence that the effects of emotional maltreatment are maladaptive towards psychological wellbeing and prominent within the sibling relationship. In the current study, severe sibling rivalry was defined by intellectually and emotionally abusive behaviour towards one sibling and the perceived intent and degree of hurtfulness behind that behaviour, due to competition or comparison within the relationship. Parents, teachers, and clinicians may benefit from increasing their awareness to the emotionally abusive comments exchanged between children and addressing them immediately. The acknowledgement of emotional neglect is even more difficult to detect and should be addressed immediately as well. As a result, internalization of such comments may be less likely to occur, and the developmental crisis may be more likely to be completed. In turn, a healthy sense of self could be established given the absence of other contributing factors. If emotional maltreatment is a common occurrence within the sibling relationship, individual therapy should also be considered (Morrill-Richards & Leierer, 2010). Given the negative effects of severe sibling rivalry on psychological wellbeing, influential persons should pay close attention to verbal comments that have the intent or power to emotionally or intellectually hurt someone. The eight categories of emotional

maltreatment and the seven categories of verbal aggression can be used to aid in this process of identification as well.

Although no significant results were achieved from the investigation of the specific developmental shift from normal to abusive rivalry, descriptive statistics indicated a clear theme of when participants perceived their rivalry at its worst. Skill building outside of the home environment such as in school or therapeutic settings is encouraged so individuals can learn resiliency and self-worth to combat the maltreatment occurring at home. Given more information surrounding what skills and traits participants currently obtain would be helpful to the recommendation of this work as well.

Limitations and Future Research

One of the major limitations of the current study is the participant population in terms of their student status. Although emerging adulthood was the developmental group of focus, most of the participants were students. A student participant population may have influenced the results surrounding contributing factors to perceived rivalry, as one of the highest rated factors surrounded academic success. Moreover, it is possible that in a mixed or non-student participant group that academic success would have been rated lower among the other themes. Attending post-secondary school is additionally assumed to bring a sense of accomplishment to individuals who seek independence and success. It is possible that obtaining a population of non-students or siblings who were obstructed from leaving the home would bring yield different perceptual findings. Overall, it is difficult to make any claims of generalizability to other groups. Future research should aim to collect student and non-student participants when investigating contributing factors of severe sibling rivalry.

Another limitation is the recruitment platform that was used to collect student participants from the University of Lethbridge psychology program. As a result of the study collecting non-identifying information, the researcher was unable to identify which students completed the study and deserved the credit versus the students who did not. The policy surrounding granting credits instructed the researcher to grant the credits in a timely manner and not wait till the end of the semester as this would stress out the students who completed it earlier on. Given this policy, the researcher granted credits throughout, which in turn allowed students who signed up for the study but did not complete it to gain a credit. Consequently, approximately 200 participants were excluded from this study's sample size because of incomplete data. Also relative to data collection, the specific number of participants collected from social media, SONA, word of mouth, and posters is unknown. Future research should attempt to collect these details as it may provide further insight to the findings.

The construction of some survey questions and statements highlights another limitation of this study. Firstly, this study did not give appropriate options for gender identification. Specifically, the options male, female, transgender, and other, were offered. There are several other gender identifications that should have been offered, and this lack of options obtained results non-specific to other genders. Second, this study aimed to obtain as much information as possible through a limited number of questions and within fifteen minutes. Given this, there was a limited number of questions or statements used to measure specific constructs. No statements were made to specifically measure perceived sibling rivalry. Statements pertaining to competition, jealousy, and performance were used. However, more statements would have benefited the significance of perceived sibling rivalry as a dependent variable. Similarly, only one question was asked regarding when rivalry was perceived as most intense. It is possible that

questions alluding to the developmental crisis within each stage would have elicited more specific results regarding the effects of rivalry occurring at that time on psychological wellbeing later. It is suggested that future research focuses on the shift from normal to abusive sibling rivalry and its effect on psychological wellbeing as the sole purpose of the study. Thus, several questions can be used to measure each developmental period and the impact of emotional maltreatment on later wellbeing. Psychological wellbeing was investigated using measures of self-esteem and self-concept. It is possible that the self-concept questions over complicated this study's purpose and results, as Rosenberg's self-esteem statements might have elicited more robust results on their own. Lastly, more questions pertaining to emerging adulthood were needed to expand the literature on this developmental stage. This study sought to investigate the specific effects of the perception of rivalry and consequent psychological wellbeing from an emerging adulthood perspective. Although most participants did identify within the emerging adulthood age group, more questions were required to give information to their perception of rivalry at this time. Moreover, do their results resemble their current perception of severe sibling rivalry and if so, how is that different compared to their perception in young adulthood or adolescence. It is possible that as a result of severe sibling rivalry appearing normal or going unrecognized, participants either gained an enhanced negative perspective of their relationship, or due to other factors their perception became more positive over the years. Future research should incorporate questions surrounding the emerging adult perception of sibling rivalry at the time it is identified as most intense versus how they see it currently. Overall, more questions would have allowed for specific results and potentially more significance, however, this would have impacted the length of this study which may have deterred people from completing it.

Future directions should continue to explore severe sibling rivalry and its maladaptive psychological effects. This study only measured one sibling's perspective of rivalry possibly occurring within the sibling relationship. Although this study specifically measured perceived versus actual rivalry, it would be interesting to compare both siblings' perspectives on the matter. Relevant research previously demonstrated a bidirectional relationship between positive self-esteem and a positive sibling relationship, as well as negative self-esteem and a negative sibling relationship using a sample of families (Yeh & Lempers, 2014). This study measured actual sibling relationships and analyzed self-esteem at different developmental times. Similarly, future research should aim to investigate the effects of perceived or actual severe sibling rivalry at different psychosocial developmental stages using a sample of both sibling's data. This should give more information to the shift from normal to abusive rivalry and the time at which it most significantly affects psychological wellbeing. In addition, the current study did not assess other factors related to the existence and perception of sibling rivalry, such as the effects of cultural diversity, social media, other developmental age groups, personality, or the influence of growing up in a stressful home environment (i.e., divorce, substance abuse, grief, etc.). Future research should aim to investigate the effects of these factors on perceived and severe sibling rivalry as it may extend the current knowledge on normal rivalry shifting to a form of sibling abuse.

Summary

Despite these limitations, the results of this study revealed that perceived sibling rivalry is likely to exist as a result of jealousy, competition, comparison, and PDT, and in its most severe form resembles emotional maltreatment. Additionally, findings significantly report that severe sibling rivalry negatively affects self-esteem and self-concept. Given the prevalence of severe sibling rivalry within the sibling relationship, it is important that parents, teachers, health care

providers, and other influential people involved in a child's upbringing, educate themselves on the presence and effects of severe sibling rivalry. Additionally, it is important for these influential figures to enhance their awareness of the developmental crisis existing at each stage, as this will bring attention to harmful contributing factors occurring within the child's life if the crisis is not satisfied. It is possible that training programs including practical interventions to target emotional maltreatment would aid authoritative figures handle these occurrences more effectively. In sum, although the results of this study are preliminary, it appears that the perception of severe sibling rivalry occurring within the sibling relationship is multifaceted, and future research on the developmental period that is most dangerous for severe rivalry to occur in respect to the psychological effects on self-esteem and self-concept later is warranted.

The concept of severe sibling rivalry as a form of sibling abuse is novel to sibling relationship and sibling maltreatment literature. This study sought to bring awareness to this experience to reduce the prevalence of parental dismissal and internalization of emotional maltreatment. It is the hope that future research will use this study as foundational information to continue educating society on the importance of this underrecognized form of sibling abuse.

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Appendix A

Exclusion Criteria

I confirm that I have experienced rivalry (competition or comparison in a sibling relationship) that has caused conflict between me and my sibling.

- ☐ Yes, I have experienced, or I am still experiencing sibling rivalry.
- ☐ No, I have not experienced or am not experiencing sibling rivalry.

I also verify that this sibling rivalry did not result in physical or sexual abuse.

- ☐ Yes, sibling rivalry has resulted in physical or sexual abuse.
- ☐ No, sibling rivalry has not resulted in physical or sexual abuse.

Are you participating in this study to gain credit for a psychology course at the University of Lethbridge?

- ☐ Yes
- ☐ No

Appendix B

Demographic Information

How old are you?

- ☐ 18
- ☐ 19
- ☐ 20
- ☐ 21
- ☐ 22
- ☐ 23
- ☐ 24
- ☐ 25
- ☐ 26+ _____

What gender do you identify with?

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Other
- ☐ I prefer not to respond

Are you currently in school? If so, at which level?

- ☐ High School
- ☐ College
- ☐ University - Undergraduate
- ☐ Graduate School - Masters
- ☐ Graduate School - Ph.D.
- ☐ I am not currently in school
- ☐ Other

What is the level of education you have completed so far?

- ☐ High School diploma
- ☐ College Diploma
- ☐ Undergraduate University Degree
- ☐ Masters Degree
- ☐ Doctorate Degree (Ph.D.)
- ☐ None of the above

What is your parents marital status?

- ☐ Married
- ☐ Widowed
- ☐ Divorced
- ☐ Separated
- ☐ Never married
- ☐ Other _____

If your parents lived in different homes, who did you permanently live with growing up?

- ☐ Mother
- ☐ Father
- ☐ Other

How many siblings do you have (i.e., biological, half, step, adopted, foster, or fictive)?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8 or more

What is your birth order? (1 means you are the first-born child, 2 means you are the second-born child, etc.)

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8+

What was your family's socio-economic status growing up? (i.e., household income)

- ☐ Under \$5,000 a year
- ☐ \$5,000 to \$19,999 a year
- ☐ \$20,000 to \$34,999 a year
- ☐ \$35,000 to \$99,999 a year
- ☐ \$100,000 to \$249,999 a year
- ☐ More than \$250,000 a year
- ☐ I do not know
- ☐ I prefer not to say
- ☐ This does not apply to me

For this next section, choose a sibling you get along with the least and answer the following questions about that specific sibling relationship.

Please indicate this sibling's age. (type in the number)

What gender does this sibling identify with?

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Other
- ☐ I prefer not to say

How are you and this sibling related?

- ☐ Biological sibling (share the same parents)
- ☐ Half sibling (share one biological parent)
- ☐ Step-sibling (related through marriage of parents)
- ☐ Adopted sibling (from a different set of parents)
- ☐ Foster sibling (related through a shared home)
- ☐ Fictive (not biologically related, but considered siblings)

Did you and this sibling at any point live in the same home growing up?

- ☐ Always
- ☐ Usually
- ☐ About half the time
- ☐ Seldom (not often)
- ☐ Never

If your parents lived in different homes, who did this sibling permanently live with growing up?

- ☐ Mother
- ☐ Father
- ☐ My sibling lived with both our parents
- ☐ This does not apply to me

Appendix C

Adult Sibling Relationship Questionnaire (ASRQ) Rivalry Subscale

The following questions are about you and your sibling's relationship with your parents. You can choose to think about how your parents treated you and this sibling when growing up, or you can answer these questions regarding how your parents currently treat you both. Try and keep all responses in line with the time frame you choose.

If one or both of your parents are deceased, please indicate how you felt about your parent(s) treating you and your sibling before they passed or indicate "neither of us is favoured".

Do you think your mother favours you or this sibling more?

- ☐ I am usually favoured
- ☐ I am sometimes favoured
- ☐ Neither of us is favoured
- ☐ This sibling is sometimes favoured
- ☐ This sibling is usually favoured

Does this sibling think your mother favours them or you more?

- ☐ I am usually favoured
- ☐ I am sometimes favoured
- ☐ Neither of us is favoured
- ☐ This sibling is sometimes favoured
- ☐ This sibling is usually favoured

Do you think your father favours you or this sibling more?

- ☐ I am usually favoured
- ☐ I am sometimes favoured
- ☐ Neither of us is favoured
- ☐ This sibling is sometimes favoured
- ☐ This sibling is usually favoured

Does this sibling think your father favours them or you more?

- ☐ I am usually favoured
- ☐ I am sometimes favoured
- ☐ Neither of us is favoured
- ☐ This sibling is sometimes favoured
- ☐ This sibling is usually favoured

Does this sibling think your mother supports them or you more?

- ☐ I usually get more support
- ☐ I sometimes get more support
- ☐ We are supported equally
- ☐ This sibling sometimes gets more support
- ☐ This sibling usually gets more support

Do you think your mother supports you or this sibling more?

- ☐ I usually get more support
- ☐ I sometimes get more support
- ☐ We are supported equally
- ☐ This sibling sometimes gets more support
- ☐ This sibling usually gets more support

Does this sibling think your father supports them or you more?

- ☐ I usually get more support
- ☐ I sometimes get more support
- ☐ We are supported equally
- ☐ This sibling sometimes gets more support
- ☐ This sibling usually gets more support

Do you think your father supports you or this sibling more?

- ☐ I usually get more support
- ☐ I sometimes get more support
- ☐ We are supported equally
- ☐ This sibling sometimes gets more support
- ☐ This sibling usually gets more support

Does this sibling think your mother is closer to them or you?

- ☐ Our mother is usually closer to me
- ☐ Our mother is sometimes closer to me
- ☐ Our mother is equally close to both of us
- ☐ Our mother is sometimes closer to this sibling
- ☐ Our mother is usually closer to this sibling

Do you think your mother is closer to you or this sibling?

- ☐ Our mother is usually closer to me
- ☐ Our mother is sometimes closer to me
- ☐ Our mother is equally close to both of us
- ☐ Our mother is sometimes closer to this sibling
- ☐ Our mother is usually closer to this sibling

Does this sibling think your father is closer to them or you?

- ☐ Our father is usually closer to me
- ☐ Our father is sometimes closer to me
- ☐ Our father is equally close to both of us
- ☐ Our father is sometimes closer to this sibling
- ☐ Our father is usually closer to this sibling

Do you think your father is closer to you or this sibling?

- ☐ Our father is usually closer to me
- ☐ Our father is sometimes closer to me
- ☐ Our father is equally close to both of us
- ☐ Our father is sometimes closer to this sibling
- ☐ Our father is usually closer to this sibling

(Stocker, Lanthier, & Furman, 1995).

Appendix D

ASRQ Conflict Subscale

For the following questions, think about how you and your sibling are different in certain areas of life (socially, athletically, academically, etc.), and how that may cause or have caused jealousy or competition within your relationship.

How competitive are you with this sibling?

- ☐ Hardly at all
- ☐ A little
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely much

How competitive is this sibling with you?

- ☐ Hardly at all
- ☐ A little
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely much

How much does this sibling feel jealous of you?

- ☐ Hardly at all
- ☐ A little
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely much

How much do you feel jealous of this sibling?

- ☐ Hardly at all
- ☐ A little
- ☐ Somewhat
- ☐ Very much
- ☐ Extremely much

How much does this sibling try to perform better than you?

- ☐ Hardly at all
- ☐ A little
- ☐ Somewhat
- ☐ Very Much
- ☐ Extremely much

How much do you try and perform better than this sibling?

- ☐ Hardly at all
- ☐ A little
- ☐ Somewhat
- ☐ Very Much
- ☐ Extremely much

(Stocker, Lanthier, & Furman, 1995).

Appendix E

Jealousy

Which of the following do you think causes or caused competition within your sibling relationship? (Select all that apply)

- ☐ Popularity
- ☐ Degree of academic success
- ☐ Degree of financial success
- ☐ Degree of intimate relationship success
- ☐ Degree of occupational success
- ☐ Physical appearance
- ☐ Other _____
- ☐ None of the above
- ☐ This does not apply to me

Appendix F

Severity of Rivalry and Existence of Emotional Maltreatment

Sibling rivalry is defined as the competition that exists between siblings, which includes acts of jealousy, competition, comparison, and conflict.

In this next section, please indicate how you remember your sibling treating you as a result of rivalry.

Think of specific experiences in your life when the competition within your sibling relationship caused your sibling to treat you badly. Please indicate how often the following statements occurred.

	All the time (1)	Very Often (2)	Sometimes (3)	Rarely (4)	Never (5)
My sibling would call me fat or ugly (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling called me names (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling threatened to destroy my belongings (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would threaten me (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling told me I was worthless or stupid (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would contradict me (e.g., say what I said was wrong, and what they said was right) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would embarrass me in public (e.g., in front of <u>friends</u>) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would downgrade my accomplishments (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would lie and tell me I was adopted (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My sibling
would threaten
to get me in
trouble with my
parents (10)

☐☐☐☐☐

My sibling
would bully me
about my
gender (11)

☐☐☐☐☐

My sibling
would tell me I
never did
anything right
(12)

☐☐☐☐☐

My sibling
would bully me
about my
sexuality (13)

☐☐☐☐☐

My sibling
insulted or
swore at me
(14)

☐☐☐☐☐

My sibling
would tease me
(15)

☐☐☐☐☐

My sibling
would say they
wish I was
never born (16)

☐☐☐☐☐

Think of specific experiences in your life when the competition within your sibling relationship caused your sibling to treat you badly. Please indicate which of the following occurred during these experiences.

	All the time (1)	Very Often (2)	Sometimes (3)	Rarely (4)	Never (5)
My sibling never wanted to spend time with me (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would tell me not to speak to them in public (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling would never let me play with them (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling did not let me hang out with them or their friends (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling never took my thoughts or opinions into consideration (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sibling did not support me (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How hurtful was it when your sibling treated you this way?

- ☐ Extremely hurtful
- ☐ Hurtful
- ☐ Average
- ☐ Kind of hurtful
- ☐ Not at all hurtful
- ☐ This does not apply to me

Do you think your sibling intended to hurt you?

- ☐ My sibling knew those comments would hurt my feelings
- ☐ My sibling did not mean to hurt my feelings with those comments
- ☐ This does not apply to me

Appendix G

The Developmental Shift from Normal to Abusive Rivalry Using Erikson's Psychosocial Stages

How old were you when sibling rivalry began?

- ☐ Infant (Birth-1 year of age)
- ☐ Toddler (2-3 year of age)
- ☐ Preschool (4-5 years of age)
- ☐ Elementary School (6-11 years of age)
- ☐ Adolescence (12-17 years of age)
- ☐ Early Adulthood (18-26 years)

At what age do you think your relationship with your sibling was the worst due to intense sibling rivalry?

- ☐ Infant (Birth-1 year of age)
- ☐ Toddler (2-3 year of age)
- ☐ Preschool (4-5 years of age)
- ☐ Elementary School (6-11 years of age)
- ☐ Adolescence (12-17 years of age)
- ☐ Early Adulthood (18-26 years)

Why do you think your relationship was most severe at that time? (i.e., certain sibling behaviours, comments, relationship milestones, etc.)

Appendix H

Rosenberg's Self-Esteem Scale

I feel that I am a person of worth, at least on an equal plane with others.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

I feel that I have a number of good qualities.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

All in all, I am inclined to feel that I am a failure.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

I am able to do things as well as most other people.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

I feel I do not have much to be proud of.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

I take a positive attitude toward myself.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

On the whole, I am satisfied with myself.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

I wish I could have more respect for myself.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

Q54 I certainly feel useless at times.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

At times I think I am no good at all.

- ☐ strongly agree
- ☐ agree
- ☐ disagree
- ☐ strongly disagree

(Rosenberg, 1965)

Appendix I

Self-Concept

Please answer the following questions in terms of how you see yourself now.

	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly Disagree
I am able to do things as well as most other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to have doubts about myself or my abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to keep my emotions "inside"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to avoid conflict and confrontation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as strong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see myself as beautiful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>