**The Role of the Sibling Relationship During Stressful Life Events**

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## Abstract

Siblings play a major role in each other's lives.  If a child has a sibling, they experience

life together often going through similar struggles, events, or joys.  As siblings grow up, they

often disclose information to each other and why or how they disclose life events to one another

can depend on many factors.  The disclosure levels will likely shift as siblings grow older and

move through life.  The current study focused on levels of disclosure between siblings and how

disclosure is related to the gender of the siblings and the degree of warmth and emotional support

in their relationships.  College students (54 male, 140 female, 7 other) completed questionnaires

about the relationship they have with the sibling closest in age to them.  Participants were asked

some general questions about their sibling relationship as well as with whom they would disclose

information in three hypothetical situations.  Based on previous studies, I hypothesized that

siblings would be more likely to go to each other during stressful family events as compared to

stressful personal events, and this hypothesis was supported.  I also found, as hypothesized, that

siblings with warm and emotionally supportive relationships, and who were closer in age, would

be more likely to disclose to one another than other siblings.  In terms of gender, I predicted that

pairs of sisters would be more likely to disclose to each other than both sister-brother pairs and

brother-brother pairs, which was supported.  Lastly, I expected that siblings would be more

likely to discuss a family-wide event with one another and would be more likely to discuss

personal and positive events with a friend, which was also supported by my data.  No difference

was found in disclosure levels between older and younger siblings (in terms of birth order).

Overall, I found that siblings were most likely to rely on one another during a stressful family-

wide event and that the presence of warmth and emotional support facilitated the increased

disclosure.  In the future, it could be helpful to examine how disclosure levels between siblings

differ later in life as people start new families or even move towards the end of their lives.

**The Role of the Sibling Relationship During Stressful Life Events**

Siblings:  how would life be different without them?  Siblings can be best friends, enemies, or just two people who co-exist while growing up.  No matter what, if a child has a sibling, they are experiencing life together, often going through similar struggles, traumas, or joys.  The sibling relationship is complicated and changes as children grow up and move through life.  As children mature and grow up, who will be there to support them?  Will siblings provide that emotional support that many need as they grow?  While it is a sad reality, it is likely that everyone will go through a stressful life event or a traumatic experience.  It is important to know who people lean on for support during those times and if those people are siblings.  My study focused on the sibling relationship to discover what situations lead people to go their siblings for emotional support with a focus on the varying support and disclosure patterns of different gender sibling dyads and examining how age difference played into disclosure as well.  Additionally, my study focused on the presence of warmth in the sibling relationship and how this warmth level relates to emotional support between siblings.

In 2020, the world was faced with a challenge:  the COVID-19 pandemic.  This placed stress on all aspects of life from family and friends, to work, to overall health; everything suffered during the pandemic.  One area in particular that likely faced a newfound stress was the family and sibling relationship.  As data and trends began to be analyzed from this time, Perkins et al. (2021) looked at sibling conflict and sibling violence levels during the pandemic.  As noted in the Perkins et al. (2021) study, sibling conflict and violence often increases during times of stress, and an increase in family violence has been seen throughout the pandemic.  Family violence and domestic violence levels across the United States increased during the pandemic, which may reflect the overall trend of violence between loved ones increasing during times of

stress (Perkins et al., 2021). Additionally, during times of stress, routine is likely thrown off. Prime et al. (2020) found that when routines are not normal, or when there is an overall increase in family violence and conflict, like Perkins et al. (2021) found, sibling conflict also increases. Taken together, these studies suggest an overall trend that during times of stress and uncertainty, sibling conflict and overall family conflict increases.

Similarly, an unpublished study by Weissel (2021) found that conflict levels between college-aged siblings increased during the COVID-19 pandemic, as compared to their conflict levels before the pandemic. This study originally aimed to examine how the conflict levels changed between siblings as they moved from adolescence into young adulthood (Weissel, 2021). To compare conflict levels, Weissel (2021) asked college student participants to think back to their conflict levels with their siblings in high school as well as think about their current sibling conflict levels. Contrary to many studies before, such as the study by Van Volkom et al. (2011) which found that as siblings got older, conflict levels decreased, the unpublished study by Weissel (2021) found that conflict levels actually increased as siblings got older and were in college. This once again points to the trend that during stressful times, such as the COVID-19 pandemic, sibling conflict levels increase. The current study built on the ideas of these past works to examine the sibling relationship during times of stress and trauma to see what, in addition to conflict levels, may differ during stressful times. Not only conflict levels, but on the other side of the spectrum, I focused on how siblings support one another during times of stress.

The sibling relationship is likely one of the longest, if not the longest, relationship someone will have in their lifetime. There are many facets to the sibling relationship such as birth order, age, sibling genders, and more that can all impact the ways in which siblings interact or support one another. One factor in particular that can shape sibling interactions is birth order.

Herrera et al. (2003) conducted multiple studies with young adult siblings, in either high school or college, in order to examine how siblings viewed the different birth orders and what the birth order effects looked like in the real world.  Participants were given questionnaires asking them their hypothetical thoughts about firstborns, middle-borns, last-borns, only children, and "themselves" on a variety of different topics (Herrera et al., 2003).  When asked about personality traits, firstborns were labeled as the most responsible, most intelligent, and least emotional; middle-borns were labeled as the most envious and the least talkative; last-borns were labeled as the most emotional, most creative, and the most irresponsible (Herrera et al., 2003).  From these traits it can be assumed that each birth order takes on a different role in the family and the other siblings are aware of these differences.  These differing roles will play into the overall dynamic of the sibling relationship and will likely affect when and how siblings share with one another.  From the studies by Herrera et al. (2003), it is likely that siblings know the traits of one another and know how each other operates.  When it comes to disclosure, this could have an impact on whom siblings go to and why.

Not only can birth order effect sibling behavior and characteristics, but these traits can shift as siblings move through early adulthood.  Van Volkom and Beaudoin (2017) conducted a study with 167 college students to better understand how birth order relates to people's perceptions of their own sibling relationship.  They wanted to explore ideas such as how would a middle child versus a firstborn child versus a later-born child view the sibling relationship differently?  Through a questionnaire, the college student participants were asked about their sibling relationships to assess varying aspects such as intimacy, conflict, comparisons between siblings, and many more (Van Volkom & Beaudoin, 2017).  When it came to birth order differences, they found that middle-borns predicted that they felt closer to their siblings than

firstborn or later-born siblings did (as based on their own perceptions), and middle children also reported that they were most likely to be friends with their siblings, even if hypothetically they were not related (Van Volkom & Beaudoin, 2017). As Van Volkom and Beaudoin (2017) point out, it would appear from these results that middle children feel closer to their siblings overall. Additionally, while this finding was not statistically significant, middle children tended to be the most likely to turn to their siblings for support during a difficult time (Van Volkom & Beaudoin, 2017).

It is clear from these findings that for some reason middle children are more drawn to their siblings, and as Van Volkom and Beaudoin (2017) found, middle children are more likely to rely on their siblings during difficult times. It is possible that middle children fall into this role of needing support or wanting connection because they have always had it, even when the firstborns or last-borns would not have. Middle children are born into a family that already has a sibling and when that sibling goes off to college, they still have the younger sibling there for connection and support. Hence, middle siblings are used to this constant connection, and because of this, they may perceive more closeness or feel they need their siblings more as it is what they are used to. Regardless of the exact reasoning, the study by Van Volkom and Beaudoin (2017) provides a deeper understanding of how birth order could begin to play a role in self-disclosure between siblings and the idea of which siblings rely on each other and when.

Birth order is not the only demographic feature that may have an impact on this sibling disclosure. Another factor in the complicated equation of the sibling relationship is gender. The gender make-up of the sibling dyad (sister-sister, sister-brother, brother-brother) can potentially affect how siblings interact with one another. As siblings experience different life events, some stressful and some not, it is important to know when siblings will go to each other and how the

gender of the sibling pair can change these interactions.  Weaver et al. (2003) conducted a study

through questionnaires with 224 college students to explore the question of gender's role in the

sibling relationship.  Weaver et al. (2003) found that perhaps the gender make-up of the sibling

dyad does not play as big of a role in the relationship as they originally expected.  That being

said, they did find that sisters were more likely to go to one another for emotional support and

more highly value input and opinions from their siblings than brothers do (Weaver et al., 2003).

One reason proposed by Weaver et al. (2003) for why sisters (in sister-sister pairings) would go

to each other for emotional support more than brothers in brother-brother pairings, and those in a

mixed-gender pairing, is because in society women are taught to speak more about their feelings

and are conditioned to do so more often than men.  Similarly, Weaver et al. (2003) found that

sisters were more likely to provide various types of assistance to one another than brothers.  The

reasoning behind this is likely similar to that of why sisters engage in more emotional support,

where women are socialized to be helpful and nurturing (motherly) so based on society standards

women would be more helpful than brothers (Weaver et al., 2003).  More generally, Weaver et

al. (2003) found that same-gender siblings identified more with one another and impacted each

other's personalities more than mixed-gender siblings did.  As young adults attend college and

experience stressful life events there, having siblings whom they can rely on and go to for

emotional support is important.  Gender can impact these interactions and likely play a role in

when and why siblings go to each other for support.

During college, the amount and type of disclosure siblings share with each other may

differ, and gender can also play a role in this self-disclosure between siblings.  Lord and Velicer

(1975) conducted a study with 145 college students and gave participants a questionnaire about

their self-disclosure habits.  This questionnaire asked participants to rate how likely they were to

discuss certain topics with different people (siblings, parents, and friends), and they found that in general women were more likely to engage in self-disclosure than men (Lord & Velicer, 1975). Additionally, Lord and Velicer (1975) found that both men and women were more likely to disclose information with their friends than with their siblings, but when they did go to their siblings, there was more disclosure between same-gender siblings than mixed-gender siblings. When siblings did go to one another, Lord and Velicer (1975) found that same-gender siblings who were 1-2 years older than the participant disclosed the most as compared to those without a sibling 1-2 years older. From the above studies, it is clear that gender is related to disclosure levels.

How does the sibling relationship change throughout life? As young children, siblings do most everything together and may be all the other person has in terms of close peer relationships. As siblings go off to school and begin to make friends, their sibling relationship may not be their most important relationship anymore. The sibling relationship provides a unique relationship of companionship, friendship, comfort, and other attributes that are often readily available to them at home (Goetting, 1986). As Goetting (1986) notes in her review of many sibling studies, in a child's life, if there are no other peers or friends of a similar age and personality, then the sibling can be extremely important to provide the child with the companionship and comfort that they need. While this sibling relationship is important, both Goetting (1986) and Spitze and Trent (2018) introduce the idea of a social support hierarchy or a relationship hierarchy in a person's life. The social support or relationship hierarchy is the idea that there is a ranking of people that someone would go to for support (Goetting, 1986; Spitze and Trent, 2018). This support or relationship hierarchy often shifts with age.

There are many reasons why one's main person for support and comfort may shift. Goetting (1986) notes that in early and middle adulthood, while siblings do still rely on one another at times, the intensity of their companionship and emotional connection generally decreases.  As Goetting (1986) suggests, this decreased intensity is likely due to the fact that siblings in this stage of life are focused on their spouses, new families, or jobs, and the sibling interactions that were once necessary (when they lived together) are no longer always necessary. Additionally, siblings are not always together to provide this companionship and emotional support to one another (Goetting, 1986).  This act of growing apart as siblings or no longer "being necessary" is something siblings are likely to see in college too.  While college-aged students are transitioning to emerging adulthood, they are in a way beginning their adult lives. When siblings go off to college, it is likely that they are in less frequent contact with one another than they were when they were living together, and this may cause a shift in disclosure levels between siblings.  This idea of a shifting social hierarchy might explain why siblings shift to disclosing to their friends when they leave for college.

Similarly, Spitze and Trent (2018) conducted a study using data from the National Survey of Families and Households to examine how sibling relationships shift as individuals get older. One issue they focused on in particular was when people did and did not go to their siblings, using the idea of the social support hierarchy (Spitze & Trent, 2018).  They used the data from this national survey and looked at when sibling contact decreased and then linked this to varying types of support (Spitze & Trent, 2018).  Related to social support, Spitze and Trent (2018) found that when people went from being single to being partnered, their contact with their siblings declined, even when controlling for proximity.  As seen with other studies, when people get into relationships, or even make new friends in new environments, it is possible that their

sibling is no longer their main person of contact.  White (2001), who also conducted a study with the National Survey of Families and Households, found that those who got divorced later in life were more likely to receive help from their siblings than those still in marriages.  While this could be because they need more help and support, it also supports the trend that those who have another main person of contact (spouse, significant other, etc.) may shift away from their sibling.  Will this same trend be found with siblings in college who make new friends?  Or will they still largely rely on their siblings?

The previously mentioned studies about social support hierarchies are in contrast to a study conducted by Howe et al. (2000) with 5th and 6th grade children which found that children were most likely to go to their siblings for disclosure and subsequently support than those who were older.  The children in this study were interviewed as well as given questionnaires and they were still in the phase of life where their siblings are always around them and could likely be the best friend that they have (Howe et al., 2000).  There is a clear theme that growing older and perhaps making new friends or moving away from home has an impact on the sibling disclosure relationship.

In looking at how likely siblings are to disclose to one another, there are certain aspects of their relationship that may relate to their disclosure levels.  One of these aspects is warmth.  In a longitudinal study conducted by Kim et al. (2006), they found that as siblings go through adolescence, their intimacy or warmth levels often decrease, especially in a mixed-gender sibling dyad.  This could play a role in how much siblings are willing to rely on each other as they move into adulthood.  As mentioned above, Howe et al. (2000) conducted a study with 5th and 6th graders to look at self-disclosure between siblings in early adolescence.  Participants were given an overall sibling relationship questionnaire to learn more about the general sibling relationship,

such as warmth, conflict, and rivalry levels (Howe et al., 2000). Additionally, participants were

interviewed to ask about the nature of their self-disclosures, specifically looking at whom they

went to and why for certain situations. Howe et al. (2000) found that warmth strongly positively

correlated with self-disclosure levels, which is to say that the more warmth present in the

relationship, the more disclosure was noted. Siblings with more warmth in their relationship are

more likely to disclose information to each other, and in addition, the warmer the relationship,

the more likely the child would go to that sibling for emotional support (Howe et al., 2000). As

warmth can shift with age and change depending on other life events, it is important to note this

correlation.

Not only did Howe et al. (2000) find that warmth correlated with sibling disclosure, but

they also found that siblings were more likely to disclose information with each other when they

are upset as compared to when they are happy. It is possible that more upset or stressful moods

and situations can make siblings need someone to lean on even more, and if there is already

warmth present in the relationship, that person can be a sibling. Warmth can be seen here as a

mediating factor between disclosure and emotional support (Howe et al., 2000). It is also

possible that in times of stress, siblings will be expressing more warmth towards each other and

therefore disclosure may be higher. In my study, some of these ideas around warmth and

disclosure were examined.

With warmth comes the idea of empathy. Empathy takes simple feelings of warmth a

step further and makes the warmth a tangible action where the other person is taking on the

discloser's feelings. Empathy is especially seen in times of stress when people support others

going through a tough time. Such support likely includes emotional support. Tucker et al.

(1999) conducted a short longitudinal study with 203 families (siblings aged 9-12) to examine

how older siblings' levels of empathy and various personality qualities impacted younger

sibling's levels of empathy.  After assessing the individual siblings' levels of empathy, they

asked them about the quality of their sibling relationships (Tucker et al., 1999).  Older siblings

were assessed on their caregiving qualities as these qualities would play into how often and when

they interacted with their younger siblings, which in turn could affect empathy levels (Tucker et

al., 1999).  They found many correlations between older siblings' personal qualities and empathy

levels and the levels of their younger siblings.  In particular, when the older sibling is a boy and

the younger sibling is a girl, the younger sibling tended to display more empathy when the

overall relationship between the two was positive.  Similarly, when the empathy levels were

already preestablished to be higher in the older sibling than the younger siblings (regardless of

gender), the younger sisters were also more empathetic because they likely saw the older siblings

as a sort of role model (Tucker at al., 1999).  Lastly, they found that older sibling caretaking

levels were not associated with empathy levels of the younger siblings in any way (Tucker et al.,

1999).  These trends suggest that the older sibling does play a fairly significant role in empathy

levels of younger siblings, especially when the preexisting relationship was positive (Tucker et

al., 1999).  Younger siblings will often look up to their older siblings, and if they can model

these levels of empathy from them, they may be better at providing emotional support and caring

for their other siblings or friends.

Having a warm and emotionally supportive sibling relationship can be beneficial for life

and for reversing potential adverse life outcomes.  It is likely that everyone will go through a

stressful life event at some point in their lives, and Gass et al. (2007) found that the sibling

relationship can help mediate some of the internalizing symptoms that result from stressful

situations.  While negative outcomes can occur at any point in life from a stressful event,

stressful events from childhood can lead to psychological difficulties later in life (Gass et al., 2007). To examine this idea further, Gass et al. (2007) conducted a longitudinal study and found that children who experienced stressful life events and had an affectionate relationship with a sibling were less likely to experience a negative change in internalizing symptoms as compared to children who did not have affectionate siblings. These findings help illustrate just how important the sibling relationship is and how having a positive relationship full of affection, warmth, and emotional support can be extremely beneficial in the long run.

　　While it is clear that the warmth and affection in the sibling relationship play a role in how siblings rely on each other during stressful events, what does the sibling relationship look like more specifically during stressful life events? This is not to say that empathy does not factor into all of these situations, but do siblings actually rely on each other during or after a stressful life event? After a traumatic event occurred at an elementary school in Sicily, Italy, where part of the school building collapsed, Perricone et al. (2014) conducted a study with some of the children involved to see if their siblings acted as a resource for them in the aftermath of that difficult time. There were several reasons why Perricone et al. (2014) thought siblings would be helpful. One to note was the idea of perspective taking or putting oneself in the other's shoes, which is very similar to empathy (Perricone et al., 2014). The children who went through the traumatic event likely felt alone and like no one understood what they were going through; however, if siblings were able to use empathy and perspective taking, they may have been able to alleviate some of the stress and uncertainty and serve as a resource for their sibling who went through the trauma (Perricone et al., 2014). After administering a series of surveys, Perricone et al. (2014) found that 61% of children reported that their older sibling was a useful resource for them, and that older brothers in particular were noted to be a resource when it came to managing

the events and tasks related to the trauma.  Perricone et al. (2014) also noted that having a sibling as a resource could help children work through the trauma rather than avoid it or suppress it to the point that is comes back worse to impair them later.  Siblings can provide real, and often necessary, support for each other during times of stress.

In a study about social support, Sandler (1980) wanted to deeply examine ideas around social support and siblings as a resource during times of stress and how this could help mediate maladjustment of children from families of lower socio-economic status.  Sandler (1980) specifically looked at three factors about the child's family:  was there an older sibling present, how many parents were present, and was the neighborhood ethnically congruent or incongruent.  The main findings from Sandler's (1980) study that were most relevant to my study, were that children lacking an older sibling for social support had more inhibition problems as compared to those with an older sibling.  Additionally, they found that this older sibling helped mediate the stressful event (Sandler, 1980).  Sandler (1980) suggested that in families of low socio-economic status the older sibling often helps take care of the younger siblings and this additional caregiving and support could help moderate the stressful life event.  Sibling support, or social support in general, is important in helping cope with stressful life events; therefore, it is interesting to examine how this relationship behaves in stressful life events and what other factors might affect the levels of mediation.  Siblings are often there for one another even when someone might not expect it, or in more subtle ways, but as seen in previous studies, through empathy and warmth, siblings can be vital for each other during stressful times.

Not every stressful situation is the same though, and not every type of stressful event will see the same type of success from sibling support.  As Waite et al. (2011) outline in their study there are three main types of stressful events:  family-wide events; personal events; and siblings'

personal events.  Waite et al. (2011) conducted this study with 9–18-year-olds by giving the

participants a few different questionnaires to fill out about sibling warmth and varying life events

they have faced and how stressful they were.  A family-wide event is something that the entire

family experiences such as the loss of a grandparent or divorce, and Waite et al. (2011) found

that sibling warmth was most effective in helping out another sibling with depressive symptoms

and being a helpful source of social support during a family wide stressful event as compared to

the other events.  A personal stressful event is something that one is likely to experience with

friends such as a breakup or not making the team, and a sibling personal event is something that

happens to the sibling (not the target child being surveyed) (Waite et al., 2011).

The event or type of stressful event is just one factor that may affect how much empathy

or emotional support siblings give each other.  Another factor that could affect the frequency or

way in which siblings rely on each other is birth order or birth position.  As previously

mentioned, Herrera et al. (2003) and Van Volkom and Beaudoin (2017) noted that siblings are

often aware of birth order and can view or perceive different birth orders differently.  As the

different birth orders take on different roles in the family, one might be "better" or more

available for emotional support.  These factors could influence how siblings interact with each

other and who discusses what with whom.

As seen in the study with Sandler (1980) there is a clear role that the older sibling plays

in supporting younger siblings during times of stress.  Additionally, the notion of an older sibling

being most helpful was found in the Perricone (2014) study.  This theme of older siblings

providing support for younger siblings is also reported on in the study by Lord and Velicer

(1975).  Lord and Velicer (1975) noted that the most effective disclosure is exchanged between a

person and their sibling who is 1-2 years older.  This then begs the question, who do firstborn

siblings disclose to during stressful times for much needed emotional support. Lord and Velicer (1975) conducted their study with college students and found that firstborn siblings will likely go to their friends with information instead of to a younger sibling.

Dolgin and Lindsay (1999) tried to take these ideas of birth order and disclosure a step further by examining siblings on a long list of topics and seeing when they disclosed information to each other and why (what was the motive). The "why" was to try and get a deeper look as to the reasons siblings would go to each other and if these motives differ depending on birth order (Dolgin & Lindsay, 1999). This study was conducted with 212 participants in college and all the participants were given a questionnaire listing 31 disclosure topics such as "our parents" or "a sad event." Participants were asked to indicate whether or not they have disclosed that information to a sibling and if so, what was their motive for doing so (out of 10 motives). The main findings from this study were that participants were most likely to go to an older sibling when seeking advice, and on the other hand participants were more likely to go to a younger sibling when trying model disclosure techniques or teach their younger sibling (Dolgin & Lindsay, 1999). Additionally, Dolgin and Lindsay (1999) found that participants were most likely to go to the sibling closest in age to vent about any issue or life event they were experiencing. Birth order and empathy can come together in some situations as seen in the Tucker et al. (1999) study. As mentioned above, Tucker et al. (1999) found that older siblings with more affection and empathy are likely to rub off on their younger sibling and influence the younger sibling's empathy characteristic.

There has been much previous research done on the sibling relationship disclosure levels, but not much research had been done on how these disclosure levels varied during different life events. Previous research had focused on disclosure in general and how and why siblings went

to each other, but these ideas were not explored in stressful life events with college-aged

students.  The current study wanted to extend the ideas of sibling disclosure to look at how these

disclosure levels vary in stressful family-wide events as compared to stressful personal events.

Additionally, much of the past research on the different types of life events was done with

younger children, and my study extends this research to college students to see if the role of

siblings is just as important now that friends may be around more, and their social support

hierarchies may have shifted.  Lastly, the current study also wanted to look at the gender make-

up of the sibling relationship more closely.  Many of the previous studies only focused on same-

gender versus mixed-gender sibling pairings, whereas the current study wanted to add more to

this and break down these sibling pairings into brother-brother, sister-sister, and sister-brother

(mixed-gender).  In the current study 200 college students were surveyed generally on their

sibling relationship as well as given hypothetical situations to help examine their disclosure

levels during varying life events.

I hypothesized that in general (regardless of birth order) siblings would be more likely to

go to each other during a stressful situation that is considered a family-wide event than during a

personal life event (Waite et al., 2011).  Along with this, I also hypothesized that the more

warmth present in the sibling relationship, the more likely siblings would be to go to each other

for emotional support and disclosure (Howe et al., 2000; Tucker et al., 1999; Perricone et al.,

2014).  This hypothesis is further supported by the findings by Gass et al. (2007) because they

found that the more affection in the sibling relationship, the less internalizing effects seen later in

life.  Additionally, because warmth may be a mediating factor in emotional support and because

I hypothesized that pairs of sisters would have more warmth than pairs of brothers, I

hypothesized that sisters would be more likely to go to each other for emotional support as compared to brothers (Weaver et al., 2003).

I also hypothesized that siblings would be more likely to go to their older sibling during stressful life events and for the purpose of disclosure than to their younger sibling (Sandler, 1980; Perricone et al., 2014; Lord & Velicer, 1975). Additionally, I hypothesized that same-gender siblings closer in age would be more likely to go to each other for disclosure as compared to those further apart in age (Lord & Velicer, 1975; Dolgin & Lindsay, 1999). Lastly, I hypothesized that firstborn siblings or older siblings would be motivated to go to their younger siblings to teach or model disclosure whereas younger siblings would be more likely to go to their older siblings for emotional support and to seek advice (Dolgin & Lindsay, 1999). I expected to find what previous researchers found in terms of warmth as a mediator and in terms of siblings going to older siblings versus younger siblings for different motives. My study adds overall insight into what the sibling relationship looks like for college students seeking support during stressful times.

## Method

### Participants

The participants in this study were 200 students from a selective liberal arts college. Based on the make-up of the campus population, the majority of the participants were assumed to be white. Out of the participants, 54 were male, 140 were female, 5 were non-binary/third binary, and 1 preferred not to answer. Their ages ranged from 18 – 24 (M = 19.69). One participant did not report age. All of the participants had at least one sibling. Each participant was asked to report on the sibling closest in age to them for the entire questionnaire. There were 200 siblings who were reported on. Out of the siblings, 88 were male, 107 were female, 4 were

non-binary/third gender, and 1 preferred not to answer.  The siblings ranged from ages 11 – 43

(M = 20.69).  The participants total number of siblings ranged from one to six, with the most

common number of siblings being one (101 participants had 1 sibling) and the average was 1.72

siblings.  The participants birth orders (specific birth placement within their sibling system)

ranged from firstborn to sixth-born or beyond, with the most common birth order being second

born (firstborn = 70, second-born = 74, third-born = 38, fourth born = 15, fifth-born = 2, sixth or

beyond = 1).  The siblings' birth orders also ranged from firstborn to sixth-born or beyond, with

second-born being the most common here as well (firstborn = 85, second-born = 88, third-born =

19, fourth born = 6, fifth-born = 1, sixth or beyond = 1).  The participants birth positions (the

overarching category where their birth order falls) were distributed across firstborns to last-

borns, with last-borns being the most common (firstborn = 67, middle-born = 39, last-born = 92).

The siblings reported on were also distributed across all three birth positions, with the most

common birth position being firstborns (firstborn = 88, middle-born = 50, last-born = 62).  The

students for this study were recruited through the college's department of psychology research

platform called Sona Systems and through haphazard sampling around campus by sending out an

email to every student inviting them to participant.  Every participant completed the same

Google Form questionnaire.

**Materials and Procedure**

Participants signed up for the current study either through Sona Systems or by directly

clicking on the Google Form questionnaire link.  If participants did sign up on Sona Systems,

they were directed to the Google Form after signing up.  The Google Form collected all the

participants' responses and gave directions on how to proceed.  Before beginning the actual

questionnaires, participants were given an informed consent document explaining what they

could expect from the study, what the study was about, that there were no known risks to the study, that they were free to withdraw at any time, and that all of their answers would be kept anonymous and confidential (refer to Appendix A for the exact wording). After participating in the study, participants were able to enter a raffle as a potential reward (if they win) for completing the study. Additionally, after taking the questionnaire, participants were given a debrief document, which gave more insight into the study's specific hypotheses and why certain questions were asked (refer to Appendix B for the exact wording). All of the data were collected through Google Forms and then transferred to SPSS for analysis.

There were three main sections to this questionnaire: background information, sibling relationship questionnaire, and three hypothetical situations. In the first section, background information, participants were asked questions about their age, their sibling's age, their gender, their sibling's gender, total number of siblings, birth order and birth position of both the participant and the sibling, as well as how often they communicated with their sibling and their most common method of communication. Throughout the questionnaire, participants were asked to think about the sibling closest in age to them if they had more than one sibling. This sibling was referred to as Sibling A.

The next section of the questionnaire was based on the Italian adaptation of the Adult Sibling Relationship Questionnaire (Tani et al., 2013) (ASRQ). The original ASRQ was created by Stocker et al. (1997). I adapted the Italian (Tani et al., 2013) version of the ASRQ even further to remove the questions about the parent-child relationship. The questionnaire version I used consisted of 37 questions divided into two main domains: warmth and conflict. Each question was rated on a scale from 1-5 (1=*hardly at all*, 5=*extremely much*). The warmth domain was split into eight subcategories (1. Intimacy, 2. Affection, 3. Emotional support, 4.

Instrumental support, 5. Knowledge, 6. Similarity, 7. Admiration, 8. Acceptance) with 25 total

questions. An example of a warmth question is "How much do you and this sibling have in

common?" The Chronbach's α value from the Tani et al. (2013) questionnaire for warmth was

.90. In the current study the Chronbach's α was .95 for warmth. Emotional support was looked

at separately in my study because it was another area of influence on sibling disclosure levels.

The subcategory of emotional support had a Chronbach's α level of .82. There were three

emotional support questions, and an example one is "How much do you and this sibling try to

cheer each other up when one of you is feeling down?" The conflict domain was split into four

subcategories (1. Dominance, 2. Competition, 3. Antagonism, 4. Quarrelling). An example of a

conflict question is "How much do you and this sibling irritate each other?" The Chronbach's α

value from the Tani et al. (2013) questionnaire for conflict was .81. In my study, the

Chronbach's α was .92 for conflict.

The second part of the questionnaire presented three hypothetical situations based on

Waite et al. (2011). The first hypothetical situation was a family-wide event: "You just found

out that a beloved family member has passed away." The second hypothetical situation was a

personal life event: "You recently broke up with your significant other or had a major

disagreement with a close friend." The third and final hypothetical situation was a positive life

event: "You were trying out for a varsity team or a part in the school play and just heard that

you made it."

After each hypothetical situation, participants were asked six questions (five after

Situation 3; see Appendix C). After the situation was presented, six questions followed. The

first three questions following each situation asked how likely the participant was to discuss the

situation with a sibling, parent, or friend: "How likely are you to discuss this situation with a [1.

parent or guardian], [2. sibling], [3. friend]?"  Each likelihood question was measured on a scale

of 1-7 (1=unlikely to discuss, 7=likely to discuss in great depth).  Overall likelihood to disclose

to Sibling A was computed by averaging across the three situations for their likelihood to

disclose (Chronbach's $\alpha$ = .81).  The individual likelihood values for the family-wide event

(Family Event), personal event (Personal Event), and the positive event (Positive Event) were all

used in analysis.

The fourth question was a list of motives, taken from a study done by Dolgin and Lindsay

(1999).  The question asked participants to "Check each motive that describes why you would

discuss this situation with Sibling A.  Check all that apply."  Participants were then given a list of

10 motives about reasons why they may discuss that certain situation with a sibling.  An example

of a motive is "For emotional support:  because you are sad or hurt about something and want

comfort."  The full list of motives can be found in Figure 1.  For both the Family Event and the

Personal Event, participants were asked if there was a different sibling they would have gone to

instead of Sibling A, and if so why.  Participants indicated the main reason from a list of seven

possible reasons that they would not go to Sibling A ("They do not understand me") (See

Appendix C for the full list.)

<div align="center">

**Results**

</div>

**Likelihood to Disclose**

The means and standard deviations of the major variables are in Table 1.  As seen in

Table 1, the Family Situation was more likely to be discussed with a sibling than was a Personal

Situation.  This test was conducted to examine how siblings disclose information during stressful

life events which is why the Positive Situation was not included.  A paired samples t-test

revealed that this was a significant difference, $t(197) = 7.87, p < .001, d = .559$.

Table 2 contains the Person Product-Moment correlations among the following variables, warmth, emotional support, and overall likelihood to disclose to Sibling A to test the hypotheses about how warmth, emotional support, and age difference levels all impact disclosure to Sibling A. The correlation between warmth and likelihood to disclose to Sibling A was significant ($r$ $(200) = .758$, $p < .001$) showing that as warmth between siblings increases, likelihood to disclose goes up. The correlation between emotional support and likelihood to disclose to Sibling A was significant, ($r$ $(200) = .705$, $p < .001$) showing that as emotional support between siblings increases, likelihood to disclose increases as well. Additionally, correlations were computed between warmth and emotional support. The correlation between warmth and emotional support was also found to be significant ($r$ $(198) = .896$, $p < .001$), meaning that as warmth levels between siblings increases, emotional support levels also increase between siblings.

Sibling status was calculated based on the siblings' ages. The participants who were older siblings than Sibling A (N = 72) were compared to those who were younger than Sibling A (N = 112). There were 14 sets of twins who were not included in these comparisons and two participants did not include age. This sibling status (older vs. younger) was the independent variable in a multivariate t-test, with the dependent variables of Family Event and Personal Event which was used to examine the relationship between sibling status and likelihood to disclose in both the Family Event and the Personal Event. The multivariate t-test revealed no significant difference between older siblings and younger siblings in terms of their likelihood to disclose to Sibling A between the family-wide event versus the personal event, $F$ $(2, 179) = .641$, $p = .528$.

**Siblings versus Friends in Disclosure**

In order to examine the relationship between disclosure levels in friends and Sibling A, a multivariate analysis of variance (MANOVA) was conducted. In the MANOVA the

independent variables were gender groups (brother-brother, sister-sister, and mixed gender) and Target of Disclosure (friend vs. sibling) and the dependent variables were likelihood to disclose in the three situations (Family Situation, Personal Situation, and the Positive Situation).  The MANOVA revealed a significant difference in the level of disclosure to siblings compared to the disclosure to friends, $F$ (3, 193) = 108.41, $p < .001$.  The Ms and SDs for this test can be found in Table 1.  Examination of the follow-up univariate tests showed that participants were more likely to disclose to their siblings than to their friends in the Family Event, $F$ (1, 195) = 217.46, $p <$ .001.  However, they were more likely to disclose to their friends than to their siblings in both the Personal Event $F$ (1, 195) = 175.70, $p < .001$, and the Positive Event $F$ (1, 195) = 129.77, $p <$ .001.  The gender groups did not differ in their likelihood to disclose between friends versus siblings $F$ (2, 195) = 1.36, $p = .230$.

**Age Difference Between Siblings**

Age difference was calculated by taking the absolute value of sibling age subtracted from participant age.  As seen in Table 2, Pearson Product-Moment correlations were computed to see the relationship between age difference and likelihood to disclose to Sibling A, warmth, and emotional support.  The correlation between age difference and Overall Likelihood to disclose to Sibling A was significant ($r$ (198) = -.154, $p = .03$), meaning that as age difference increased, likelihood to disclose decreased.  Additionally, the correlation between warmth and age difference was significant ($r$ (200) = -.177, $p = .03$), meaning that as age difference increases, warmth between siblings decreases.  The correlation between age difference and emotional support was not significant, $r$ (198) = -.089, $p = .215$.

A multivariate t-test was conducted to examine the differences between disclosure levels, between the three hypothetical situations, between older and younger siblings (in terms of birth

order between the participant and the sibling in the study). The independent variable for this test was sibling status which is the variable looking at whether the participant is older or younger than Sibling A. The three dependent variables for this test were Family Event likelihood to disclose to Sibling A, Personal Event likelihood to disclose to Sibling A, and Positive Event likelihood to disclose to Sibling A. The multivariate t-test revealed no significant difference between likelihood to disclose between older and younger siblings, $F(1, 180) = 1.119$, $p = .343$. The mean and standard deviation values for this test can be found in Table 3. A second multivariate t-test compared the older versus younger siblings using three dependent variables: the likelihood to disclose to a friend in the Family Situation, in the Personal Situation, and in the Positive Situation. There was no difference found between older and younger siblings in their likelihood to disclose to a friend across all three situations, $F(1, 181) = 1.705$, $p = .168$. The means and standard deviations for this can also be found in Table 3.

**Sibling Dyad Configuration - Gender**

A multivariate t-test was conducted to examine the differences between same-gender siblings (N = 100) and mixed-gender siblings (N = 100) and the likelihood to disclose to Sibling A in all three situations: Family Event, Personal Event, and Positive Event. This multivariate t-test revealed a significant difference, $F(3, 194) = 4.036$, $p = .008$. The univariate follow-up tests revealed that the significant difference was occurring with sibling disclosure within the personal event, $F(1, 196) = 20.045$, $p = .024$. This test revealed that same-gender siblings were more likely to disclose information regarding the personal event than mixed-gender siblings were.

A more fine-grained analysis of sibling gender compared the three gender groups: brother-brother (N = 24), sister-sister (N = 76), and sister-brother (N = 89) (11 missing are from either participants or siblings who reported as non-binary/third gender or prefer not to say). The

three dependent variables were the likelihood to disclose to a sibling in the Family Event, in the Personal Event, and in the Positive Event. The MANOVA revealed a significant difference among the three sibling groups three groups, $F = (6, 388) = 3.338$, $p = .003$. An examination of the univariate test showed that the sibling groups differed only in the Personal Situation, $F (2, 195) = 6.107$, $p = .003$. The post hoc revealed that this difference was in the personal event likelihood to disclose showing that sister-sister pairings were more likely to disclose during a personal event as compared to brother-brother or sister-brother sibling pairs.

## Discussion

The present study was conducted to examine in depth the sibling relationship during different life events with college-aged participants. I found, as expected, that siblings were more likely to disclose to their sibling in some types of situations, but not others, and that certain characteristics of the sibling relationship were related to their likelihood to confide in their sibling. Some of the characteristics that were specifically looked at here were warmth, emotional support, age difference, gender (same-gender vs. mixed-gender, as well as brother-brother vs. sister-sister vs. mixed-gender), and birth order.

Some exploratory analyses found that there was a difference in disclosure levels between siblings and friends: siblings were more likely to discuss a family-wide event with one another and were more likely to discuss personal and positive events with a friend.

Consistent with what previous researchers have found, I hypothesized that siblings would be more likely to go to each other for disclosure for a stressful family-wide event as compared to a stressful personal event. Waite et al. (2011) found the same results where the most social and emotional support through disclosure was provided by siblings after the family-wide event. Waite et al. (2011) preformed their study with 9–18-year-olds, and the current study shows that

these findings and disclosure patterns are still found as siblings enter young adulthood. This finding aligns with what is known about sibling disclosure and how they go to each other for things that they have in common and can relate to one another about. If the stressful life event is family-wide, it means that the entire family is likely impacted by it; therefore, siblings will discuss this mutual life event and work through it together (Waite et al., 2011).

Going through the stressful event with siblings adds to the idea of a "common struggle," which can lead to more connection and a sense of feeling closer to one another. Perricone et al. (2014) supported this idea and noted that after a stressful life event, people can often feel alone and can feel as though they are suffering by themselves. Siblings can provide a mutual support system as they also have been through the family-wide event, which can allow siblings to alleviate some of the stress for each other and work through the pain together. Additionally, as siblings feel closer to each other, they are likely to increase levels of warmth in the relationship, and as seen in this study as well as in other studies, the more warmth in the relationship, the more disclosure there is between siblings (Waite et al., 2011; Howe et al., 2000; Tucker et al., 1999; Perricone et al., 2014).

As mentioned above, warmth is an integral part of the sibling relationship, especially when looking at disclosure levels. Consistent with past research, my data supported my hypothesis that the more warmth in a sibling relationship, the more disclosure. As Howe et al., (2000) found in their study with elementary school children, warmth is seen as a mediating factor, and with this comes more self-disclosure. My study replicated these results, only now with college-aged students. When children mature and go off to college, it is possible that their warmth levels with their siblings could have substantially decreased; however, I found that siblings still reported warmth, and similarly this warmth was associated with higher levels of

disclosure. It is also likely that the disclosure levels are higher in more warm sibling relationships because there is more trust involved, and as Tucker et al. (1999) noted in their study, more empathy. The more siblings trust each other and expect to get an empathic response in a time of stress or just in life in general, then the more willing they may be to share and disclose information with their siblings.

Similarly, the ideas of empathy and trust extend to emotional support as well, and emotional support was represented in my study. I found that the more emotional support reported in the sibling relationship, the more disclosure there was between the siblings. This was found by previous researchers with younger children (under the age of 18) (Howe et al., 2000; Tucker et al., 1999; Perricone et al., 2014). One possible explanation behind high levels of emotional support being linked to greater amounts of disclosure between siblings is similar to the reasoning for why warmth impacts the disclosure levels. My study adds to the findings about emotional support by showing that emotional support and sibling disclosure levels are correlated even as siblings grow up and enter college.

I also had two hypotheses that focused on sibling gender and how this plays into disclosure levels. I hypothesized that sisters would be more likely to go to each other for disclosure as compared to brothers, and this was further refined by expecting that sister-sister sibling pairings would have the highest levels of disclosure as compared to brother-brother or sister-brother sibling pairings. Consistent with other researchers' findings, my study found that this hypothesis was supported in the personal life event situation (Weaver et al., 2003).

I think it is necessary to further examine this and look at why the significant difference in disclosure was only seen in sister-sister pairings and not sister-brother pairings or brother-brother pairings. This is to say that there was no significant difference in disclosure levels between

brother-brother versus sister-brother sibling pairs and no difference in disclosure levels between all three groups in both the family-wide event and the positive event. For the personal event, I found that sister-sister pairings engaged in the most disclosure, and this was significantly different from the disclosure levels in sister-brother and brother-brother pairings. As Spitze and Trent (2006) and Fowler (2009) discuss, women make the relationship closer, and the more women (or in this case sisters) in the relationship, the closer the relationship will be. The presence of more sisters, or as Spitze and Trent (2006) put it, this "principle of femaleness," may explain why the disclosure levels are higher in sister-sister pairings as compared to those with brothers and would also explain why the sister-brother pairings had the next highest disclosure levels. Also, the closer the relationship, the more warmth their likely is, and as Weaver et al. (2003) found, sisters report more warmth in their relationships than brothers.

That being said, if what really caused the relationship to lead to more disclosure was the presence of a sister, then why was the sister-brother relationship lower on disclosure than sister-sister? To start, it is important to note that the sister-sister relationship has more females, which means it will have more disclosure in line with the principle of femaleness. Yet why does the sister-brother relationship not have significantly more disclosure than brother-brother siblings (Spitze & Trent, 2006; Fowler, 2009)? While it is true that the sister-brother relationship has more sisters than does the brother-brother relationship, the sister-brother relationship is a mixed gender relationship. As shown in the current study, the mixed-gender relationship is associated with less disclosure than same-gender relationships, and as shown in other studies, mixed gender sibling relationships are associated with less warmth, which once again leads to lower levels of disclosure (Weaver et al., 2003; Furman & Buhrmester, 1985). Besides the fact that this is a mixed gender relationship, in society, stereotypically, men are less open or expressive with their

emotions and often disclose or talk less in general to another person about what they are going through (Wood & Inman, 1993). Due to their lower level of communication and lack of wanting to disclose, brothers would be likely report lower levels of disclosure as compared to their sisters. This explanation can also be applied to why less disclosure is found in the brother-brother sibling pair.

Unexpectedly, the hypothesis that younger siblings would be more likely to disclose to their older siblings as compared to older siblings disclosing to their younger siblings was not supported. Other researchers have found that younger siblings are more likely to confide in their older siblings during stressful life events as compared to older siblings disclosing information to their younger siblings (Sandler, 1980; Perricone et al., 2014; Lord & Velicer, 1975). However, siblings disclosing more to their older siblings as compared to younger siblings was trending towards significance during the positive life event. It is possible that my findings did not align with this because I performed my study with college-aged siblings and two of the studies I based my hypothesis on of were done with elementary school-aged children. When children are younger, it may be that they need their older siblings more because they are less mature and need help or support more often. As the older sibling, when one is in elementary school, they may feel as though they cannot trust their younger sibling or that the younger sibling just does not know enough to hear their disclosure and provide any help or support. In my study, the participants were all in college, and it may be that as siblings get older and both the older and the younger siblings mature, they both feel as though they can trust one another and disclose information. This potential increased feeling of maturity or mutual understanding may lead older siblings to disclose to their younger siblings more than they would have in the past, and this could be why I found no significant difference here.

While I found no difference in disclosure levels between birth orders, I did find support for my hypothesis that siblings closer in age would be more likely to go to each other for disclosure as compared to siblings further apart in age. This aligns with what other researchers have found in the past when looking at disclosure and closeness in siblings (Lord & Velicer, 1975; Dolgin & Lindsay, 1999). I think this finding may be attributed to the ideas that siblings further apart in age have less in common and are likely in different life stages. The less these siblings have in common, or the less they feel they can relate to or help one another, the less motivation they have to disclose. As Goetting (1986) and Spitze and Trent (2018) found, as siblings get older, their social support network shifts, and they try to find friends or other people who are the same age as them to disclose information to. That same principle would apply here. Additionally, as Stocker et al. (1997) also found with college-aged students, siblings further apart in age reported less conflict with one another, and this was likely because siblings just were not spending enough time together to argue. In the current study, the same idea is applied to disclosure: the less time siblings spend together (I am speculating that in my study these trends were true), the less opportunity there is to disclose, but also the less opportunity they have to get close to one another and share warmth. As was also found in the current study, the larger the age difference, the less warmth reported in the sibling relationship, and as discussed above, when there is less warmth between siblings, there is less disclosure.

Although I had not made specific predictions about the likelihood to disclose in friends versus siblings across the three situations, I explored the findings in this area. I found that participants were more likely to go to their siblings for disclosure during the family-wide life events, and they were more likely to go to their friends for disclosure during the personal and positive life events. This is something new that my study added to the current line of sibling

disclosure research.  While ideas of shifting social support hierarchies or social support systems

have been researched, there has not been much research on actual disclosure levels and how

these varied across different life events.

       As siblings grow up and go off to college, they are likely in less contact with one another

and are constantly surrounded by friends.  This could be when their social support hierarchy

shifts.  As Goetting (1986) notes, the sibling relationship will shift with time.  Spitze and Trent

(2018) also discuss that as siblings transition to new life stages, their social hierarchy likely shifts

with them.  I think that shifting of the social support is what we are seeing in the current study as

siblings in college rely more on their friends.  While college students may rely more on their

friends for personal issues as their friends are the ones who are around them on a daily basis and

know the most about their current lives, the family-wide event still leads to higher disclosure

between siblings.  These results show that people are likely to disclose information to those who

are most closely related to the issue or the news.  When it is a family-wide event, siblings are

going through it together so they both know what is going on and how to care for each other;

however, when it is personal or positive event and the person is in college, their friends are likely

the ones who know the most about the situation, which is why the disclosure is higher to friends

for these events.

       One of the main limitations of this study was the way in which the motives for disclosure

were collected.  Due to the way the questionnaire was created, the information about why

siblings disclose information to each other was not able to be analyzed.  The questionnaire asked

participants to check off all of the reasons or motives for why they disclose information to their

sibling.  When SPSS collected this data, it did not separate each reason out; therefore, the

individual reasons could not be compared.  Due to this I was not able to use these data for

statistical analysis and compare the motives across birth orders or gender pairings of siblings. I was unable to address the topic in detail of why siblings confide in one another and examine when do these motives look different and what other sibling characteristics (birth order and gender) may play into this. More research could be done on the specific reasons why siblings go to each other for disclosure to examine what they think they can get out of the disclosure and how this may differ from why they disclose to a friend. It would be beneficial to examine how disclosure motives differ across birth orders or across varying life situations and how these varying motives affect the overall sibling relationship. Diving deeper into disclosure motives would be an interesting area to research further and continue this line of research on siblings.

Sibling research is important because the sibling relationship is often one of, if not the, longest relationship a person will ever have. It is important to know how this relationship shifts through young adulthood and what role self-disclosure plays in this relationship. If siblings have each other for their entire lives, they are likely to rely on each other throughout life and use each other as a support system. The current study worked to dive deeper into these ideas of disclosure in the sibling relationship and see how disclosure levels differ with respect to a variety of variables such as gender, age difference, warmth, type of life event, and others. My study revealed that siblings consult with each other on family-wide events, and they are more likely to go to each other for disclosure when they are closer in age, a pair of sisters, and when there is more warmth or emotional support that is present in the relationship. Additionally, my study revealed that the social support hierarchy does shift and is likely related to the factor of who knows most about the person and provides the most support or encouragement.

That being said, this research can be taken a step further to examine even more about the sibling relationship and can work to address some of the limitations I faced. My study was

limited to college-aged students, and it is important to see how this relationship changes or looks

later in life.  Looking at the sibling relationship later in life, such as during married life or near

the end of one's life, could provide more insight into how this social support hierarchy shifts and

how other life events may impact disclosure levels.  Examining this relationship further and

seeing when and how they disclose information will provide insight into why siblings are so

important to each other.

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**Table 1**

*Means and Standard Deviations (SD), for Likelihood to Discuss Hypothetical Events with a*

*Sibling or with a Friend.*

| Groups | Likelihood to Discuss with Sibling | | | Likelihood to Discuss with Friend | | |
|---|---|---|---|---|---|---|
| | Family-Wide | Personal | Overall | Family-Wide | Personal | Overall |
| Sibling Pairs | | | | | | |
| Brother-Brother | 5.37 (1.58) | 4.13 (1.92) | 5.06 (1.47) | 4.33 (1.27) | 5.42 (1.61) | 5.22 (1.12) |
| Sister-Sister | 5.61 (1.77) | 5.32 (2.04) | 5.63 (1.69) | 5.22 (1.68) | 6.00 (1.34) | 5.86 (1.05) |
| Mixed Gender | 5.72 (1.43) | 4.39 (1.87) | 5.33 (1.29) | 5.04 (1.67) | 6.12 (1.37) | 5.74 (1.15) |
| Whole Sample[1] | 5.64 (1.58) | 4.71 (1.99) | 5.41 (1.48) | 5.03 (1.64) | 5.98 (1.40) | 5.73 (1.12) |

*Note.* Numbers in parentheses are standard deviations.
1. N=198 (sibling), 199 (friend)

**Table 2**

*Pearson Correlation between Age Difference, Overall Likelihood[1] to Disclose to Sibling A, Warmth, and Emotional Support[2].*

| Measure | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Age Difference | 1.0 | | | |
| 2. Overall Likelihood | -.154* | 1.0 | | |
| 3. Warmth (ASRQ) | -.177* | .758** | 1.0 | |
| 4. Emotional Support (ASRQ) | -.089 | .705** | .896** | 1.0 |
| M | 3.51 | 5.41 | 3.55 | 3.56 |
| SD | .765 | 1.48 | .765 | 1.08 |

1. Overall Likelihood:  average of the sibling likelihood scores in all three hypothetical situations
2. N = 198 (age difference, two participants or siblings did not report an age); N = 200 (overall likelihood, warmth, emotional support)
* $p < .05$
** $p < .01$

**Table 3**

*Means and Standard Deviations (SD), for Likelihood to Discuss Hypothetical Events between*

*Older and Younger Siblings.*

| Groups | Likelihood to Discuss with Sibling | | | Likelihood to Discuss with Friend | | |
|---|---|---|---|---|---|---|
| | Family-Wide | Personal | Positive | Family-Wide | Personal | Positive |
| Birth Position | | | | | | |
| Older[1] | 5.44 (1.71) | 4.54 (2.04) | 5.62 (1.82) | 5.00 (1.56) | 5.75 (1.54) | 6.20 (1.08) |
| Younger[2] | 5.71 (1.52) | 4.76 (1.94) | 6.06 (1.48) | 4.96 (1.71) | 6.13 (1.34) | 6.21 (1.19) |
| Whole Sample[3] | 5.60 (1.60) | 4.67 (1.98) | 5.89 (1.63) | 4.98 (1.65) | 5.98 (1.43) | 6.20 (1.15) |

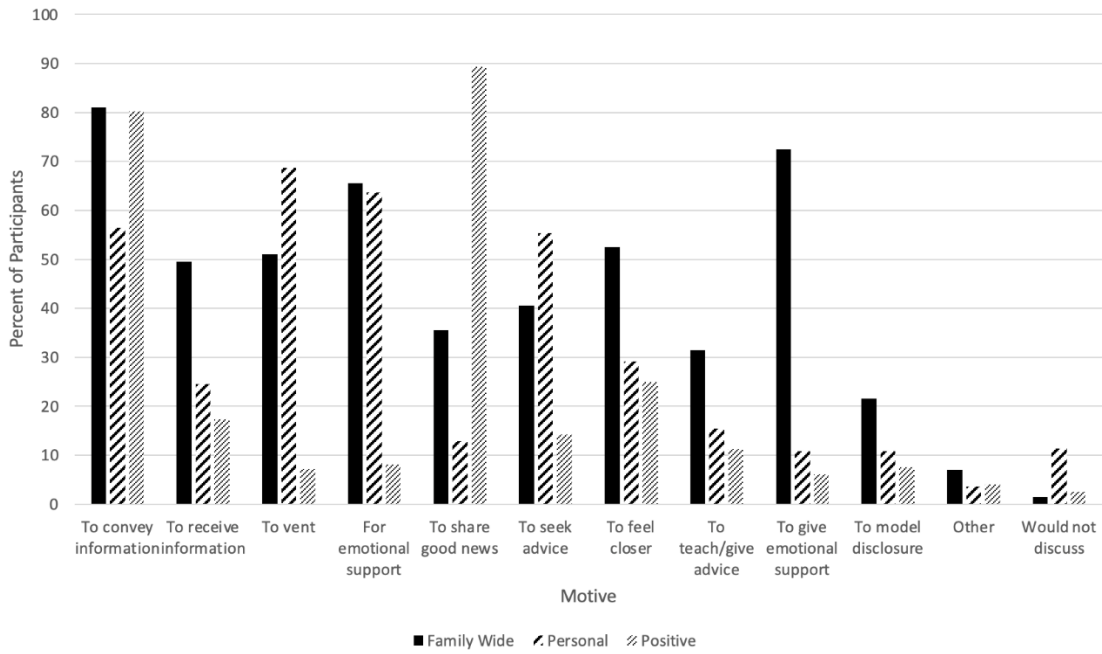*Note.* Numbers in parentheses are standard deviations.
1. N = 71
2. N = 111 (sibling), 112 (friend)
3. N = 182 (no twins and two participants did not report age)

**Figure 1**

*Percentages of Participants Who Chose Each Motive for Disclosure, Across All Three*

*Situations.*

**Appendix A**

*Informed Consent:*
"My name is Brianna Weissel, and I am a psychology major at Union College. I am inviting you to participate in a research study for my senior thesis. Involvement in the study is voluntary, so you may choose to participate or not. A description of the study is written above. I am interested in learning more about sibling relationships and how the sibling relationship is affected by life events. You will be asked to fill out a survey about your relationship with your sibling. This will take approximately 15 min. There are no known risks in this study. If you no longer wish to continue, you have the right to withdraw from the study, without penalty, at any time. You are also free to skip a question that you do not wish to answer, without penalty. All information will be kept anonymous and confidential, meaning data collection will not be connected to a particular participant. I am not telling you my specific hypotheses now, but at the end I will give you more information about them. If you have any questions about the research, please contact Brianna Weissel at weisselb@union.edu or Professor Linda Stanhope (faculty advisor) at stanhopl@union.edu. If you have any questions concerning your rights as a research participant that have not been answered or if you wish to report any concerns about the study, you may contact the Union College Human Subjects Review Committee Chair Professor Joshua Hart (hartj@union.edu) or the Office for Human Research Protections (https://www.hhs.gov/ohrp/). By checking the box below, you indicate that you understand the information printed above, and that you wish to participate in this research study."

**Appendix B**

*Debrief:*
"My goal with this study is to learn more about how siblings provide emotional support and disclose information to each other during stressful life events.  I also want to learn more about the effects that birth order has on the sibling relationship, and the reasons why people go to their siblings.  Lastly, I am curious to learn if students in college are even likely to go to their siblings with stressful life events or if their trusted person has shifted.  I used the hypothetical situations in order to get people to think about how they would react in certain stressful life situations and how their sibling(s) would play into that.  Supported by previous research, I hypothesize that siblings will be more likely to go to their older sibling if they are looking for emotional support and are more likely to go to their younger sibling for a teaching moment.  I also hypothesize that the more warmth present in the sibling relationship before the stressful life event, the more likely siblings will be to go to each other for emotional support.  If you have any questions about this study please reach out to Brianna Weissel at weisselb@union.edu or Professor Linda Stanhope at stanhopl@union.edu."

**Appendix C**

*Hypothetical Situation Questions*:

1. How likely are you to discuss this situation with a parent or guardian?
2. How likely are you to discuss this situation with a friend?
3. How likely are you to discuss this situation with Sibling A?
4. Please read all the descriptions and then check EACH motive that describes WHY you would discuss this situation with Sibling A.  Check all that apply.
5. Is there a sibling you would have gone to over Sibling A to discuss the situation above?
    a. Yes, they are older
    b. Yes, they are younger
    c. No, I am not more likely to go to another sibling
    d. No, I do not have any other siblings
6. If you would NOT discuss the situation with Sibling A, please check the main reason why not. (this was excluded from situation three)
    a. They do not understand me
    b. We do not get along well
    c. Someone else understands me better
    d. They do not know enough about my life
    e. They would not provide me with support
    f. I do not trust them
    g. Other