AN EXAMINATION OF THE ROLE OF INTERPERSONAL EMOTION REGULATION ON THE LINK BETWEEN SOCIAL ANXIETY AND WELL-BEING

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Abstract

Although there has been a recent shift to investigating interpersonal emotion regulation (IER), there are still key aspects of IER to understand generally and in the context of the COVID-19 pandemic. Examining how individuals, including those with social anxiety, utilize and think about IER can provide insights into how this type of emotion regulation can impact well-being. It is crucial to investigate IER during the pandemic since in-person interpersonal interactions may have been disrupted due to physical distancing. Thus, the current study examined the relations between social anxiousness, IER, and well-being during this time. Emerging adults (n = 674) completed measures related to social anxiousness (social interaction, performance, and scrutiny anxiety as well as avoidance), IER (tendency and efficacy for positive and negative emotions), and well-being (subjective happiness, life satisfaction, and flourishing). Through a structural equation mediation model, it was demonstrated that social anxiousness is inversely linked to well-being and IER, and IER is positively linked to well-being in the context of the pandemic. Importantly, IER acted as a partial mediator on the link between social anxiousness and well-being. These results have implications for intervention including the development of student IER workshops to enhance the well-being of socially anxious university students while transitioning back to in-person learning.

Keywords: interpersonal emotion regulation, social anxiety, well-being, social interactions, emotion regulation

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An Examination of the Role of Interpersonal Emotion Regulation on the Link Between Social Anxiety and Well-being

Interpersonal emotion regulation (IER) describes a broad set of emotion regulation strategies in which individuals utilize the support of other individuals to regulate their emotions (Hofmann, 2014; Williams et al., 2018; Zaki & Williams, 2013). Individuals have unique differences with respect to IER including the frequency that they utilize IER as well as their evaluation of the effectiveness of these IER strategies (Williams et al., 2018). Additionally, individuals may differ in their thoughts surrounding IER interactions more broadly (Swerdlow & Johnson, 2020). Several types of mental health concerns have been theorized to impact an individual's use of, and their thoughts revolving around, IER (e.g., Hofmann, 2014; Williams et al., 2018). However, there is a substantial gap in the research on IER in general, as well as its relation to mental health (Dixon-Gordon et al., 2015; Williams et al., 2018). Thus, the current study aimed to better understand IER and its key associations with mental health and well-being. In addition, enhancing our understanding of the influence of IER on well-being during the COVID-19 pandemic is crucial since there are common reports of increased social distancing along with fewer opportunities for in-person social interactions (e.g., Browning et al., 2021). The current investigation will provide valuable information regarding how IER may benefit individuals, including those with mental health concerns, with respect to their overall well-being, particularly in the context of the COVID-19 pandemic.

One mental health concern that is important to investigate in general and has been suggested to be particularly relevant in relation to IER is social anxiety (Dixon-Gordon et al., 2015; Williams et al., 2018). Social anxiety is prevalent in adolescence and emerging adulthood with one study suggesting that 36% of their sample, aged 16-29 and spanning multiple countries,

had social anxiety (Jefferies & Ungar, 2020). Social anxiety can negatively impact an individual's well-being which can be operationalized as lower general happiness and lower satisfaction within domains of life (Diener et al., 2009; Lent, 2004; Wittchen et al., 2000). In relation to IER, social anxiety may influence IER use and an individuals' evaluations of it since social anxiety is characterized by fear in social interactions as well as avoidance, difficulties in interpersonal relationships, and has been found to involve anxiety surrounding self-disclosure to another individual (Alden & Taylor, 2004; American Psychiatric Association (APA), 2013; Endler et al., 2002; Williams et al., 2018). Thus, IER may be a mechanism that underlies the association between social anxiety and well-being. Specifically, social anxiety may impact how an individual uses and evaluates IER, which may, in turn, influence their well-being. Additionally, the COVID-19 pandemic is an important context to investigate how social anxiousness can influence IER and consequently, well-being since higher levels of social anxiety have been reported (Hawes et al., 2021). Overall, the main objective of the current study is to examine whether IER mediates the relation between social anxiety and well-being during this time.

Interpersonal Emotion Regulation

Intrapersonal emotion regulation, the process of how an individual regulates their emotions internally (e.g., Gross, 1998), has been studied extensively, whereas there is a substantial gap in the literature regarding interpersonal emotion regulation, the process of how an individual utilizes others to regulate their emotions (Dixon-Gordon et al., 2015; Hofmann, 2014; Hofmann & Doan, 2018; Zaki & Williams, 2013). Scholars acknowledge that humans are inherently social and emotion regulation often occurs in social contexts and thus, it is important

to investigate emotion regulation in social, interpersonal contexts (Hofmann, 2014; Hofmann & Doan, 2018; Zaki & Williams, 2013).

Zaki and Williams (2013) created a comprehensive IER framework that describes IER as having two components: the type of regulation and whether the regulation depends on another individual's response. For the purposes of the current study, the first component is of relevance. The two types of IER regulation are termed as intrinsic and extrinsic. Interpersonal emotion regulation that is *intrinsic* involves when an individual's emotions are being regulated by someone else, whereas *extrinsic* IER refers to when an individual is regulating someone else's emotions (Zaki & Williams, 2013). The current study focuses on intrinsic IER.

In the following years, Hofmann et al. (2016) discovered multiple strategies that individuals may use when engaging in IER. The first strategy termed *enhancing positive affect* is when an individual utilizes someone else to intensify their positive emotions. The second strategy termed *perspective taking* is when one gets another individual to remind them to try to not worry and that their situation is not as bad as it may seem compared to someone else's situation. The third strategy termed *soothing* is when one utilizes another individual to alleviate negative emotions and feel comforted. Lastly, the fourth strategy termed *social modelling* is when one observes how other individuals handle similar scenarios.

Moreover, Williams and colleagues (2018) examined intrinsic IER and recognized that individuals differ in the frequency that they use IER as well as in their evaluation of how effective IER is in regulating their emotions. These differences are termed as the *tendency* to use IER and the *efficacy* of IER respectively (Williams et al., 2018). The scholars' examination focused less on specific strategies of IER and focused both on generally whether it is used and individuals' thoughts about IER. In addition, Williams and colleagues (2018) specify that IER

can be used to either enhance positive emotions or reduce negative emotions, and which emotion the individual is attempting to change must be considered when examining tendency and efficacy. Thus, their framework includes four categories: positive tendency, positive efficacy, negative tendency, and negative efficacy.

Related to an individuals' thoughts surrounding IER, Swerdlow and Johnson (2020) discuss that an individual's interpretation of their IER experiences is also important. These authors found that a person's interpretation of how someone else responded and acted in an IER interaction typically fall into four categories: responsiveness, hostility, cognitive support, and physical presence. Swerdlow and Johnson (2020) state that examining differences between individuals' interpretations of their IER experiences will further our knowledge about IER processes and IER use. With that in mind, it may be the case that socially anxious individuals interpret IER interactions differently than non-socially anxious individuals.

The regulation of emotions in social contexts and utilizing other individuals to aid in regulating emotions is not a novel concept. In early life, infants' various needs are regulated by their parental figures, and it is through these social interactions and relationships that emotion regulation takes place (Hofmann & Doan, 2018; Thompson, 1994). However, what is less researched is how emotion regulation in social contexts, termed IER, occurs after early life and more specifically, in emerging adulthood (Zaki & Williams, 2013). Hofmann and Doan (2018) state that as an individual progresses through development, using social contexts to regulate emotions does not become less important. Thus, examining how emerging adults continue to regulate their emotions in social contexts is critical.

Social Anxiety

Social anxiety is described as a fear of social scenarios wherein one can be scrutinized and there is a component of evaluation (APA, 2013). In addition to the experience of fear, another crucial component of social anxiety is that these individuals typically avoid the scenarios that induce anxiety (APA, 2013). There are various types of fears that can comprise one's social anxiety. For instance, socially anxious individuals can experience fear when interacting socially with others (APA, 2013; Mattick & Clarke, 1998). Additionally, they can also experience what is termed as *scrutiny* anxiety wherein they experience fear of being examined during everyday tasks such as eating (APA, 2013; Mattick & Clarke, 1998). Beyond experiencing anxiety related to social interactions and being evaluated by others, another key component of social anxiety described by Endler and colleagues (2002) relates to anxiety surrounding self-disclosure of personal information. Endler et al. (2002) have discovered that anxiety surrounding self-disclosure makes a unique addition to the overarching concept of social anxiety. Since the concept of IER and self-disclosing may provoke anxiety, this self-disclosure component of social anxiety may be another potential reason that IER use and thoughts regarding its efficacy may differ for these socially anxious individuals.

Interpersonal Emotion Regulation and Social Anxiety

Research indicates that certain intrapersonal emotion regulation strategies are associated with mental health disorders (see Aldao et al., 2010 for a meta-analysis). However, the literature on interpersonal emotion regulation, mental health, and well-being is limited (e.g., Dixon-Gordon et al., 2015; Williams et al., 2018). Moreover, to my knowledge, the links between IER and mental health as well as well-being during the COVID-19 pandemic have not been investigated. Hofmann (2014) has proposed that the use of interpersonal emotion regulation

(IER) strategies can also be associated with mental health concerns including anxiety disorders. One study that investigated the relation between Hofmann and colleagues (2016) IER strategies and anxiety found that higher general anxiety levels were associated with higher use of the soothing IER strategy (Ray-Yol et al., 2020). Additionally, Chan and Rawana (2021) found that the IER strategies of enhancing positive affect and perspective taking were linked to less anxiety and higher ratings of well-being whereas the soothing and social modelling strategies were linked to more anxiety and lower ratings of well-being. Because these findings suggest that particular IER strategies can positively influence the well-being of emerging adults, the current study sought to replicate the finding that IER is linked to well-being during the pandemic context. Moreover, to expand on these findings, the current study utilized a measure of IER that is not strategy specific as well as a more diverse set of well-being measures by adding life satisfaction in the conceptualization of well-being as well as pandemic adaptability in a descriptive manner.

In terms of specific types of anxiety, such as social anxiety, correlational research has shown that social anxiety appears to be linked to specific IER strategies, although the findings between studies are not in full agreement. For instance, while developing the Interpersonal Emotion Regulation Questionnaire (IERQ), Hofmann and colleagues (2016) found that perspective-taking, soothing, and social modelling were positively linked to social anxiety ratings whereas enhancing positive affect was not as clearly correlated. To my knowledge, there are a couple studies that focused their investigation on social anxiety symptoms and specific IER strategies (e.g., Akkuş & Peker, 2022; Perry, 2020). Thesis research by Perry (2020) did not find any significant associations between IER strategies and social anxiety in a sample of university students. Recently, Akkuş and Peker (2022) found some significant links between social anxiety

and IER as well as found that negative mood regulation expectancy can explain the link between social anxiety symptoms and IER strategies. In particular, they found that soothing and social modeling were positively linked to social anxiety, similar to Hofmann et al (2016). However, in contrast, they found that perspective taking was negatively correlated with social anxiety symptoms. With this in mind, it becomes clear that additional research should be conducted to investigate IER and its link to social anxiety.

Based on the limited research and mixed findings regarding social anxiety and its association to specific IER strategies, particularly in the context of a pandemic, it is valuable to instead investigate the general use of IER to better understand whether socially anxious individuals are engaging in IER at all. From a theoretical perspective, Dixon-Gordon and colleagues (2015) suggest that if an individual often avoids social situations, which is a prominent component of social anxiety, that could likely influence if they utilize IER and how often (APA, 2013; Dixon-Gordon et al., 2015). Specifically, it has been found that social anxiety and tendency to utilize IER—for both positive and negative emotions—was negatively correlated (Williams et al., 2018). Therefore, one of the objectives of the current study is to replicate how socially anxious individuals differ in the frequency with which they use IER in the pandemic context. Moreover, Williams and colleagues (2018) examined how socially anxious individuals evaluated the efficacy of IER. Their findings suggest that higher levels of social anxiety are linked to negative evaluations of the efficacy of IER when the purpose of the IER was to enhance positive emotions specifically (Williams et al., 2018). Therefore, the current study attempted to replicate this link to add another layer to the understanding of the relations between social anxiety and the frequency of general IER use and individual's thoughts surrounding how effective it is. Importantly, this study investigates this link in a context wherein

higher social anxiety levels have been reported in comparison to levels observed pre-pandemic (e.g., Hawes et al., 2021).

Interpersonal Emotion Regulation, Social Anxiety, and Well-being

The association between IER tendency and efficacy and well-being has not been examined extensively in the literature. Well-being can be thought of as an individual's perception of their life and broadly encompasses satisfaction in one's life, as well as in different life domains (e.g., Diener et al., 2009; Diener et al., 2012). Aside from life satisfaction, well-being can be measured by asking participants questions related to their levels of happiness and their psychosocial functioning (e.g., Diener et al., 2009; Diener et al., 2010; Lent, 2004; Lyubomirksy & Lepper, 1999). One study conducted by Williams and colleagues (2018) suggests that using IER more frequently and evaluating IER to be effective in regulating emotions has been associated with a multitude of positive outcomes such as enhanced social relationships and the experience of positive emotions. Although well-being was not measured specifically in Williams and colleagues' (2018) research, the positive outcomes of IER, such as positive interpersonal relationships have been said to be associated with well-being such as life satisfaction (Alden & Taylor, 2004; Demir, 2010). Thus, it was predicted that a higher tendency to use IER and having positive evaluations of its efficacy would also be linked to higher well-being. In the present study, three measures were utilized to operationalize the well-being variable in order to gain a comprehensive overview of how IER might be related to a general construct of well-being as well as how IER may be correlated with different types of well-being scales (i.e., subjective happiness, life satisfaction, and flourishing).

With respect to social anxiety and well-being, the experience of social anxiety symptoms can have deleterious effects on one's well-being since it impacts an individual's functioning and

satisfaction in numerous life domains at both subclinical and clinical levels (e.g., APA, 2013; Fehm et al., 2008; Filho et al, 2010; Wittchen et al., 2000). Specifically, socially anxious individuals tend to be less satisfied with life broadly and in particular domains, such as interpersonal relationships (e.g., Eng et al., 2005; Fehm et al., 2008; MacKenzie & Fowler, 2013). Since these individuals are less satisfied within areas of their life (e.g., Eng et al., 2005), it was predicted that social anxiousness would also be inversely linked to other measures of well-being such as happiness and flourishing. Overall, the current study aimed to replicate the association between social anxiety and well-being during a context in which social anxiety levels have been higher and well-being scores have been lower (e.g., Ammar et al., 2020; Hawes et al., 2021; Rania & Coppola, 2021).

When considering the interplay of social anxiety, IER, and well-being, if socially anxious individuals are not using IER, they may not gain some of the positive outcomes described by Williams et al. (2018), such as positive relationships. In turn, this can impact their well-being since research suggests that healthy interpersonal relationships—whether romantic, with a parent, or a with a friend—are positively associated with well-being (Alden & Taylor, 2004; Demir, 2010; Gómez-López et al., 2019). Thus, the current study examined a model which considers this potential interplay.

Emerging Adulthood

Emerging adulthood encompasses individuals between 18 to 29 years of age and is a developmental stage after adolescence and before adulthood (Arnett, 2000; 2014; Arnett et al., 2014). One of the key characteristics of emerging adulthood is that individuals in this stage experience various changes in their life (e.g., Arnett, 2014; Lane, 2015). Additionally, emerging adults may experience changes in their emotion regulation strategies (Zimmermann & Iwanski,

2014). As individuals age, their emotion regulation strategies become more adaptive, and typical patterns are created for the rest of their lifespan (Rawana et al., 2014; Zimmermann & Iwanski, 2014). Thus, emerging adulthood is a crucial time to study emotion regulation. However, despite this importance, emotion regulation is understudied in the emerging adulthood population (Rawana et al., 2014; Zimmermann & Iwanski, 2014). Moreover, emerging adulthood is a time wherein it is typical to experience shifts in relationships, such as romantic relationships (e.g., Arnett et al., 2014). Additionally, for those who attend university, the transition into university can be considered a time in which new relationships are formed (Williams et al., 2018). Therefore, examining how emerging adults use emotion regulation in an interpersonal context is crucial during this time when forming new relationships can come to the forefront. Furthermore, the changes experienced in various domains of life can be associated with negative feelings, thus, this developmental phase is described as a crucial time to investigate well-being (Arnett et al., 2014; Lane, 2015). Lastly, emerging adulthood is also an important time to investigate the impacts of social anxiety symptoms since research suggests that for individuals who experience social anxiety symptoms, even at subclinical levels, 70% of these individuals will have experienced them by the age of 20 years old (Wittchen et al., 2000). Overall, emerging adulthood is an essential time to investigate IER, social anxiety, and well-being as well as the relations among them.

COVID-19 Pandemic

The COVID-19 pandemic has drastically influenced the lives of many individuals. In Canada for instance, individuals were required to physically distance themselves from others outside of their household and limit in-person socializing (Government of Canada, 2021). One study involving Canadian university students found that 98% of their sample engaged in

distancing from other individuals (Okabe-Miyamoto et al., 2021). Moreover, for university students in particular, their day-to-day life has been significantly altered, including switching to online learning for their post-secondary studies (Browning et al., 2021). With respect to overall well-being and mental health, it has been found over the past year and a half that individuals are reporting lower ratings of well-being (i.e., happiness and life satisfaction) as well as higher social anxiety levels (Ammar et al., 2020; Hawes et al., 2021; Rania & Coppola, 2021). Since the present study collected data during the ongoing pandemic, the results must be conceptualized while simultaneously considering the impact that the pandemic may have on IER—since the pandemic has altered social interactions——as well as levels of social anxiety and well-being. For instance, any replications of prior research would have held true in a unique and stressful pandemic context and the findings can illustrate the impacts of social anxiousness and IER on well-being even during a pandemic. To assess factors related to the COVID-19 pandemic, scales to measure one's experiences related to the pandemic and an individuals' adaptation skills were utilized (Besser, Flett, & Zeigler-Hill, 2022; Kujawa et al., 2020).

The Present Study – Objectives and Hypotheses

Overall, this research investigated the interplay between social anxiety symptoms, interpersonal emotion regulation, and general well-being in a sample of emerging adults in the context of the COVID-19 pandemic. Specifically, this study examined the mediating role that IER could play in the relation between social anxiety and well-being. The specific objectives of the current study were to: 1) replicate the negative link between social anxiety symptoms and well-being, 2) examine and replicate the link between social anxiety symptoms and the tendency for an individual to use IER as well as their evaluations of IER (i.e., efficacy), 3) investigate the link between IER and well-being, and 4) test if IER mediates the relation between social anxiety

symptoms and well-being. The respective hypotheses were: 1) higher levels of social anxiety would be linked to lower well-being (MacKenzie & Fowler, 2013), 2) higher levels of social anxiety in individuals would be linked to utilizing IER less often due to their common fear of social interactions (APA, 2013; Mattick & Clarke, 1998; Williams et al., 2018), and negative evaluations of IER (Swerdlow & Johnson, 2020; Williams et al., 2018), 3) since IER use and positive evaluations of it has been associated with positive outcomes (e.g., positive emotions and positive relationships) (Swerdlow & Johnson, 2020; Williams et al., 2018), it was predicted that more frequent use and positive general evaluations of IER would be associated with higher well-being, and 4) socially anxious individuals may use IER less frequently and evaluate it in a negative manner (e.g., it does not regulate their emotions well) and consequently, their levels of well-being may be lower. In addition, since this data was collected during the COVID-19 pandemic, descriptive analyses were conducted to gain a sense of the average well-being of the emerging adults in our sample. Furthermore, an exploratory objective of the current study was to investigate correlations between the three key variables and COVID-19 related measures (i.e., one's adaptability to COVID-19 and their experience of pandemic-related events and consequent stress levels).

Method

Participants

Undergraduate students in the emerging adult age range (18–29; e.g., Arnett, 2014) were recruited through the research participant pool at York University as well as through social media between May 2021 and January 2022. Of the 760 participants that completed the survey, 674 emerging adults were included in the study (M_{age} = 19.79, SD = 2.22, 77.3% female). Participants were excluded if they finished the survey in under ten minutes or completed less

than 65% of the survey. The sample had a diverse set of ethnic backgrounds consisting of individuals mostly identifying as South Asian (n = 174, 25.8%), White/Caucasian (n = 139, 20.6%) and Black (n = 80, 11.9%). For a full breakdown of participants' ethnicities, see Table 1.

Table 1

Participant Demographic Information

Participant demographics	*n*	Percentage (%)
Gender		
Female	521	77.3%
Male	147	21.8%
Non-binary	2	0.3%
Other	3	0.4%
Ethnicity		
South Asian	174	25.8%
White/Caucasian	139	20.6%
Black	80	11.9%
West Asian	75	11.1%
East Asian	67	9.9%
South-East Asian	53	7.9%
Persons of mixed origin	32	4.7%
Hispanic or Latinx	18	2.7%
Indo-Caribbean	14	2.1%
Indigenous peoples of North America	1	0.1%
Other	5	0.7%

Measures

Demographic Questionnaire

Participants completed a demographic questionnaire consisting of questions regarding their age, gender, education, income, living situation, and ethnicity (see Appendix A).

Interpersonal Emotion Regulation

Interpersonal emotion regulation was measured using the Interpersonal Regulation Questionnaire (IRQ; Williams et al., 2018; see Appendix B). This scale consists of 16 items measuring one's tendency to use IER and their evaluations of its efficacy. The IRQ is divided into four subscales: positive tendency, positive efficacy, negative tendency, and negative efficacy. For example, a negative tendency question is, "When something bad happens, my first impulse is to seek out the company of others" and an example of a positive efficacy question is "I find that even just being around other people can help me to feel better." In the development of the scale, various associations between the subscales and variables related to mental health as well as well-being were reported (Williams et al., 2018). It appears that the positive efficacy subscale was consistently associated with various measures relevant to mental health and well-being (Williams et al., 2018). Specifically, positive efficacy was associated with positive and negative affect as well as stress, and it also had the strongest association with social interaction anxiety (Williams et al., 2018).

The items were presented to participants in a randomized order. Each question was rated on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). This scale demonstrates strong inter-item correlations, test-retest reliability, as well as convergent and discriminant validity with related and unrelated scales, respectively (Williams et al., 2018). Additionally, the four subscales demonstrated good internal consistency in the current study (negative tendency,

Cronbach's α = .84; negative efficacy, Cronbach's α = .75; positive tendency, Cronbach's α = .82; positive efficacy, Cronbach's α = .80).

Social Anxiety

Social anxiety was measured using two scales. The first scale is comprised of the short-form Social Interaction Anxiety Scale (SIAS-6) and the short-form Social Phobia Scale (SPS-6) that Peters and colleagues (2012) tested with items from the original SIAS and SPS (Mattick & Clarke, 1998; see Appendix C). The SIAS includes six items that focus on anxiety surrounding interactions with others (e.g., "I feel tense if I am alone with just one person") whereas the SPS includes six items that focus on scrutiny anxiety (e.g., "I worry that I might do something to attract the attention of other people"). Each question was rated on a 5-point Likert scale (0 = *not at all characteristic or true of me* to 4 = *extremely characteristic or true of me*). This short-form scale has been found to demonstrate convergent and discriminant validity as well as reliability (Peters et al., 2012). The present study also exemplified that both scales are highly reliable with respect to internal consistency (SIAS, Cronbach's α = .83; SPS, Cronbach's α = .89).

Second, participants reported on their social anxiety levels and avoidance of certain scenarios using the Liebowitz Social Anxiety Scale—Self-Report which is similar to the original Liebowitz Social Anxiety Scale completed by clinicians (e.g., Baker et al., 2002; Hope et al., 2019; Liebowitz, 1987; see Appendix D). The self-report scale is comprised of 24 items and includes questions related to social interaction anxiety and avoidance as well as performance anxiety and avoidance. For example, "Acting, performing or giving a talk in front of an audience". The current study utilized two of the six subscales from this measure in the data analyses: the fear of performance subscale and the total avoidance subscale which was a composite score encompassing both avoidance of social interaction and performance scenarios.

An article by Heimberg and colleagues (1999) was used to distinguish the items that were categorized as social interaction anxiety versus performance anxiety. For each item, participants rated their anxiety levels related to specific scenarios on a 4-point Likert scale (0 = *none* to 3 = *severe*) as well as their avoidance of that scenario on a 4-point Likert scale (0 = *never (0%*), 1 = *occasionally (1-33%)*, 2 = *often (34-66%)*, and 3 = *usually (67–100%))*. The rating percentages on this scale seem to have some minor variability in their presentation (e.g., Hope et al., 2019; Kobak et al., 1998). Thus, the present study used a rating scale that resembles one utilized by Kobak et al. (1998) and one presented in a book chapter by Hope et al. (2019), although we adapted one of the options for consistency across the Likert-scale based on Psychology Tools (n.d). The self-report version of this scale demonstrates sound validity and reliability (e.g., Baker et al., 2002; Fresco et al., 2001). In the present study, all six subscales demonstrated strong internal consistency (fear of social interaction; Cronbach's α = .90; avoidance of social interaction, Cronbach's α = .87; fear of performance; Cronbach's α = .87; avoidance of performance, Cronbach's α = .85; total fear, Cronbach's α = .94; total avoidance, Cronbach's α = .92). Moreover, it is suggested that presenting this scale to participants in an online manner demonstrates similar psychometrics (Hedman et al., 2010).

Well-being

Well-being was operationalized as subjective happiness, life satisfaction, and flourishing. Thus, three different scales were used to measure overall well-being.

Subjective Happiness. Subjective happiness was measured using the self-report Subjective Happiness scale (Lyubomirksy & Lepper, 1999; see Appendix E). This scale consists of four items and each question was rated on a 7-point Likert scale which ranges in terminology depending on the question (1 = *not a very happy person* or *less happy* or *not at all* to 7 = *a very*

happy person or *more happy* or *a great deal*). For example, one question is, “Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?” In this case, participants rated on a scale from 1 = *not at all* to 7 = *a great deal*. This scale has demonstrated sound reliability and validity including moderately correlated scores when the measure was reported by the individual themselves and when it was reported by an informant for that same individual (Lyubomirksy & Lepper, 1999). The present study similarly demonstrates sound reliability (Cronbach’s α = .85).

Life Satisfaction. Life satisfaction was measured using the Satisfaction with Life Scale (SWLS; Diener et al., 1985; see Appendix F). This scale contains five items wherein participants rate how much they agree or disagree with the item on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). One example item from the scale is, “In most ways my life is close to my ideal”. The SWLS has demonstrated sound convergent validity and reliability (Diener et al., 1985). Moreover, the scale has been utilized with university students (e.g., Demir, 2010) and found to be reliable in this type of sample with Canadian participants (Chow, 2005). The present study also found the SWLS to have good reliability in this population (Cronbach’s α = .87).

Flourishing. Flourishing was measured using the Flourishing Scale (FS) created by Diener and colleagues (2010; see Appendix G). The Flourishing Scale is comprised of eight items and participants were asked to rate how much they agree or disagree with the item presented on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). For instance, “I am engaged and interested in my daily activities”. This scale exhibits good reliability and convergent validity (Diener et al., 2010). In the current sample, the FS demonstrated high

internal consistency (Cronbach's α = .89). Moreover, Diener and colleagues (2010) suggest that this scale is a satisfactory global measure of well-being.

COVID-19

Pandemic Stress. The level of stress one felt during the pandemic was measured utilizing the Pandemic Stress Questionnaire (PSQ; Kujawa et al., 2020; see Appendix H). The PSQ contains 25 items and participants first answered each question with a 'yes' or 'no' response depending on whether they experienced that particular COVID-19 related event. For example, "I was unable to be with close family, friends, or partners because of the coronavirus pandemic." If they answered yes to any of the items, they were then asked to rate the severity of the experience on a 5-point Likert scale ranging from 1 = *not at all bad* to 5 = *extremely bad*. The PSQ encompasses six subscales: general life disruption (moving, travel, cancellations), interpersonal, financial, education/professional goals, health (self), and health (others).

For the purposes of the current study, the total PSQ score was utilized which was computed by summing the ratings for each event that the participant reported they had experienced. This scale has been utilized in an emerging adult sample and demonstrates acceptable validity and reliability (Kujawa et al., 2020). The present study further demonstrates the acceptable reliability of the scale (Cronbach's α = .88)

Adaptability. One's ability to adapt to situations in the context of the COVID-19 pandemic was assessed using The Adaptability Scale (see Appendix I) created by Martin and colleagues (2012; 2013) and adapted for the pandemic by Besser, Flett, and Zeigler-Hill (2022). The scale includes nine items that tap into cognitive, affective, and behavioural adaptability. Participants rated how much they agreed with each statement on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). One example item is, "To help me through this new

situation, I am able to draw on positive feelings and emotions (eg. enjoyment, satisfaction)". This scale exhibits good psychometrics in adolescents and has been utilized in research with a sample of post-secondary students (Besser, Flett, & Zeigler-Hill, 2022; Martin et al., 2012). Also, high internal consistency was demonstrated in the present study (Cronbach's $\alpha = .90$).

Procedure

Once the undergraduate students between the ages of 18 and 29 years were recruited, they accessed the online survey to complete on Qualtrics. First, students provided informed consent to participate in the study (see Appendix J) and were asked to complete various questionnaires including a demographic questionnaire as well as questionnaires to measure social anxiety, IER, and well-being. Also, a subset of the participants ($n = 403$), completed measures that assessed pandemic-related variables. These measures were added on the basis of suggestions regarding the need to gain a better sense of the potential role and impact of the pandemic. The questionnaires were presented in a randomized order and were approximated to take 30 minutes to complete. Additionally, each item had a "prefer not to answer" option if the participant did not wish to answer. After the survey was concluded, participants were shown a debriefing document which included mental health resources if they felt any distress during the survey (see Appendix K). Lastly, participants were compensated with half a credit for their psychology course if they were in PSYC 1010 or if they were not, they had the opportunity to be entered in a draw to win 1 of 5 $25 Tim Horton's gift cards. If participants began the study and did not wish to continue, they still received the compensation mentioned.

Data Analysis

To analyze the data, IBM SPSS Statistics (Version 28.0) and R were utilized. To start, descriptive statistics on age, sex, as well as ethnicity and all relevant measures were run.

Moreover, Cronbach's alpha was computed for each scale to assess inter-item correlations and determine reliability. As well, zero-order correlations were utilized to examine any relations between the study variables. With respect to statistical assumptions, we verified that linearity and multicollinearity were acceptable. On the other hand, univariate normality was violated. With that in mind, we conducted the analyses utilizing bootstrapped estimates which are robust to normality violations (e.g., Woody, 2011). In terms of investigating the main objectives, structural equation modelling (SEM) was used. Structural equation modelling examines the overall model which includes associations between the three variables of interest and a mediation analysis, specifically whether IER plays a mediating role in the relation between social anxiety and well-being. Importantly, SEM evaluates the overall fit of the model using various fit indices including the comparative fit index (CFI; Bentler, 1990), root mean square error of approximation (RMSEA; Steiger, 1990), and standardized root mean square error (SRMR; Diamantopoulos & Siguaw, 2000). A couple of advantages when using SEM include that error is always considered in the model and, SEM allows for the broader examination of latent variables, which can be referred to as more of a construct, instead of solely examining variables that are directly observed (MacCallum & Austin, 2000; Suhr, 2006). In the current study, social anxiety levels, IER, and well-being were latent variables and the different scales and/or subscales, were the observed variables. Specifically, for social anxiety, the observed variables were social interaction anxiety, scrutiny anxiety, performance anxiety, and avoidance. For IER, the observed variables were the positive and negative tendency to use IER and the positive and negative efficacy of IER. Lastly, the observed variables for general well-being were subjective happiness, life satisfaction, and flourishing (see Figure 1 for a path diagram).

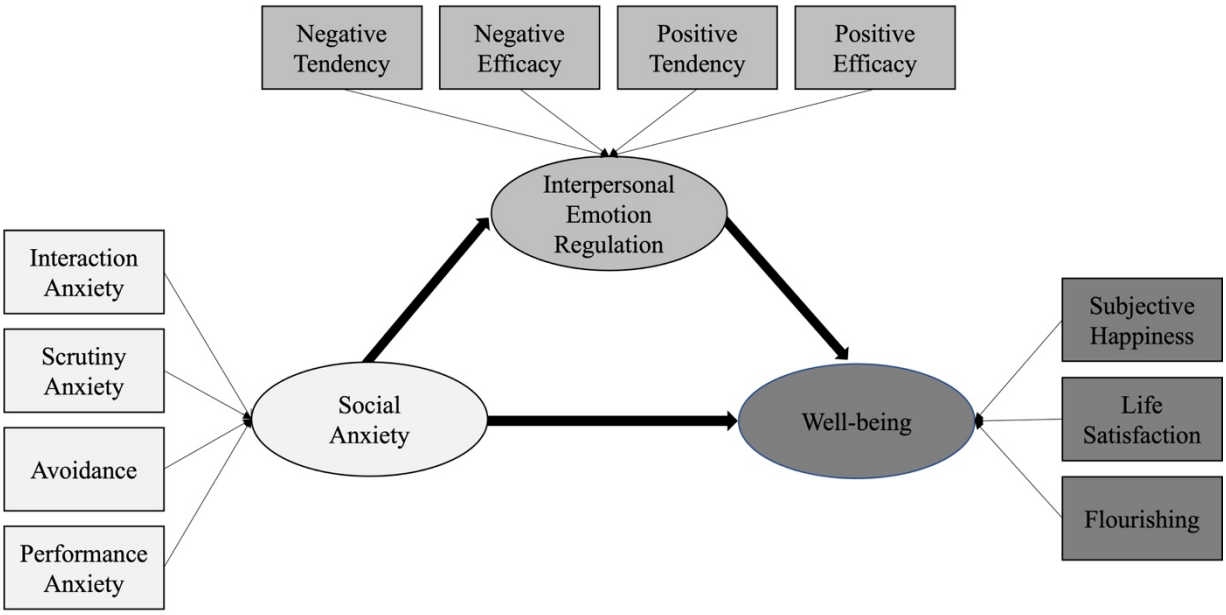

Figure 1

Structural equation mediation model path diagram involving the latent variables of social anxiety, interpersonal emotion regulation, and well-being along with their indicators. All paths were statistically significant, $p < .05$.

Results

Descriptive Statistics

Descriptive statistics of each variable are presented in Table 2. Overall mean levels for some of the main measures are contextualized in the subsequent discussion section.

Additionally, the zero-order correlations are shown in Table 3. In brief, as expected, the indicators for social anxiety (i.e., social interaction anxiety, scrutiny anxiety, performance anxiety, and avoidance) were positively correlated with one another as evidenced by large Pearson correlation coefficients (r = .585 to r = .794, $p < .01$). For IER, all subscales (i.e., negative tendency, negative efficacy, positive tendency, and positive efficacy) were moderately to largely positively correlated (r = .482 to r = .529, $p < .01$). Regarding well-being, all indicators (i.e., subjective happiness, life satisfaction, and flourishing) were positively correlated with one another with a large correlation coefficient (r = .627 to r = .668, $p < .01$). Moreover, majority of the social anxiety measures were weakly negatively correlated with IER negative tendency and positive efficacy (r = -.112 to r = -.232, $p < .01$), except for the Social Phobia Scale (SPS; Peters et al., 2012) in which the negative correlation did not meet significance for IER negative tendency. In terms of the positive tendency subscale for IER, only the Liebowitz Social Anxiety Scale—Self-Report Avoidance subscale had a weak negative correlation (r = -.126, $p < .01$). For negative efficacy, no significant correlations were found with the measures of social anxiety. In addition, the measures of social anxiousness were negatively correlated with the three well-being measures and ranged from weak to moderate correlation coefficients. For the IER subscales and well-being scales, there were mostly weak positive correlations, and one moderate positive correlation with the flourishing scale.

Regarding associations with the COVID-19 related scales, all measures of social anxiety were weakly negatively correlated with COVID-19 adaptability. For pandemic-related stress, only scrutiny social anxiety had a positive significant association. For the IER subscales, neither COVID-19 adaptability nor pandemic-related stress demonstrated significant correlations. Related to well-being, the measure of COVID-19 adaptability was positively correlated with all well-being scales ranging from moderate (i.e., subjective happiness and life satisfaction) to strong (i.e., flourishing) correlations while the measure of pandemic-related stress was only significantly negatively correlated with life satisfaction with a weak correlation coefficient.

Table 2

Means and Standard Deviations of Study Variables

Study Variable	*M* (SD)	Scale Range
Social Anxiety		
Performance Anxiety	19.18 (8.16)	0–39
Social Interaction Anxiety	8.95 (5.41)	0–24
Scrutiny Anxiety	8.28 (6.31)	0–24
Avoidance	31.26 (15.31)	0–72
Interpersonal Emotion Regulation		
Negative Tendency	15.70 (5.68)	4–28
Negative Efficacy	22.37 (4.24)	4–28
Positive Tendency	19.49 (5.03)	4–28
Positive Efficacy	21.41 (4.41)	4–28
Well-being		
Subjective Happiness (SHS)	4.32 (1.29)	1–7
Satisfaction with Life (SWLS)	20.76 (6.91)	5–35
Flourishing (FS)	41.74 (8.48)	8–56
COVID-19		
Adaptability	44.09 (9.14)	7–63
Pandemic Stress	23.96 (14.94)	1–125

Table 3

Pearson Correlations for Variables of Interest

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. SIAS	-												
2. SPS	.630**	-											
3. LSAS-SR-F/A-P	.636**	.662**	-										
4. LSAS-SR-A	.585**	.590**	.794**	-									
5. IRQ-NT	-.117**	-.040	-.129**	-.181**	-								
6. IRQ-NE	-.006	.032	.023	-.049	.524**	-							
7. IRQ-PT	-.035	-.001	-.072	-.126**	.528**	.505**	-						
8. IRQ-PE	-.164**	-.112**	-.134**	-.232**	.482**	.529**	.505**	-					
9. SHS	-.369**	-.348**	-.354**	-.351**	.168**	.083*	.169**	.269**	-				
10. SWLS	-.235**	-.229**	-.273**	-.280**	.228**	.121**	.200**	.239**	.627**	-			
11. FS	-.354**	-.301**	-.342**	-.335**	.242**	.247**	.278**	.357**	.668**	.631**	-		
12. Adapt	-.294**	-.245**	-.280**	-.175**	.002	-.033	.019	.035	.393**	.368**	.544**	-	
13. PSQ	.031	.107*	.070	.035	-.063	.053	.004	.055	-.064	-.204**	.009	-.054	-

Note. SIAS = Social Interaction Anxiety Scale, SPS = Social Phobia Scale, LSAS-SR-F/A-P = Liebowitz Social Anxiety Scale Self Report-Fear and anxiety for performance situations, LSAS-SR-A = Liebowitz Social Anxiety Scale Self Report- Avoidance, IRQ = Interpersonal Regulation Questionnaire, NT = Negative tendency, NE = Negative efficacy, PT = Positive tendency, PE = Positive efficacy, SHS = Subjective Happiness Scale, SWLS = Satisfaction with life scale, FS = Flourishing Scale, Adapt = Adaptability Scale (COVID-19), PSQ = Pandemic Stress Questionnaire

**$p < .01$, *$p < .05$

Structural Equation Modelling

The SEM model is presented in Figure 1. A mediation model with standardized variables was utilized to investigate the links between the variables of interest and mainly to determine if the latent variable of IER mediates the association between social anxiety and well-being, which are also latent variables in the model. For social anxiety, the four indicators are social interaction anxiety, scrutiny anxiety, performance anxiety, and avoidance. For IER, the four indicators are the subscales from the IRQ (Williams et al., 2018) which are negative tendency, negative efficacy, positive tendency, and negative efficacy. Lastly, there are three indicators of well-being including subjective happiness, life satisfaction, and flourishing.

The tested bootstrapped mediation model demonstrated good fit indices: CFI = .958, RMSEA [90% CI] = .070 [.059, .080], SRMR = .047. As well, each indicator loaded onto its respective latent variable (all *p*s < .001; see Table 4). First, the path between the latent variables of social anxiousness and IER, denoted as path a, was significant (*B** = -.134, 95% CI [-.190, -.019]) suggesting that social anxiousness negatively predicted IER, albeit somewhat weakly. Specifically, those higher in social anxiousness engaged in IER less and evaluated it to be less effective and approximately 2% of the variance in IER was explained by social anxiety. Next, the path between the latent variables of IER and well-being, denoted as path b, was significant (*B** = .340, 95% CI [.269, .504]) such that higher scores on IER tendency and efficacy predicted higher well-being and approximately 34% of the variance in well-being was explained by IER and social anxiety, which is quite substantial. Regarding our main objective of the study, the total effect regarding the relation between social anxiousness and well-being was statistically significant (*B** = -.473, 95% CI [-.515, -.331]). Considering the mediation model, the direct effect of social anxiousness on well-being, while taking IER into account, was also statistically

significant (*B** = -.427, 95% CI [-.470, -.290]) Importantly, the indirect effect of IER on the relation between social anxiousness and well-being was significant (*B** = -.046, 95% CI [-.080, -.007]). See Table 5 for a summary of the statistics. When examining a measure of effect size, we found that approximately 10% of the variance between social anxiety and well-being can be explained by IER which demonstrates that IER acts as a relevant mediator.

Table 4

Latent Variables and Respective Indicators for Structural Equation Model

Latent variable	Indicator	*B*	*SE(B)*	*Z*	*p*	*B**
Social Anxiety	Performance anxiety	1.000				0.909
	Avoidance of social interactions and performance situations	0.936	0.034	27.426	< .001	0.850
	Social interaction anxiety	0.799	0.042	18.831	< .001	0.724
	Scrutiny anxiety	0.815	0.041	19.985	< .001	0.740
Interpersonal Emotion Regulation	Negative tendency	1.000				0.712
	Negative efficacy	1.008	0.077	13.141	< .001	0.717
	Positive tendency	1.000	0.062	16.007	< .001	0.713
	Positive efficacy	1.005	0.088	11.387	<. 001	0.715
Well-being	Subjective happiness	1.000				0.806
	Life satisfaction	0.942	0.047	19.924	< .001	0.757
	Flourishing	1.058	0.059	18.058	< .001	0.847

Table 5

Structural Equation Model Regressions and Total, Direct, and Indirect Effects

Variables	Path	*B*	*SE(B)*	*Z*	*p*	*B**	95% CI
Interpersonal Emotion Regulation ~ Social Anxiety	(a)	-0.105	0.042	-2.478	.013	-0.134	[-0.190, -0.019]
Well-being ~ Interpersonal Emotion Regulation	(b)	0.385	0.059	6.538	< .001	0.340	[0.269, 0.504]
Social Anxiety	(c')	-0.379	0.046	-8.281	< .001	-0.427	[-0.470, -0.290]
Indirect effect	(a*b)	-0.040	0.018	-2.223	.026	-0.046	[-0.080, -0.007]
Total effect	(c' + a*b)	-0.420	0.047	-8.968	< .001	-0.473	[-0.515, -0.331]

Discussion

The main objective of the current study was to investigate whether IER could explain a portion of the link between social anxiousness and well-being among emerging adults, in the context of a pandemic, by recruiting participants to complete a web-based survey. With this in mind, the current research sought to 1) replicate research suggesting that higher social anxiousness leads to lower well-being (MacKenzie & Fowler, 2013), 2) replicate and determine whether social anxiousness is associated with general IER (e.g., Williams et al., 2018), 3) determine if IER is associated with well-being, and 4) examine whether IER acts as a mediator in the established relation between social anxiety and well-being. In addition, this study aimed to examine average scores of well-being relevant measures during the COVID-19 pandemic as well as explore associations between our variables of interest and two COVID-19 related measures.

Regarding the first objective and in line with our hypothesis as well as prior literature, the SEM model demonstrated that social anxiousness was inversely related to well-being such that emerging adults with higher social anxiousness—encompassing ratings of social interaction anxiety, performance anxiety, scrutiny anxiety, and avoidance—reported lower levels of well-being overall including subjective happiness, life satisfaction, and flourishing. The present study replicates and extends research by illustrating the negative association between social anxiety symptoms and emerging adults' well-being during a global pandemic (e.g., MacKenzie & Fowler, 2013). Interestingly, it may be the case that limited in-person interactions negatively impacted interpersonal relationships, which are already impacted in those with social anxiety (e.g., Alden & Taylor, 2004). Thus, since social relationships are crucial for well-being (e.g., Diener et al., 2009; Ryff & Singer, 1998), it is theoretically plausible that the pandemic exacerbated interpersonal concerns for these individuals and further influenced their well-being.

With respect to the second objective, it was found that higher social anxiety levels were linked to lower ratings of IER (i.e., tendency and efficacy) in the SEM model, thus supporting the hypothesis which was based on the idea that these individuals typically fear and avoid social interactions and experience anxiety regarding self-disclosure of information (APA, 2013; Dixon-Gordon et al., 2015; Endler et al., 2002; Hofmann, 2014; Mattick & Clarke, 1998; Williams et al., 2018). Further, since the pandemic required individuals to avoid in-person social interactions, participants' social anxiety may have been amplified. Moreover, if an individual is concerned about the interaction, perhaps they may not think it worked to regulate the type of emotion they were experiencing. When considering each subscale of the IRQ separately, similar to Williams et al. (2018), each subscale was found to be positively correlated with each other. With respect to social interaction anxiety specifically, the negative correlation was replicated such that higher levels of social anxiety are linked to lower ratings of negative tendency (NT) and positive efficacy (PE). Moreover, in line with the literature, negative efficacy (NE) was not found to be correlated with social interaction anxiety. In contrast to Williams et al. (2018), a negative correlation between social interaction anxiety and positive tendency (PT) was not found. One potential explanation for this finding is that perhaps turning to others to enhance positive emotions does not bring the same amount of anxiety for socially anxious individuals since the fear of negative evaluation may be less prominent for positive emotions versus negative emotions. The zero-order correlations also provide further novel information regarding the link between social anxiousness and IER tendency and efficacy ratings as the present study included a measure of scrutiny-based and performance-based social anxiousness as well as avoidance of socially anxious situations. For scrutiny anxiety, only PE was significantly negatively correlated. For performance anxiety, there were negative correlations with NT and PE. Lastly, for avoidance

of anxiety-provoking social scenarios, negative correlations with NT, PE, and PT were observed. Interestingly various facets of social anxiety may impact IER use and efficacy ratings differently.

For the third objective and aligning with the hypothesis, IER was found to be positively associated with well-being such that individuals who utilized IER more frequently and evaluated it to work well in managing their emotions reported higher well-being scores. Prior literature has suggested that IER has implications for one's well-being (e.g., Williams et al., 2018) and the present study supports that idea by explicitly demonstrating that IER tendency and efficacy is linked to well-being (subjective happiness, life satisfaction, and flourishing) in a stressful global context. In the current study, flourishing had the strongest associations with the IRQ subscales. This finding is relevant to note since it is the only well-being measure in the study that explicitly mentions aspects of well-being that involve having positive interpersonal relationships and extends the positive link found by Williams et al. (2018) regarding IER and social support in general as well as in the pandemic context which altered social interactions.

Regarding descriptive findings for well-being, prior research has illustrated that well-being levels, including happiness and life satisfaction, have been lower during the beginning of the COVID-19 pandemic (Ammar et al., 2020; Rania & Coppola, 2021). In the current sample, the mean scores of subjective happiness were comparable to the means found by Rania and Coppola (2021) which were significantly different from the means of the normative sample in their study. Thus, it can be inferred that the current sample aligns with their pandemic-related findings. With respect to life satisfaction, the current sample had slightly lower means than have been previously described in university students (Diener et al., 2009). Regarding flourishing, the current mean was also slightly lower relative to other samples comprised of university students (Diener et al., 2010). In terms of the adaptability to the pandemic measure, once again the

obtained mean was only slightly lower than the overall mean reported by Besser, Flett, Nepon, and Zeigler-Hill (2022) for a sample of university students from Israel. Although it is not possible to be certain, it appears that well-being in particular might have been negatively impacted by the COVID-19 pandemic based on the descriptive results from this sample. With these descriptive results in mind, the findings are both novel and important in the sense that this study demonstrated that IER tendency and efficacy positively influences well-being in general and specifically, during a stressful context wherein well-being was lower on average.

With respect to the fourth and main objective, IER acted as a partial mediator in the relation between social anxiety and well-being which is in line with the hypothesis. Specifically, individuals scoring higher on social anxiety tended to utilize IER less and evaluated it to not work as well which was in turn linked to lower well-being. One important novel aspect of this study lays within this model as one significant explanation of the interplay between these variables was found, that has not yet been investigated. In particular, the mediational role of IER. Additionally, since there are mixed findings related to social anxiousness and IER strategies in the literature, IER was examined in broader terms to provide further theoretical information. Moreover, looking beyond use and into evaluations of how well IER works to manage emotions from the users' perspective provides an even broader understanding, as perceptions may play a large role in the real-life effectiveness of IER. Furthermore, the current study advances the literature's understanding of general IER use and perceptions of IER among different individuals such as those with social anxiety, which has been suggested by scholars to be crucial to examine (e.g., Dixon-Gordon et al., 2015; Williams et al., 2018). Additionally, these results were found while in an unprecedented global context wherein individuals were experiencing higher levels of social anxiousness and changes in their social interactions (Browning et al., 2021; Hawes et al.,

2021). In the future, research can be expanded to examine specific IER strategies employed and the consequent impact that may have on well-being for socially anxious individuals.

Regarding the exploratory objective, individuals higher in social anxiety typically had lower scores on the COVID-19 adaptability measure. In other words, people who are socially anxious seemed to be adapting poorly to the COVID-19 pandemic, which could be due to various reasons. For one, research has suggested that individuals with social anxiety have difficulty altering their affect and experience emotion dysregulation (Hofmann et al., 2012; Turk et al., 2005; Werner et al., 2011). Thus, it is logical that they may struggle with affective adaptation of their negative emotions related to the COVID-19 pandemic. Moreover, individuals with social anxiety have been suggested to believe that their cognitive emotion regulation strategies are not successful (Werner et al., 2011). Thus, it is likely that their cognitive adaptability to COVID-19 would similarly follow this pattern. Ultimately, it appears that socially anxious emerging adults are not faring as well as their counterparts. For the severity of stress related to pandemic events, only higher levels of scrutiny social anxiety were linked to higher scores on the PSQ. This finding could be related to the fact that individuals are not used to being in public settings and in front of other individuals proceeding the lockdowns. Specifically, it may be the case that individuals who have higher levels of pandemic-related stress are becoming hyperaware to how they are being viewed by others and are experiencing anxiety regarding being observed and scrutinized. With respect to well-being, those higher in COVID-19 adaptability were also scoring higher in all aspects of well-being which aligns with similar findings by Besser, Flett, and Zeigler-Hill (2022). Regarding pandemic-related stress, those reporting higher stress were scoring lower only in life satisfaction; however, no correlations were found among subjective happiness and flourishing. For IER, none of the subscales significantly correlated with

COVID-19 adaptability or pandemic-related stress scores. Since COVID-19 adaptability was positively correlated with the measures of well-being and not with IER, it would be of value for future research to examine other correlates of pandemic-related adaptability. Moreover, since there were no significant associations between pandemic-related stress and two of the three well-being measures, it may be the case that utilizing specific subscale scores instead of the total score on the PSQ may lead to different results. For instance, the interpersonal subscale on the PSQ (Kujawa et al., 2020), which includes items such as not being able to spend time with loved ones, may be associated with the Flourishing Scale (Diener et al., 2010) since the latter scale includes relational items, and the importance of social relationships in the conceptualization of well-being is well recognized (e.g., Diener et al., 2009; Ryff & Singer, 1998). Thus, future research can investigate each subscale of the PSQ and its correlation with IER. Overall, these correlations provide some insight into how COVID-19 may have impacted the variables of interest. Future research could examine in detail how COVID-19 may be impacting the specific associations that were found between social anxiety, IER, and well-being through mediation or moderation processes. For instance, perhaps the link between IER and well-being is moderated by the level of pandemic-related stress an individual experienced.

Limitations and Strengths

The current study has some limitations that are relevant to note. For one, there may be some concerns related to the generalizability of our sample with respect to gender, age, and clinical relevance. Regarding gender, the present sample was predominantly female which limits the generalizability of the findings. For IER specifically, females have been found to have higher overall ratings on the IRQ (Williams et al., 2018). Thus, it will be important for future studies to aim to replicate the current findings with a sample that contains equally distributed genders.

Moreover, although a sample of emerging adults (i.e., 18–29, e.g., Arnett et al., 2014) was utilized, the age frequency tended to be towards the lower end of the emerging adulthood age range. This is important to consider as the lower and upper ends of the emerging adulthood age range may be associated with different life transitions. For instance, individuals may generally experience a transition to university earlier in emerging adulthood. Relatedly, IER use may then be different across the age range since university is mentioned to be associated with forming new relationships (Williams et al., 2018). Lastly, a clinical sample was not utilized, thus, the findings cannot necessarily be generalized to individuals with social anxiety disorder. With that being said, in the present sample the average score on some of the social anxiety measures (i.e., LSAS-SR total score) were comparable to the means found in research involving individuals diagnosed with social anxiety disorder (e.g., Baker et al., 2002) as well as subclinical levels of social anxiety (e.g., Filho et al., 2010). Thus, it appears that the present sample did experience substantial levels of social anxiousness. One objective of future research could be to expand on our findings by utilizing a clinical sample recruited from clinical settings. It is also relevant to keep in mind that these higher social anxiety levels could be a result of the global COVID-19 pandemic wherein higher levels have been reported (Hawes et al., 2021). Despite these limitations of generalizability, the present sample was quite ethnically diverse, and measures that are often seen in the literature for social anxiousness and well-being were utilized.

With respect to methodology, the current study is cross-sectional; thus, causal inferences regarding the relations between the variables of interest are unable to be made. To date, similar research related to social anxiousness and IER strategies (e.g., Akkuş & Peker, 2022; Perry, 2020) have also been cross-sectional. Thus, future research should use a longitudinal design to further understand how these variables influence one another over time. Additionally, self-report

questionnaires were used in this study to measure the key variables, which brings up the concern of social desirability bias. Moreover, with IER research in particular, utilizing dyads (see Christensen et al., 2020 for an example) would help to examine the bidirectionality of IER interactions, gain two perspectives on an interaction, and observe differences in intrinsic and extrinsic IER wherein an individual is the one regulating the other person's emotions for the latter (Zaki & Williams, 2013).

Regarding the data analysis, the utilization of SEM is a strength in and of itself. With that being said, by utilizing a latent variable for social anxiety for example, important indicators were included that have not often been included in the IER and social anxiety literature (i.e., examining avoidance ratings). The inclusion of these indicators are crucial to furthering our understanding of the links between these variables and potential avoidance of IER situations as well. Relatedly, the way in which well-being was conceptualized is a strength of this study as multiple indicators of well-being were included in our analyses. This illustrates that the links found between IER and well-being are quite comprehensive in comparison to using only one well-being scale.

Future Research

Beyond what has been briefly mentioned, future research can aim to utilize other types of methodology to examine IER interactions in real-time. For instance, ecological momentary assessment (EMA) can be used to investigate tendency and efficacy ratings of IER interactions within a shorter time frame of when the interactions occur, therefore, not relying on retrospective accounts. To date, there has been research on socially anxious individuals and their intrapersonal emotion regulation strategies (e.g., Daniel et al., 2019; Farmer & Kashdan, 2012) using this type of real-time method, although, to my knowledge, none have researched social anxious

individuals and their interpersonal emotion regulation strategies with this methodology. Thus, this is an area where a gap in the literature is recognized and future research can further our understanding of the daily processes and perceptions of IER in socially anxious individuals and then relatedly, their well-being. Furthermore, future research should go beyond general use as well as efficacy and examine more detailed perceptions about various aspects of IER interactions by using scales such as the Interpersonal Regulation Interaction Scale (IRIS; Swerdlow & Johnson, 2020). Moreover, it would be interesting to see how self-disclosure anxiety, another component of social anxiety (Endler et al., 2002), plays a role in the utilization and efficacy ratings of IER. Additionally, investigating both intrapersonal and interpersonal emotion regulation strategies and models simultaneously (e.g., Christensen et al., 2020; Tull & Aldao, 2015) can provide more information regarding how individuals use these two types of emotion regulation in their daily lives and provides the ability to answer questions such as, is one type used over the other for certain individuals? Does someone who utilizes both types of ER have better well-being?

Moreover, research could examine the number of people that socially anxious individuals turn to if they are utilizing IER in some respect, compared to non-socially anxious individuals, since Cheung and colleagues (2015) found that turning to various, and specific, individuals is positively linked to well-being. An important question becomes, how many people do socially anxious individuals turn to in order to meet their emotion regulation needs? Do they perceive it to be less effective if they are not utilizing various relationships for their ER needs? Will they use it less? These are all relevant questions for future research to investigate to further contribute to the knowledge of IER in these individuals and then apply this knowledge to enhance their

well-being. Future research should also qualitatively examine socially anxious individuals' views on using IER.

Another important and timely area of future research involves examining the modality in which IER is utilized (e.g., in-person, over the phone, texting or via social media) since individuals have been interacting by virtual means, especially during the COVID-19 pandemic (e.g., Ammar et al., 2020; Dixon-Gordon et al., 2015; Gabbiadini et al., 2020). Moreover, socially anxious individuals may prefer socializing with other individuals in a virtual format (e.g., Hutchins et al., 2021; Pierce, 2009). Thus, it would be interesting to investigate whether IER has a differential impact on well-being for individuals with social anxiety depending on the modality in which it is utilized.

Theoretical and Practical Implications

The current study has both theoretical and practical implications for students, particularly those that are socially anxious. First, the current study advances the literature by filling a gap regarding the need to investigate how mental health concerns can influence the use of IER and its associated positive outcomes (Dixon-Gordon et al., 2018; Hofmann, 2014; Swerdlow & Johnson, 2020; Williams et al., 2018). Specifically, the current study begins to enhance the understanding of how IER influences well-being and that the relation between social anxiety and well-being can be explained by general IER use and evaluations of its efficacy in emerging adults. Additionally, this research was conducted in a pandemic context which illustrates that even during this unprecedented and stressful time, higher social anxiousness and lower IER tendency and efficacy is linked to lower well-being levels. Moreover, the current study further contributed to the literature by utilizing a sample comprised of emerging adults, which is not as frequently studied in emotion regulation research (Rawana et al., 2014; Zimmermann & Iwanski, 2014) despite this

developmental period being a relevant time to examine IER due to changes in emotion regulation strategies (e.g., Zimmermann & Iwanski, 2014) and relationships (e.g., Arnett, 2014).

With respect to practical implications, the findings that IER positively influences well-being and acts as a mediator between social anxiousness and well-being, can provide direction to individuals and agencies in the realm of clinical intervention or education with the aim to support emerging adults' well-being. With respect to individualized therapy, clinicians can target IER processes in intervention for those with social anxiety to enhance their well-being (Swerdlow & Johnson, 2020; Williams et al., 2018). For instance, if IER leads to greater well-being, but socially anxious emerging adults are not engaging in IER as frequently and they negatively evaluate its efficacy (Williams et al., 2018), then a goal of treatment could be to attempt to increase the use and positive evaluations of IER in efforts to support their well-being. Specifically, if a socially anxious individual is avoiding IER interactions, then exposure therapy—a common component of CBT used in social anxiety treatment (e.g., Kim et al., 2011)—can include working towards facing these anxiety provoking IER scenarios. Furthermore, there is theoretical background that suggests that IER can likely be learnt and practised effectively through group therapy means (see Messina et al., 2021). Thus, it is exemplified that IER can be integrated into various types of therapy.

Moreover, the current findings allow for the preliminary development of IER psychoeducation workshops, specifically for university students in the emerging adult age range, which should focus on the important role of various types of emotion regulation strategies including the positive benefits of IER on well-being. For first year university students, there could be a focus on using IER to potentially strengthen new relationships being formed (e.g., Williams et al., 2018). With additional research, ways to incorporate IER into various

relationships, as well as how to respond in a healthy manner to someone seeking IER, can also be included. Moreover, the workshops could be led by peer-leaders to enhance relatability as well as increase accessibility to the information. Proceeding the workshops, attendees can hopefully begin to implement IER, with trusted individuals, in their daily life when suitable. The current findings can also provide initial ideas surrounding adapting the IER-based psychoeducation workshops to be developmentally appropriate and then leading the workshops in elementary and secondary schools. For instance, since peers become increasingly important in adolescence (e.g., Brown & Larson, 2009; Kingery et al., 2010), it may be valuable to focus the workshops on beginning to adaptively utilize IER in peer relationships, in addition to utilizing it with parental figures. Relatedly, the current findings have implications for the educational curriculum in elementary and secondary schools. Specifically, IER can be integrated into the social-emotional learning (SEL) component of Ontario's curriculum to enhance the pieces of emotion regulation and healthy relationships (Ontario Ministry of Education, n.d.). Lastly, IER psychoeducation workshops can also be adapted and held for parents. In particular, the workshop content should incorporate the view that IER is a life-long skill and as Hofmann and Doan (2018) discuss, it does not become less important throughout development. By learning about IER in workshops, parents can start to develop ways to help foster adaptive emotion regulation strategies in their children at various developmental periods. With all that said, future research is required to further develop the framework and content of various types of IER workshops.

Conclusions

The current study was conducted to better understand the interplay among social anxiousness, IER, and well-being in emerging adulthood within the COVID-19 global pandemic context. The main objective of this study was to examine the possible mediational role that IER

could play in the link between social anxiousness and well-being. The current findings demonstrate that during the ongoing context of the pandemic, IER does explain a portion of the negative relation between social anxiety and well-being such that individuals higher in social anxiety score lower on tendency and efficacy ratings of IER which in turn, is associated with lower well-being. Notably, IER had an important influence on well-being during this stressful time in which our in-person interactions were restricted. The current study provides an important step in continuing to understand the intricacies of IER use, efficacy evaluations, and general IER interactions. Moreover, this study has aided in filling a gap in the literature, mentioned by Dixon-Gordon et al. (2015) and Williams et al. (2018), regarding the limited research on the links between mental health and IER. Specifically, we demonstrated how a mental health concern (i.e., social anxiousness) can influence ratings of IER tendency as well as efficacy and the implications that has on one's well-being. This information will provide professionals with the ability to continue the research and think about developing tools to bolster emerging adults' well-being through IER in therapeutic practice and via psychoeducation workshops in community-based and school-based settings.

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Appendix A

Demographic Questionnaire

URPP ID # _____

1. What is your birth date? (dd/mm/yyyy; e.g., January 1, 2006 = 01/01/2006) __/__/____

2. Please indicate your identified gender
O Male
O Female
O Non-binary
O Transgender
O Two-Spirit
O Other; please specify:
_____
O Prefer not to answer

3. What year of undergraduate studies are you in?
O 1st year
O 2nd year
O 3rd year
O 4th year
O 5th year or above
O Other; please specify:
_____
O Prefer not to answer

4. What is the highest level of education you have completed?
O Less than high school diploma
O High school diploma
O Some college or university studies
O College diploma
O Bachelor's degree
O Some post graduate studies (e.g., Masters, PhD)
O Graduate degree (e.g., Masters, PhD)
O Prefer not to answer

5. What is the highest level of education your parent(s) have completed?

Parent 1	Parent 2	
O	O	Less than high school diploma
O	O	High school diploma
O	O	Some college or university studies
O	O	College diploma
O	O	Bachelor's degree
O	O	Some post graduate studies (e.g., Masters, PhD)

O	O	Graduate degree (e.g., Masters, PhD)
O	O	Prefer not to answer/Not applicable

6. What is your total annual household income? *Please include yourself and the family members that you live with.*
O $0 - $24,999
O $25,000 - $49,999
O $50,000 - $74,999
O $75,000 - $99,999
O $100,000 - $124,999
O $125,000 - $149,999
O $150,000 - $174,999
O $175,000 - $199,999
O $200,000 and up
O Prefer not to answer

7. Where do you live?
O Parents/guardians home
O Residence
O Off campus
O Other; please specify:
_____
O Prefer not to answer

8. Please indicate your ethnicity
O Black (e.g., Africans and African heritage people from the Caribbean, Americas, Europe, etc)
O East Asian (e.g., Chinese, Japanese, Korean, etc)
O Hispanic or Latinx (including Indigenous persons from Central and South America)
O Indigenous peoples of North America
O Indo-Caribbean (e.g., Trinidadian, Guyanese, etc)
O Persons of mixed origin (e.g., with one parent member of a visible minority group)
O South Asian (e.g., Indian, Pakistani, Bangladeshi, etc)
O South East Asian (e.g., Filipino, Thai, Vietnamese, etc)
O West Asian (e.g., Iranian, Lebanese, Afghan, etc)
O White/Caucasian
O Other; please specify:
_____
O Prefer not to answer

9. Were you born in Canada?
O Yes
O No
O Prefer not to answer

If "NO":
A) How long have you lived in Canada? (years)

_____
O Prefer not to answer

B) What country were you born in?

_____
O Prefer not to answer

Appendix B

Interpersonal Regulation Questionnaire (IRQ; Williams et al., 2018)

Please indicate how much you agree or disagree with each of the following statements.

	(1) Strongly disagree	(2) Disagree	(3) Somewhat Disagree	(4) Neither agree nor disagree	(5) Somewhat agree	(6) Agree	(7) Strongly Agree	Prefer not to answer
1. When something bad happens, my first impulse is to seek out the company of others.	O	O	O	O	O	O	O	O
2. When I'm having trouble, I cannot wait to tell someone about it.	O	O	O	O	O	O	O	O
3. I just have to get help from someone when things are going wrong.	O	O	O	O	O	O	O	O
4. I manage my emotions by expressing them to others.	O	O	O	O	O	O	O	O
5. I appreciate having others' support through difficult times.	O	O	O	O	O	O	O	O
6. Sometimes I just need someone to understand where I'm coming from.	O	O	O	O	O	O	O	O
7. It really helps me feel better during stressful situations when someone knows and cares about what I'm going through.	O	O	O	O	O	O	O	O

8. I really appreciate having other people to help me figure out my problems.	O	O	O	O	O	O	O	O
9. When things are going well, I just have to tell other people about it.	O	O	O	O	O	O	O	O
10. When something good happens, my first impulse is to tell someone about it.	O	O	O	O	O	O	O	O
11. When things are going well, I feel compelled to seek out other people.	O	O	O	O	O	O	O	O
12. When I want to celebrate something good, I seek out certain people to tell them about it.	O	O	O	O	O	O	O	O
13. I'm happier when I'm with my friends than when I'm by myself.	O	O	O	O	O	O	O	O
14. Being with other people tends to put a smile on my face.	O	O	O	O	O	O	O	O
15. I find that even just being around other people can help me to feel better.	O	O	O	O	O	O	O	O
16. I really enjoy being around the people I know.	O	O	O	O	O	O	O	O

Appendix C

Social Interaction Anxiety Scale—6 items (SIAS-6) and Social Phobia Scale—6 items (SPS-6); Peters et al., 2012 based on Mattick & Clarke, 1998)

For each question, please choose a number to indicate the degree to which you feel the statement is characteristic or true of you. The rating scale is as follows:

0 = Not at all characteristic or true of me
1 = Slightly characteristic or true of me
2 = Moderately characteristic or true of me
3 = Very characteristic or true of me
4 = Extremely characteristic or true of me

	(0) Not at all characteristic or true of me	(1) Slightly characteristic or true of me	(2) Moderately characteristic or true of me	(3) Very characteristic or true of me	(4) Extremely characteristic or true of me	Prefer not to answer
1. I have difficulty making eye contact with others.	O	O	O	O	O	O
2. I find it difficult mixing comfortably with the people I work with.	O	O	O	O	O	O
3. I tense up if I meet an acquaintance on the street	O	O	O	O	O	O
4. I feel tense if I am alone with just one person.	O	O	O	O	O	O
5. I have difficulty talking with other people.	O	O	O	O	O	O
6. I find it difficult to disagree with another's point of view.	O	O	O	O	O	O

7. I get nervous that people are staring at me as I walk down the street.	O	O	O	O	O	O
8. I worry about shaking or trembling when I'm watched by other people.	O	O	O	O	O	O
9. I would get tense if I had to sit facing other people on a bus or a train.	O	O	O	O	O	O
10. I worry I might do something to attract the attention of other people.	O	O	O	O	O	O
11. When in an elevator, I am tense if people look at me.	O	O	O	O	O	O
12. I can feel conspicuous standing in a line.	O	O	O	O	O	O

Appendix D

Liebowitz Social Anxiety Scale—Self-Report (LSAS-SR; e.g., Baker et al., 2002; Hope et al., 2019; Psychology Tools, n.d.)

This measure assesses the way that social phobia plays a role in your life across a variety of situations. Read each situation carefully and answer two questions about that situation. The first question asks how anxious or fearful you feel in the situation. The second question asks how often you avoid the situation. If you come across a situation that you ordinarily do not experience, imagine "what if you were faced with that situation," and then, rate the degree to which you would fear this hypothetical situation and how often you would tend to avoid it. Please base your ratings on the way that the situations have affected you in the last week. Fill out the following scale with the most suitable answer provided below.

	Fear/Anxiety				Avoidance				
	(0) None	(1) Mild	(2) Moderate	(3) Severe	(0) Never (0%)	(1) Occasionally (1-33%)	(2) Often (34-66%)	(3) Usually (67-100%)	Prefer not to answer
1. Telephoning in public.	O	O	O	O	O	O	O	O	O
2. Participating in small groups.	O	O	O	O	O	O	O	O	O
3. Eating in public places.	O	O	O	O	O	O	O	O	O
4. Drinking with others in public places.	O	O	O	O	O	O	O	O	O
5. Talking to people in authority.	O	O	O	O	O	O	O	O	O
6. Acting, performing or giving a talk in front of an audience.	O	O	O	O	O	O	O	O	O
7. Going to a party.	O	O	O	O	O	O	O	O	O
8. Working while being observed.	O	O	O	O	O	O	O	O	O
9. Writing while being observed.	O	O	O	O	O	O	O	O	O
10. Calling someone you	O	O	O	O	O	O	O	O	O

don't know very well.									
11. Talking with people you don't know very well.	O	O	O	O	O	O	O	O	O
12. Meeting strangers.	O	O	O	O	O	O	O	O	O
13. Urinating in a public bathroom.	O	O	O	O	O	O	O	O	O
14. Entering a room when others are already seated	O	O	O	O	O	O	O	O	O
15. Being the center of attention.	O	O	O	O	O	O	O	O	O
16. Speaking up at a meeting.	O	O	O	O	O	O	O	O	O
17. Taking a test.	O	O	O	O	O	O	O	O	O
18. Expressing a disagreement or disapproval to people you don't know very well.	O	O	O	O	O	O	O	O	O
19. Looking at people you don't know very well in the eyes.	O	O	O	O	O	O	O	O	O
20. Giving a report to a group.	O	O	O	O	O	O	O	O	O
21. Trying to pick up someone.	O	O	O	O	O	O	O	O	O
22. Returning goods to a store.	O	O	O	O	O	O	O	O	O
23. Giving a party.	O	O	O	O	O	O	O	O	O
24. Resisting a high pressure	O	O	O	O	O	O	O	O	O

salesperson.			

Appendix E

Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999)

For each of the following statements and/or questions, please choose the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
not a very happy person						a very happy person

O Prefer not to answer

2. Compared to most of my peers, I consider myself:

1	2	3	4	5	6	7
less happy						more happy

O Prefer not to answer

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

O Prefer not to answer

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

O Prefer not to answer

Appendix F

Satisfaction with Life Scale (SWLS; Diener et al., 1985)

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by choosing a number for that item. Please be open and honest in your responding.

7 = Strongly agree
6 = Agree
5 = Slightly agree
4 = Neither agree nor disagree
3 = Slightly disagree
2 = Disagree
1 = Strongly disagree

	(1) Strongly disagree	(2) Disagree	(3) Slightly Disagree	(4) Neither agree nor disagree	(5) Slightly agree	(6) Agree	(7) Strongly Agree	Prefer not to answer
1. In most ways my life is close to my ideal.	O	O	O	O	O	O	O	O
2. The conditions of my life are excellent.	O	O	O	O	O	O	O	O
3. I am satisfied with my life.	O	O	O	O	O	O	O	O
4. So far, I have gotten the important things I want in life.	O	O	O	O	O	O	O	O
5. If I could live my life over, I would change almost nothing.	O	O	O	O	O	O	O	O

Appendix G

Flourishing Scale (FS; Diener et al., 2010)

Below are eight statements with which you may agree or disagree. Using the 1–7 scale below, indicate your agreement with each item by indicating that response for each statement.

7 = Strongly agree
6 = Agree
5 = Slightly agree
4 = Mixed or neither agree nor disagree
3 = Slightly disagree
2 = Disagree
1 = Strongly disagree

	(1) Strongly disagree	(2) Disagree	(3) Slightly Disagree	(4) Mixed or neither agree nor disagree	(5) Slightly agree	(6) Agree	(7) Strongly Agree	Prefer not to answer
1. I lead a purposeful and meaningful life	O	O	O	O	O	O	O	O
2. My social relationships are supportive and rewarding	O	O	O	O	O	O	O	O
3. I am engaged and interested in my daily activities	O	O	O	O	O	O	O	O
4. I actively contribute to the happiness and well-being of others	O	O	O	O	O	O	O	O
5. I am competent and capable in the activities that are important to me	O	O	O	O	O	O	O	O
6. I am a good person and live a good life	O	O	O	O	O	O	O	O

7. I am optimistic about my future	O	O	O	O	O	O	O	O
8. People respect me	O	O	O	O	O	O	O	O

Appendix H

Pandemic Stress Questionnaire (PSQ; Kujawa et al., 2020)

Below is a list of events related to the pandemic that may or may not have happened to you. Please decide whether you have had each of these experiences as a result of the recent coronavirus pandemic. For each event which has happened, please decide how bad it was when it happened to you. When rating how bad each event was when it happened, please consider how much of a negative impact it had on your life, how often the event occurred, and how long it was a problem for you.

EVENTS RELATED TO THE CORONAVIRUS PANDEMIC	**Did this happen to you?**		
	Yes	No	Prefer not to answer
1. I had difficulty obtaining basic supplies because of the coronavirus pandemic (e.g., food, medicine, toilet paper).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
2. I had to move unexpectedly because of the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
3. I was unexpectedly separated from family, friends, or others close to me because of the coronavirus pandemic (e.g., due to moves or travel restrictions).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
4. I was unable to be with close family, friends, or partners because of the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
5. I had problems with my visa or the Student and Exchange Visitor Information System because of the coronavirus pandemic (e.g., unable to renew).	O	O	O

If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
6. I had to cancel travel or experienced a major disruption in travel plans because of the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
7. I had to cancel or postpone important events because of the coronavirus pandemic (e.g., events for a club, sporting events, major celebrations).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
8. I had to take on additional responsibilities caring for others (e.g., children, other family members) due to the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
9. I experienced significant financial strain due to the pandemic (e.g., due to travel, purchasing supplies, paying for housing).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
10. I temporarily or permanently lost a job or had my work hours greatly reduced due to the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
11. My workload increased substantially because of the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
12. Someone I rely on for financial support (e.g., partner, parent) temporarily or permanently lost a job or had their work hours greatly reduced because of the coronavirus pandemic.	O	O	O

If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
13. I was unable to complete important requirements for my education or professional goals due to the coronavirus pandemic (e.g., coursework, taking the SAT or GRE, thesis).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
14. I had problems with online courses and/or remote work (e.g., slow connection, no computer or internet access, major differences in time zone).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
15. I had conflicts or arguments with my partner or family members due to coronavirus (e.g., conflicts about living arrangements, shared work space, schedule expectations).	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
16. I experienced racism or discrimination due to the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
17. I had symptoms of COVID-19 (e.g., cough, fever, trouble breathing) but was unable to get tested.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
18. I was tested for COVID-19.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
19. I was diagnosed with COVID-19	O	O	O

If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
20. I had difficulty accessing or paying for physical or mental health care for myself or my dependents due to the coronavirus pandemic.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
21. I was quarantined for 2 weeks or longer due to possible exposure to COVID-19 or due to international travel.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
22. Someone close to me had symptoms of COVID-19 (e.g., cough, fever, trouble breathing) but was unable to get tested.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
23. Someone close to me was diagnosed with COVID-19.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
24. Someone close to me was quarantined for 2 weeks or longer due to possible exposure to COVID-19 or due to international travel.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			
25. Someone close to me died from COVID-19.	O	O	O
If yes: How bad was this event? O *1 - not at all bad* O *2 - slightly bad* O *3 - somewhat bad* O *4 - very bad* O *5 – extremely bad*			

Appendix I

The Adaptability Scale (Martin et al., 2012; 2013); Modified for COVID-19 (Besser, Flett, & Zeigler-Hill, 2022).

Please complete the following items with reference to how you have been experiencing the COVID-19 situation.

	Strongly Disagree (1)	Disagree	Slightly Disagree	Mixed or Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree (7)	Prefer not to answer
1. I am able to think through a number of possible options to assist me in this new situation	O	O	O	O	O	O	O	O
2. I am able to revise the way I think about this new situation to help me through it	O	O	O	O	O	O	O	O
3. I am able to adjust my thinking or expectations to assist me in this new situation if necessary	O	O	O	O	O	O	O	O
4. I am able to seek out new information, helpful people, or useful resources to	O	O	O	O	O	O	O	O

effectively deal with this new situation								
5. In this uncertain situation, I am able to develop new ways of going about things (eg. a different way of asking questions or finding information) to help me through	O	O	O	O	O	O	O	O
6. To assist me in this new situation, I am able to change the way I do things if necessary	O	O	O	O	O	O	O	O
7. I am able to reduce negative emotions (eg. fear) to help me deal with this uncertain situation	O	O	O	O	O	O	O	O
8. When uncertainty arises in this situation, I am able to minimize frustration or irritation so I can deal with it best	O	O	O	O	O	O	O	O
9. To help me through this new	O	O	O	O	O	O	O	O

situation, I am able to draw on positive feelings and emotions (eg. enjoyment, satisfaction)	

Appendix J

Consent Forms

PSYC 1010 Consent Form

Study Name: How Relationships and Emotions in Social Situations Influence Well-being

Researchers: Dr. Jennine S. Rawana 131 BSB rawana@yorku.ca
Paolina Onorato 133D BSB onoratop@yorku.ca

Purpose of the Research: The purpose of this research is to investigate how different individuals regulate their emotions by using other people to do so and how this can impact the everyday life of university students.

What You Will Be Asked to Do in the Research: This study will be conducted online and will ask you various questions related to managing emotions, any experience of anxiety, general well-being, and questions related to the COVID-19 pandemic. In addition, you will be asked about your demographic information. This study will take approximately 20-30 minutes to complete, and you will be eligible to receive 0.5 PSYC 1010 course credit.

Risks and Discomforts: There are no serious foreseeable risks involved with participating in the current study. Some people may find answering questions related to personal issues such as emotions and feelings to be uncomfortable or distressing. If you do become distressed, please contact the Counselling & Development Centre at York University (Phone: 416-736-5297; Location: N110 Bennett Centre for Student Services). At the end of the survey, you will also be given a list of other local counselling resources.

Benefits of the Research and Benefits to You: You may or may not benefit directly from this research. The main benefits of participating in this research include gaining credit for your PSYC 1010 course, contributing to emotion regulation research in psychology, and helping us better understand how different people manage emotions and how that can affect the well-being of university students during an ongoing pandemic.

Voluntary Participation and Withdrawal: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of the ongoing relationship you may have with the researchers or study staff, and York University either now, or in the future. If you stop participating, you will still be eligible to receive the promised pay/compensation for agreeing to be in the project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: All of your responses to the questions asked during the survey will be kept confidential and anonymous. Unless you specifically indicate your consent, your name will not appear in any report or publication of the research. Your data will be safely stored on a secure password-protected website and will be transferred to Dr. Jennine Rawana's secure research server. Only research team members will have access to this information. The data files, which

do not include identifying information will be kept indefinitely at York University. **Confidentiality will be provided to the fullest extent possible by law**. The data collected in this research project may be used –in an anonymized form– by members of the research team in subsequent research investigations exploring similar lines of inquiry. Such projects will still undergo ethics review by the HPRC, our institutional REB. Any secondary use of anonymized data by the research team will be treated with the same degree of confidentiality and anonymity as in the original research project.

The researcher(s) acknowledge that the host of the online survey (e.g., Qualtrics, Survey Monkey etc.) may automatically collect participant data without their knowledge (i.e., IP addresses.) Although this information may be provided or made accessible to the researchers, it will not be used or saved without participant's consent on the researchers' system. Further, because this project employs e-based collection techniques, data may be subject to access by third parties as a result of various security legislation now in place in many countries and thus the confidentiality and privacy of data cannot be guaranteed during web-based transmission.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact Paolina Onorato (onoratop@yorku.ca) or Dr. Jennine Rawana either by telephone at (416) 736-2100, extension 20771 or by e-mail (rawana@yorku.ca). This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights:

Please select below that you "agree" or "disagree" to participate in this study. By selecting "agree" and continuing to complete this survey online, you are providing your consent to participate in this study and are indicating that you have read this Consent Form. Thank you.

Response Options:
I agree **O** or disagree **O** to participate in the Survey component of the study.

Date:

Non-PSYC 1010 Consent Form

Study Name: How Relationships and Emotions in Social Situations Influence Well-being

Researchers: Dr. Jennine S. Rawana 131 BSB rawana@yorku.ca
Paolina Onorato 133D BSB onoratop@yorku.ca

Purpose of the Research: The purpose of this research is to investigate how different individuals regulate their emotions by using other people to do so and how this can impact the everyday life of university students.

What You Will Be Asked to Do in the Research: This study will be conducted online and will ask you various questions related to managing emotions, any experience of anxiety, general well-being, and questions related to the COVID-19 pandemic. In addition, you will be asked about your demographic information. This study will take approximately 20-30 minutes to complete, and you will be entered in a raffle to win 1 of 5 $25 Tim Horton's gift cards.

Risks and Discomforts: There are no serious foreseeable risks involved with participating in the current study. Some people may find answering questions related to personal issues such as emotions and feelings to be uncomfortable or distressing. If you do become distressed, please contact the Counselling & Development Centre at York University (Phone: 416-736-5297; Location: N110 Bennett Centre for Student Services). At the end of the survey, you will also be given a list of other local counselling resources.

Benefits of the Research and Benefits to You: You may or may not benefit directly from this research. The main benefits of participating in this research include the chance of winning a Tim Horton's gift card, contributing to emotion regulation research in psychology, and helping us better understand how different people manage emotions and how that can affect the well-being of university students during an ongoing pandemic.

Voluntary Participation and Withdrawal: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer, to stop participating, or to refuse to answer particular questions will not influence the nature of the ongoing relationship you may have with the researchers or study staff, and York University either now, or in the future. If you stop participating, you will still be eligible to receive the promised pay/compensation for agreeing to be in the project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: All of your responses to the questions asked during the survey will be kept confidential and anonymous. Unless you specifically indicate your consent, your name will not appear in any report or publication of the research. Your data will be safely stored on a secure password-protected website and will be transferred to Dr. Jennine Rawana's secure research server. Only research team members will have access to this information. The data files, which do not include identifying information will be kept indefinitely at York University. **Confidentiality will be provided to the fullest extent possible by law**. The data collected in this research project may be used –in an anonymized form– by members of the research team in

subsequent research investigations exploring similar lines of inquiry. Such projects will still undergo ethics review by the HPRC, our institutional REB. Any secondary use of anonymized data by the research team will be treated with the same degree of confidentiality and anonymity as in the original research project.

The researcher(s) acknowledge that the host of the online survey (e.g., Qualtrics, Survey Monkey etc.) may automatically collect participant data without their knowledge (i.e., IP addresses.) Although this information may be provided or made accessible to the researchers, it will not be used or saved without participant's consent on the researchers' system. Further, because this project employs e-based collection techniques, data may be subject to access by third parties as a result of various security legislation now in place in many countries and thus the confidentiality and privacy of data cannot be guaranteed during web-based transmission.

Questions About the Research? If you have questions about the research in general or about your role in the study, please feel free to contact Paolina Onorato (onoratop@yorku.ca) or Dr. Jennine Rawana either by telephone at (416) 736-2100, extension 20771 or by e-mail (rawana@yorku.ca). This research has received ethics review and approval by the Human Participants Review Sub-Committee, York University's Ethics Review Board and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights:

Please select below that you "agree" or "disagree" to participate in this study. By selecting "agree" and continuing to complete this survey online, you are providing your consent to participate in this study and are indicating that you have read this Consent Form. Thank you.

Response Options:
I agree **O** or disagree **O** to participate in the Survey component of the study.

Date:

Appendix K

Debriefing Form

Debriefing Information for Research Participants

We would like to thank you for completing our Survey study on feelings and behaviours experienced while attending university. The questions that you have answered related to feelings, your interactions with others, and coping will help us identify some common problems and strengths experienced in undergraduates. Some of the questions in this survey may have made you feel uncomfortable or distressed. If you are or anyone you know is feeling depressed or psychologically distressed, there is help available. Below is contact information for some helpful services if you are feeling psychologically depressed or distressed.

Before we end this study, we are asking you to please not talk about this study with anyone. There are many other people who have not participated in this study yet. If they hear from you or others about what the study is about, it may influence their responses. Our results may not be accurate. We hope that you will cooperate with us in this regard. Questions related to this study can be sent to onoratop@yorku.ca

If you would like to learn more about emotion regulation, please read the following articles:

Williams, W. C., Morelli, S. A., Ong, D. C., & Zaki, J. (2018). Interpersonal emotion regulation: Implications for affiliation, perceived support, relationships, and well-being. *Journal of Personality and Social Psychology*, *115*(2), 224–254. https://ezproxy.library.yorku.ca/login?url=http://search.proquest.com/docview/2035592868?pq-origsite=primo

Rawana, J. S., Flett, G. L., McPhie, M. L., Nguyen, H. T., & Norwood, S. J. (2014). Developmental trends in emotion regulation: A systematic review with implications for community mental health. *Canadian Journal of Community Mental Health, 33*, 31-44. http://ezproxy.library.yorku.ca/login?url=http://search.proquest.com/docview/1606064480?accountid=15182

Thank you.

Other Counselling Services in the GTA:

1. Toronto Psychological Services 416-531-0727 https://torontopsychologicalservices.com
2. Distress Centre of Toronto 416-408-4357 (HELP)
3. Help Line for All Youth HEYY 416-423-4399 (HEYY)
4. **Good 2 Talk (for post-secondary students)** 1-866-925-5454 http://www.good2talk.ca/

5. York University – Personal Counselling Services (PCS). Located in Counselling & Disability Services (CDS) in N110 Bennett Centre for Student Services, and can also be reached by phone at 416-736-5297 or http://pcs.info.yorku.ca/in-case-of-crisis/
6. The Freedom from Fear Foundation in Toronto is an organization established to help people with anxiety disorders. They have a network of support groups set up throughout Ontario 416-761-6006
7. Drug & Alcohol Registry of Treatment (DART)/Treatment info-line 1-800-565-8603
8. The National Eating Disorder Information Centre has a national register of private therapists, medical programs, and information 416-340-4156
9. Mood Disorders Association of Ontario 416-486-8046 OR call TOLL-FREE at 1-888-486-8236
10. A.C.C.E.S. (Accessible Community Counselling and Employment Services) Toronto: 416-921-1800 Scarborough: 416-431-5326 Mississauga: 905-361-2522
11. Family Services Association of Toronto 416-595-9230
12. For a list of more health, social, community, and/or government community resources/services, you can access it via www.211toronto.ca or you can dial 2-1-1 in Toronto 24 hours a day. This phone number is free, confidential, and the trained staff is multilingual.