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Emerging Adults and Identity Development in the Time of COVID-19

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IDENTITY DEVELOPMENT IN THE TIME OF COVID-19

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Abstract

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Emerging Adults and Identity Development in the Time of COVID-19

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  The COVID-19 pandemic severely altered the lives of people across the world. Although the social isolation and disruption wrought by the pandemic have been universal experiences, emerging adults are at a pivotal moment and are potentially uniquely affected. Emerging adulthood is a critical time for identity development and the college setting fosters an environment for identity exploration. Studies show that in emerging adulthood, turning point events (e.g., global or national tragedies, personal challenges, transitions, or any form of upheaval, such as a pandemic) that are resolved positively are connected more closely with progress in identity formation, and the importance of positive resolution of negative events appears to be unique to emerging adults. This study explored how emerging adults in college (N = 231) were processing the COVID-19 pandemic and whether identity was a factor that affected an individual's perception of the pandemic. The results of the present study support the hypotheses that an emerging adult's identity does affect their pandemic processing, as does a person's political identity, and self-reported mental health. The study revealed that pandemic processing was significantly related to students' identity, mental well-being, and political beliefs. This study informs practitioners of education, families, and students themselves about how identity affects reactions to adversity and how turning negative experiences into positive experiences can have long-term benefits on a person's sense of self well-being beyond emerging adulthood.

  Keywords: identity, student development theory, resilience, adversity, narrative identity, COVID-19, emerging adults, college, dual-cycle model, political ideology, pandemic, PHQ, well-being, exploration, commitment, Montana.

Emerging Adults and Identity Development in the Time of COVID-19

The COVID-19 pandemic severely altered the lives of people across the world. Although the social isolation and disruption wrought by the pandemic were felt by all, emerging adults are potentially uniquely impacted. Typically, the university experience is a ripe environment for identity development, yet the COVID-19 pandemic has affected the typical student experience. Thus, the current research is a timely and important investigation of the nexus of identity and the COVID-19 pandemic.

Emerging adulthood is a pivotal time for identity development and studies show that in emerging adulthood, turning point events (which could be global or national tragedies, personal challenges, or other transitions, for example) that are resolved positively are connected more closely with identity formation than those that are not resolved positively (McLean & Lilgendahl, 2008). Researchers and higher education practitioners do not know all of the potential consequences and impacts of this pandemic on emerging adults, making it difficult to address the needs of college students during and following the pandemic.

The current study explores how identity measures are related to students' processing of the pandemic. Identity is multifaceted and can include goals, beliefs, and values, that make a person who they are (Luyckx et al., 2008). The key identity measures in this study include identity measures drawn from Luyckx and colleagues' (2008) dual-cycle model which refers to a person's formation of commitments through broad-reaching exploration related to their identity (first cycle) and the subsequent evaluation of the commitment and deepening exploration of that commitment (second cycle). Further, political identity was used as an identity measure.

Because the importance of positive resolution of negative events appears to be unique to emerging adults (McLean & Lilgendahl, 2008), it is critical to dive deeper into what students

experienced during this time of upheaval. Identity commitment and exploration have been assessed through a Likert-style questionnaire of five identity dimensions. Political identity has been assessed through self-identification of political attitudes and voting tendencies. Pandemic processing was measured through an analysis of narrative responses to parse students' processing of the pandemic and reports of positive or negative effects of the pandemic on certain aspects of their sense of self, group affiliations, and relationships with others. It was expected that students who are positively processing and making meaning out of the pandemic by turning a bad situation into something good (redemption sequences) and identifying resolution of the issue (closure)[1] are likely to be more committed and demonstrate deeper, more adaptive, exploration in their identity dimensions than those who describe a good or "ok" situation that has deteriorated (contamination sequences). It was expected that pandemic processing and identity would be moderated by campus type[2], age, and year-in-school, with those on residential campuses or who are younger (freshmen) being more negatively affected by the pandemic and those who were on commuter campuses or older (seniors) being less negatively affected.

Given that adversity comes in many different forms and there is limited research on the effects of identity and pandemic response, this study draws upon previous research examining differential effects of previous crises on identity formation and well-being. The current work has potentially important implications for basic research on identity development and applications in higher education. This study provides insights into how challenging events can influence individuals' identity formation and how those in higher education can support students in the midst of and following this pandemic. Questionnaires were distributed in March and April 2021.

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[1] Closure was dropped from the study because the pandemic was ongoing at the time of survey collection.
[2] Campus type was dropped from the study because there were too few respondents from two-year campuses for a robust analysis (*n* = 3).

Defining and Exploring Identity

Identity is a complex, lifelong process that cannot be easily or universally defined. This study uses the neo-Eriksonian definition of *identity* attributed to Marcia (1966) and used by Lilgendahl (2015), McAdams (2001), and others. This definition conceptualizes identity as "an enduring theory or set of meanings that one constructs about oneself and that provides a sense of continuity, integration, and purposeful connection to the adult world" (Lilgendahl, 2015, p. 1). The term *identity*, which most often refers to ego identity (Erikson, 1968), is occasionally intertwined with definitions of personality and self (and occasionally, self-esteem) (Lilgendahl, 2015; Syed et al., 2020).

Erickson's eight life stages (Erikson, 1968) provide a foundation for this research and the identity focus of late adolescence (Erikson, 1968; McCleod, 2013). Erickson theorized that individuals experience eight developmental tasks throughout their lifespan. Of particular relevance for the current work, the task of adolescence is "development of identity or role confusion." In the time since Erickson's ground-breaking research, newer research (Arnett, 2000; Schwartz et al., 2013) suggests that developmental processes of mid-late adolescence have shifted to a new developmental period called emerging adulthood. Whether or not there is indeed a crisis, this is a developmental period that is, at least in developed countries, a time of focused identity exploration (Arnett, 2015).

Marcia (1966) expanded upon Erikson's stages in a model describing identity statuses through levels of exploration and commitment. A longitudinal study by Waterman et al. (1974) suggests increasing identity achievement during the college years. Marcia's model is still used today and is critical to the study of identity development. His model describes the four identity statuses of achievement, moratorium, foreclosure, and diffusion which are based on high or low

levels of identity exploration and commitment (Figure 1; Marcia, 1966; as cited in Arduini-Van Hoose, 2020). For example, an individual within the 'Identity Achievement' status would be high commitment and high exploration, having explored thoroughly and committed to an identity. An individual in the 'Foreclosure' status, will have committed to an identity with little exploration. An individual characterized by the 'Identity Diffusion' status would be low on commitment and low on exploration. Later, diffusion was divided into two categories of carefree and diffused diffusion wherein an individual either expresses little concern regarding their low levels of commitment and exploration (carefree) or is high in ruminative exploration and is in a more troubled state of identity development (diffused) (Luyckx et al., 2008). High exploration and low commitment are captured by the 'Moratorium' status which is often characteristic of late adolescence and emerging adulthood where an individual is actively exploring many aspects of their identity but has not yet made commitments (Luyckx et al., 2008).

Figure 1

Marcia's Identity Statuses

| | | Individual has committed to identity | |
		Yes	No
Individual has explored identity options	Yes	Identity Achievement	Moratorium
	No	Foreclosure	Identity Diffusion

Marcia's identity status theory is one of the key pillars of identity research and has been modernized to reflect the growing body of identity research. Luyckx et al. (2006, 2008) and McLean et al. (2014) have built upon Marcia's theory. Providing a more detailed approach than

Marcia, Luyckx and colleagues proposed a dual-cycle model which refers to a person's formation of commitments through broad-reaching exploration related to their identity and the subsequent evaluation of the commitment and deepening exploration of that commitment. Luyckx's approach considers commitment making, identification with commitment, exploration in breadth, exploration in depth, and ruminative exploration (added in 2008) as dimensions informing the statuses of Achievement, Foreclosure, Moratorium, Ruminative Moratorium, Carefree Diffusion, and Diffused Diffusion. In another modernization of Marcia's original model, Josselson, R. (1996) named each of the developmental trajectories including pathmakers, consolidators, guardians, and searchers.

The current work is focused on identity formation and thus takes a developmental perspective. In particular, this work is informed by a constructivist perspective, wherein the individual is considered to be an active participant in their development through their interaction with the social and physical world (e.g., Vygotsky, 1978; Piaget, 1968). Contextual factors, such as the transition to college or a pandemic, are fodder for development as individuals adapt and respond to changing contexts (Eriksen, 2006). These changing contexts influence identity.

Emerging Adulthood and Connecting to College

Moving from a broader view of identity to why it matters to explore identity formation in a college setting requires an understanding of the developmental stage of emerging adulthood. Emerging adulthood was established as a unique developmental stage to describe the period between 18–29 years (Arnett, 2000). Arnett argued that emerging adulthood is distinct from adolescence and appears to be a pivotal time for identity development and that those in college may delay many of the responsibilities of adulthood and explore in an almost limitless environment. Côte and Schwartz (2002) reasoned that this time in college, relatively free from

limitations, allows individuals to actively engage in their development, explore more broadly, and arrive more fully at their identity commitments (Luyckx et al., 2008). Lilgendahl (2015; citing Pulkkinen & Kokko, 2000) reiterates that "research has shown a normative progression toward increasing identity achievement with age from adolescence through the 30s" (p. 3). College students have long been subjects of research studies conducted on college campuses as a proxy for adults in general. It is evident that emerging adulthood is a unique and important development timeframe in its own right.

It is important to examine how the college context may influence identity development. Roughly 50% of 18 and 19 year-olds and about 40% of 20-24 year-olds enroll in college (NCES, 2014). According to Eriksen (2006), individuals need a "complex and inclusive" environment that can accommodate new ways of knowing to grow (p. 290). Eriksen draws upon Kegan's (1994) stage model in which individuals move from one capacity of mind (or "way of knowing") to another when faced with challenge in a supportive environment (Eriksen, 2006). According to Eriksen, when a person's environment relates to a current "way of knowing" while also presenting the "next potential way of knowing," individuals grow (citing McAuliffe & Eriksen, 1999). College arguably provides the requisite "complex and inclusive" environment for growth.

Another type of environment that may promote development is a stable social environment, which many find in college. Lilgendahl (2015) and Roberts et al. (2003) discuss the role of the social environment as a stabilizing force as emerging adults develop their identities and build these identities into their lives. Lilgendahl argues that the social environment is a stabilizing force for emerging (and persisting) identity traits suggesting that individuals will make choices (e.g., where they go to college or what major or career they choose) that reinforce their identities. For development, college could be either stabilizing or disruptive, both of which

can promote growth: the college years could offer a stabilizing social environment, like

Lilgendahl argues, or could serve as a disruptive force or a challenge that prompts further

development, as Eriksen postulates.

Given the interest in emerging adults in an academic setting, educational theory also

provides insight into identity development in emerging adulthood within educational contexts. In

particular, Perry (1970, 1999) posits through his Student Development Theory that individuals

progress through nine basic positions, beginning with dualism, where each question has only one

correct answer and two possible options, to the much more complex commitment within

relativism, which states that there may not be a correct answer (Karlson, 2014). These positions

are neither static nor mutually exclusive (i.e., an individual may not be entirely in one position at

a time). This theory is relevant to this study because it offers a framework for the development of

knowledge alongside the development of identity which may affect how someone processes their

experience in a given context, for example, a pandemic.

Many of these models are presented as linear and hierarchical, but important caveats have

been made given that individuals are not always in one stage and one stage alone (Perry, 1970).

Other developmental theorists have discussed the important role "regression" may play in

forward progress (e.g., Turiel, 1977; Eriksen, 2006). In many cases, regressing to an earlier stage

or position has demonstrated that it can lead to progressive change as an individual reconciles

rejection of their current state and development and advancement to their new understanding

(Turiel, 1977). Regression in identity development was not explored in this study but would be

interesting for future studies on identity and adversity.

Adversity and Identity Research

Important historical events, like the Great Depression, World War II, 9/11, and even previous pandemics like HIV/AIDS and Ebola, provide important context for how human development has been affected by crises. Each of these past examples was framed and shaped by the sociopolitical contexts surrounding them and the COVID-19 pandemic is no different.

As discussed, emerging adulthood is a pivotal time for identity development in ordinary times, if there are such times that can be described as ordinary. But what happens to identity development in times of extreme uncertainty, stress, or unrest? Elder (1974) stated that "crisis situations are a fruitful point at which to study change since they challenge customary interpretations of reality and undermine established routines. The disruption of habitual ways of life produces new stimuli which elicit attention and arouse consciousness of self and others" (p. 10). Bronfenbrenner's Ecological Systems theory (Bronfenbrenner, 1994; see Figure 2; Guy-Evans, 2020) states that human development is a result of a combination of person, environment, process, context, and time. Elder (1974), who conducted longitudinal research on children in Oakland during the Great Depression and World War II, argues that "crises do not reside within the individual or situation but rather arise from interaction between an individual and a particular situation; they emerge at the interface of individual and social situation, of group and its social environment" (p. 10). Environmental impacts are demonstrated, for example, in Elder's finding that subjects who were teenagers during their families' economic depression showed a more intense motivation to achieve and stronger career goals, than those who were younger at the time or whose families did not experience financial hardships.

Figure 2

Bronfenbrenner's Ecological Systems Theory
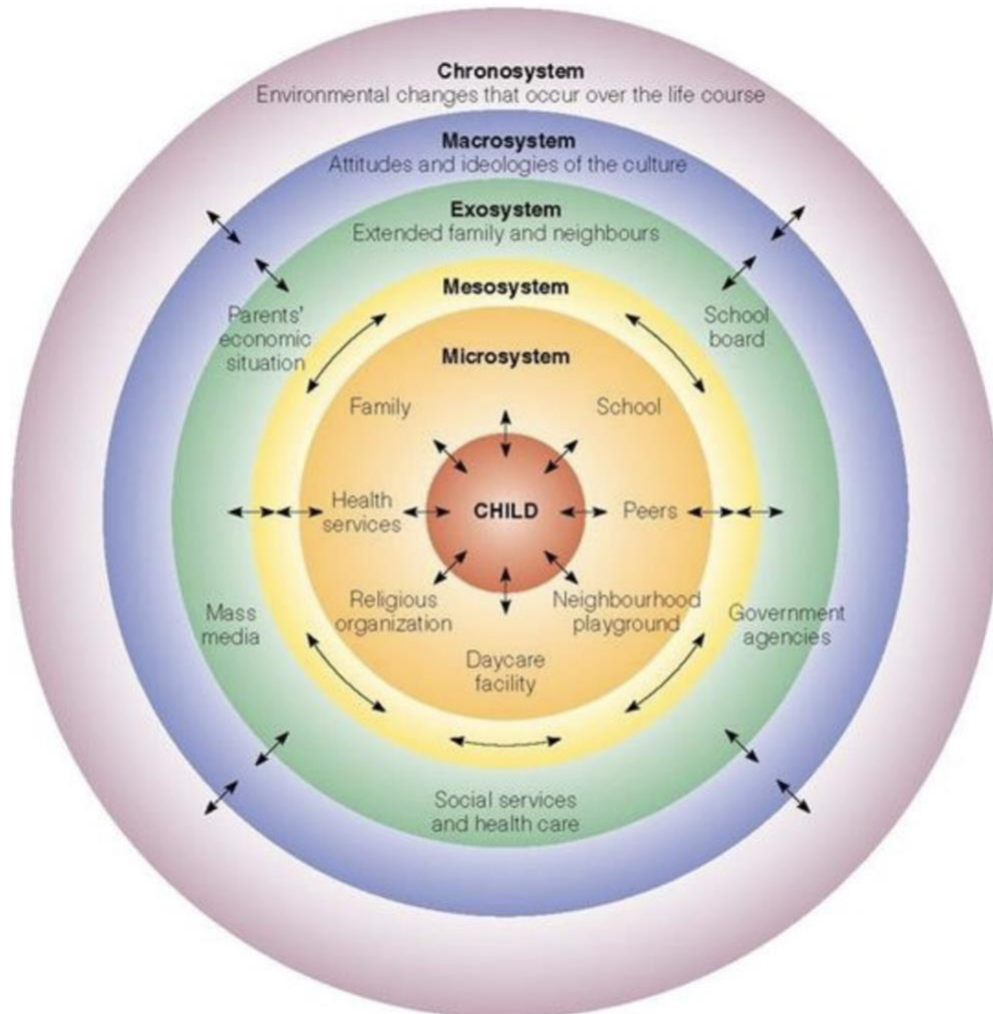
The COVID-19 pandemic, "is more than a health crisis; it is an economic crisis, a humanitarian crisis, a security crisis, and a human rights crisis" (United Nations, 2020, "UN Response to COVID-19" section, para. 1). Researchers have a unique opportunity to delve into questions of identity development for emerging adults during the COVID-19 pandemic, especially given the disruption experienced. Developmental psychology provides a particularly inspirational springboard for studies of resilience. Eriksen (2006) states (citing Fitzsimons &

Fuller, 2002; Myers et al., 2000), "inherent in a developmental perspective is the understanding that people have the capacity to move forward, to change, to adapt, to heal" (p. 290).

Some may argue that in times of turmoil, there is less explicit focus on identity development. Culture, economic security, and context play a large role in how and to what extent there is a focus on identity development as an end goal (Arnett, 2015). Arnett provides historical and cultural examples of instances when priorities have been more focused on safety, food, and reproduction. In these times, there is less focus on identity development for identity development's sake because there are, arguably, more urgent needs to be met; that doesn't mean, however, that people are not still shaped by their relationships, environments, circumstances, and ability to make meaning.

While there are many different ways to assess change during difficult circumstances, the narrative identity approach has proven quite effective in measuring the outcomes of such situations, especially when they present an opportunity to reflect on a high point, low point, and a turning point (McLean & Pratt, 2006). According to Lilgendahl (2015), "several new short-term longitudinal studies provide vivid examples of how the narration of various kinds of significant, transformative life experiences – e.g., quitting drinking or going through therapy -- may facilitate patterns of behavior and personality change" (p. 4). New experiences and especially those that include meaning-making may be critical to identity development (McLean & Pasupathi, 2012; Cox & McAdams, 2014).

Lilgendahl (2015) discusses the importance of including meaning-making as an important component of identity formation along with exploration and commitment. Meaning-making is a term that is often used in the narrative approach to identity and describes how people make sense of events, experiences, perspectives, and more. Previous studies exploring the narrative approach

and identity formation have found the two to be complementary and potentially predictive of each other (McLean & Pasupathi, 2012; van Doeselaar et al., 2020). McLean and Pasupathi (2012) found that autobiographical reasoning can inform positive choices regarding identity. For example, the retelling of a life story may reveal an aspect of one's self, such as their propensity for generosity, and subsequently, the person may seek to deepen their commitment to generosity as part of their identity.

Making meaning from events and connecting events to the development of the self is a key tenet of the narrative identity approach (Lilgendahl, 2015). This appears to be even more critical in circumstances where the outcome of the reflection may or may not end positively, such as a crisis or negative event. In emerging adulthood, turning point events that are resolved positively are connected more closely with identity formation than those that are not resolved positively (McLean & Lilgendahl, 2008). The impact of positive resolution of negative events appears to be unique to emerging adults. For the COVID-19 pandemic, this finding lends some urgency to identifying how emerging adults are processing these events to minimize the negative impacts of this prolonged global crisis. As Lilgendahl (2015) states, "for emerging adults, being able to positively resolve a negative experience may benefit well-being through its positive and perhaps protective impact on the formation of identity commitments" (p. 7).

Due to the potentially destabilizing effects of negative events, it is important to find meaning in negative experiences (e.g., Adler & Poulin, 2009; Janoff-Bulman, 1992; Taylor, 1991; Wong & Fry, 1998). Adler and Poulin (2009) explored the well-being of individuals based on responses to questions about their experiences of the terrorist attacks of September 11, 2001. According to Adler and Poulin (2009), "individuals frequently report perceiving benefits or personal growth as the result of highly stressful events" (p. 905). They found that those who used

high levels of redemption and closure language experienced lower levels of distress and better psychological well-being. For example, those who could "retrospectively describe significant events such as the [September 11] terrorist attacks with a sense that they are now over and do not exert continued influence is positively related to psychological health" (Adler & Poulin, 2009, p. 923). Although this finding does not relate directly to identity formation, it highlights the ability to minimize the deleterious effects of negative events on individuals, and in some cases gain closure in the years that follow (e.g., McAdams & McLean, 2013; Pals, 2006; Lilgendahl, 2015).

Political Identity and Pandemics

A factor that has become increasingly salient two years into the COVID-19 pandemic is the role of politics on individuals' experiences. In many ways, the experience of conservatives in the COVID-19 pandemic has been counter-intuitive. Conservatives have historically displayed a stronger disgust sensitivity and disease threat (Conway et al., 2021: Liuzza et al., 2018). This was particularly evident in the conservative responses to the HIV/AIDS pandemic in the 1980s and early 1990s and again during the Ebola epidemic in 2014 (Beall, Hofer, & Schaller, 2016). On the whole, conservatives have appeared less concerned by the COVID-19 pandemic and given that this behavior runs counter to previous findings, researchers have explored reasons for this shift. It appears that political reasons are the strongest motivator for the laissez-faire attitude toward COVID-19 (Conway et al., 2021). Conway and colleagues found that political conservativism played a less significant role in affecting a person's experience with the COVID-19 pandemic if they had direct experience with the disease. This is important because it suggests a two-tiered response to perceptions of the COVID-19 pandemic, first, a political perception, followed by an experiential perception (Conway et al., 2021).

Pandemics and epidemics can also shift voting tendencies. During the Ebola epidemic, in Republican states, political conservatism was reinforced in the midterm elections of November, 2014, and in Democratic states, the status quo was favored (Beall, Hofer, & Schaller, 2016). Interestingly, at least at the federal level, neither of these trends was seen in the 2020 General Election. There was a liberal shift in both the presidency and in Congress. At the state and local level, however, there was a conservative shift, perhaps brought about by the COVID-19 pandemic and accompanying restrictions.

Identity Measures

Identifying a single identity measure that captures all the complexities of individuals' identities is challenging, if not impossible. As Abes et al. (2007) articulate, citing McCall (2005), individuals are often in many different areas of development at a given time, thus finding a measure that captures multiple locations at one time is difficult to do. Even Marcia and Kroger (2011), state that measures of identity status are sometimes oversimplified for efficiency and do not allow for in-depth exploration into a person's identity development. For this reason, it is important to include a standardized measure of identity status, as well as an avenue for narrative responses. In Table 1, there are several identity measures that were considered for inclusion in this study to assess identity and identity development.

One of the more comprehensive measures of identity is the Dimensions of Identity Development Scale (DIDS) (Luyckx et al., 2008). The DIDS combines elements of several identity measures seen in Table 1. DIDS questions are focused on future plans since emerging adulthood is a time for planning for the future. The identity dimensions explored in the DIDS are commitment making, identification with commitment, exploration in breadth, exploration in depth, and ruminative exploration. The high exploration and low commitment that may

characterize the college experience, particularly early-on, is described as moratorium and was once "assumed to represent the hallmark of the successful transition to adulthood" (Luyckx et al., 2008, p. 60). But too much of a good thing can pose challenges; thus, Luyckx and colleagues (2008) added the dimension of ruminative exploration to the earlier model by Luyckx et al. (2006) to capture exploration that can contribute to a state of prolonged moratorium that becomes problematic to a person's continued development. Luyckx et al. (2006) found positive outcomes for college students with increased commitment making and identification with commitment levels and more negative outcomes for individuals who showed decreases in commitment and increases in exploration in breadth.

Table 1. *Select Measures of Identity*

Identity Measure	Attribution
Dellas Identity Status Inventory—Occupation Scale (DISI-O)	Dellas & Jernigan (1981)
Extended Objective Measure of Ego-Identity Status (EOM-EIS)	Bennion & Adams (1986)
Utrecht-Groningen Identity Development Scale (U-GIDS)	Meeus (1996)
Utrecht-Management of Identity Commitments Scale (U-MICS)	Crocetti, Rubini, & Meeus (2008)
Dimensions of Identity Development Scale (DIDS)	Luyckx et al. (2006)
Aspects of Identity Questionnaire-IV (AIQ-IV)	Cheek & Briggs (2013)
Political Ideology (Political Identity)	Conway et al. (2021)

To complement the findings from the DIDS, the current study employed the narrative identity approach to address the limitations of quantitative surveys seeking to describe identity, and is particularly important for emerging adults (Arnett, 2015). McAdams (1985) attests that narrative identity emerges in late adolescence and emerging adulthood, as part of the construction of an autobiographical story. Habermas and Bluck (2000) further elaborate that causation and thematic coherence in personal narratives also emerge in late adolescence. Other researchers have combined the narrative and survey approaches when studying identity. For example, Adler and Poulin (2009) in their exploration of resilience after September 11, 2001, used both a Likert-type questionnaire and narrative responses. Indeed, recent work examining the association between autobiographical narrative and the DIDS found weak, albeit significant associations, which suggest that narrative and questionnaire approaches may be tapping different, yet complementary, aspects of identity (van Doeselaar et al., 2020). Thus, combined approaches may offer a more holistic approach to studying identity development. Further, Adler and Poulin (2009), and Luyckx and others (2008) have included psychological well-being in their analyses of identity and narrative experience. This study utilized a similar approach.

Current Study

This study connects these themes of identity commitment and exploration with the impacts of the COVID-19 pandemic. Previous studies by van Doeselaar et al. (2020), McLean and Pasupathi (2012), and others have shown directional effects of a coherent life story informing identity commitment and have suggested a reciprocal relationship. This study assessed the predictive effects of identity in the dual-cycle model on narrative accounts of redemption, contamination, and closure related to the COVID-19 pandemic among college students. This study was guided by the following questions. First, does an individual's identity predict their

processing of the pandemic (e.g., as positive or negative)? Second, does age (or year in college) moderate the potential relation between identity dimensions and pandemic processing? Third, are there differential effects on students who attend a residential versus commuter campus?[3] Fourth, is well-being related to pandemic processing? Finally, is there a relation between political ideology, identity, and pandemic processing?

Pandemic processing was assessed through three narrative responses and a questionnaire, and identity was assessed via the DIDS (Luyckx et al., 2008) and political identity measure (Conway et al., 2021). Further, to assess additional factors that may affect their identity formation, students were asked to identify other significant personal, societal, or global events (in addition to the pandemic) over the last year.

Regarding the first question, it was predicted that individuals who are high in commitment dimensions and adaptive exploration (exploration in depth and exploration in breadth) would use language associated with redemption as it relates to the COVID-19 pandemic at higher rates than those with low levels or those who are high in less adaptive exploration (ruminative exploration). It was expected that these individuals would express lower levels of commitment. It was expected that participants with high closure would also exhibit high commitment and high adaptive exploration dimensions.

Regarding the second question, building on the finding that autobiographical reasoning is positively associated with commitment making, identification with commitment, and adaptive exploration (McLean & Pasupathi, 2012), it was predicted that younger college students would use contamination sequences (good to bad) related to the pandemic because they are more likely to demonstrate lower levels of commitment and higher levels of exploration.

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[3] This question was not reviewed in the analyses due to a lack of participation from students at two-year campuses.

Regarding the third question, differences across types of campuses (residential vs. commuter) were expected but were moot because there were not enough respondents to complete analyses by campus.

For the fourth question, it was expected that participants with better well-being would be more likely to have redemption sequences in their narratives and would report more positive impacts of the pandemic.

For the fifth question, it was expected that there would be differences between liberal and conservative respondents in terms of pandemic processing with conservative respondents being less negatively impacted, but no differences on the DIDS dimensions or well-being were predicted.

Alternately, it could be hypothesized that those at more committed stages of identity formation (potentially, seniors), may be more likely to demonstrate contamination in their narratives due to the upheaval of the pandemic on their plans than those with lower levels of commitment and higher levels of exploration (potentially, freshmen). If this were the case, students who are more deeply committed to their major (say, Theatre), for example, may be more disrupted by the changes to the job market (limitations on live theatre due to COVID-19) than a student who has several years to go before graduation and would likely enter a different professional environment. In contrast, older students who are higher in ruminative exploration may also utilize contamination sequences at a higher rate than their peers with higher levels of adaptive exploration (in depth and in breadth).

In addition to the above hypotheses, this study explored how participants' self-reports of their sense of self, social life, relationships, or group affiliations and concerns about the future (see Appendix D) were reflected in their narratives of the pandemic's impacts and if they were

related to their identity exploration and commitment dimensions. Early research suggests differences in perceptions of the pandemic based on political affiliation, which may be reflected in narrative responses (Conway et al., 2021).

This research has important practical implications for university administrators and student support professionals. This research could establish identity formation measures as predictive tools for identifying students most at risk in future crises or disruptions. In particular, this study provides insight into how the COVID-19 pandemic affected students, and what universities can do to better support their students' development and identity formation in this tumultuous time, in the years that follow, and in other times of crisis.

Method

Participants

The sample included 231 emerging adults[4] who attended four-year University of Montana campuses (66.7% women, 27.7% men, 5.0% gender queer or gender non-conforming, and 0.7% questioning) ranging in age from 18-24 years-old ($M = 20.29$, $SD = 1.36$). Participants (67.1%) reported their ethnicity as White European (86.5%), more than one ethnicity (9.2%), other ethnicities (1.4%; e.g., Ashkenazi Jewish or Irish), American Indian/Alaskan Native (0.7%), Latin/Central/South American (0.7%), Asian (1.4%). Participants were freshmen (22.5%), sophomores (27.3%), juniors (23.4%), and seniors (26.8%), representing graduation years 2021 (24.4%), 2022 (24.9%), 2023 (25.8%), 2024 (21.8%), 2025 (1.8%), and 2026 (0.9%).

Participants included 17.7% first-generation college students and 1.4% active-duty military or veterans. Participants reported their living arrangements which included living on

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[4] Significant differences were found between emerging adults (18-24 years) and adults (25+ years). Thus, in conjunction with the theoretical justification that emerging adults are a unique developmental age group, the decision was made to exclude adults (25+) to control for differences by age and to focus exclusively on emerging adults.

campus with a roommate (14.7%) and without a roommate (15.2%), living in non-residence hall

campus housing (7.8%), living off campus because of the COVID-19 pandemic (6.1%), and

living off campus regardless of the pandemic (56.3%). Participants were asked their families'

income as a marker of socioeconomic status with the majority reporting a family income

between \$80,000 and \$99,000 ($n = 137$, range $= < 20,000 - > 200,000$). Students attended three

Montana institutions of higher education including University of Montana-Missoula (74.0%),

University of Montana-Western (21.2%), and Montana Technical University (4.8%).

An additional 55 respondents were excluded because they were 25 years-of-age or older

($n = 27$), attended a two-year college ($n = 3$), or consented to the survey but did not respond to

the questions ($n = 25$)[5]. The study was approved by the University of Montana Institutional

Review Board in early spring 2021. Participants provided written consent and were entered into

a drawing for ten gift cards. These data were collected between March 2021 and May 2021.

Measures and Procedure

UM undergraduates were invited via email to complete an anonymous online Qualtrics

survey distributed by student affairs officials, student government, social media, and faculty.

Across all measures and questionnaires, participants were allowed to skip any question they did

not wish to answer. The survey was comprised of six ordered components (see Appendices A-F)

for complete measures).

Campus Experience Questionnaire

Participants were asked to identify their UM campus, year in college, graduation year,

age, and course modalities for Fall 2020 and Spring 2021.

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[5] While the study was initially interested in two- and four-year institutions, there were only three participants from Missoula College and they were dropped from the analysis. Helena College is also in the University of Montana System, but administrators declined to circulate on campus, thus there were no respondents from Helena College.

Dimensions of Identity Development Scale (DIDS)

The DIDS (Luyckx et al., 2008) is a 25-item measure of ordered questions to assess student identity formation based on five identity dimensions. Participants responded to the individual DIDS items on a 5-point scale where 1 = 'Strongly disagree' and 5 = 'Strongly agree'. Sample items include, "I decided on the direction I want to follow in life" (commitment making); "Plans for the future offer me a sense of security" (identification with commitment); "I think about the direction I want to take in my life" (exploration in breadth); "I think about the future plans I have made" (exploration in depth); and "I keep looking for the direction I want to take in my life" (ruminative exploration). The full survey can be found in Appendix C. Participants' scores on each dimension were computed by averaging their responses across the items comprising that dimension.

COVID-19 and Identity Narrative

Participants were asked to complete three narrative prompts to the following questions in as many or as few words as they wanted: 1) Think about a positive experience (single event) during the pandemic that evokes a particularly strong feeling. Please describe that experience in detail including what happened and when. Make sure that this is a particular and specific incident (particular time and particular place). Explain why this event was important or meaningful to you. Additionally, describe if/how the event changed how you think about yourself and/or who you want to become. 2) Think about a negative experience (single event) during the pandemic that evokes a particularly strong feeling. Please describe that experience in detail including what happened and when. Make sure that this is a particular and specific incident (particular time and particular place). Explain why this event was important or meaningful to you. Additionally, describe if/how the event changed how you think about yourself and/or who you want to

become. 3) Reflecting on the past 12 months, please list (in order of importance) the pandemic and up to three other events (from personal to global) that had a significant influence on you.

COVID-19 Processing and Identity Questionnaire

This questionnaire was comprised of five questions to capture respondents' sense of where the pandemic had the greatest positive or negative effects on their lives. The questions were based on a distilled version of the Aspects of Identity Questionnaire-IV (AIQ-IV; Briggs & Cheek, 2013), a 45-item measure of identity that explores personal identity orientation, relational identity orientation, social identity orientation, and collective identity orientation. This questionnaire (see Appendix D) assessed the pandemic's effects on participants' sense of self (personal identity), relationships with others (relational identity), social life (social identity), or group affiliations (collective identity), and directly asked their perception of the effects of COVID-19 on their future.

Patient Health Questionnaire

Respondents were asked to complete the Patient Health Questionnaire-8 (PHQ-8) in order to account for well-being as a possible influence on identity or pandemic processing. The PHQ-8 is a valid and reliable measure for diagnosing and identifying the severity of current major depression (Kroenke et al., 2019). The PHQ-8 asks individuals to indicate the frequency of eight problems over the previous two weeks, and responses include 'not at all' (0), 'several days' (1), 'more than half the days' (2), or 'nearly every day' (3). Scores are computed by summing responses across the eight items. See Appendix E for the complete measure.

Political Identity

Respondents reported their voting tendencies and political attitudes on two scales from one to nine, where one is most liberal/Democrat and nine is most conservative/Republican.

These questions were administered as part of the Demographic Questionnaire, described below. Previous research has found these two items to be highly correlated, and thus are combined to form a single political identity score (Conway et al., 2021).

Demographic Questionnaire

In the demographic questionnaire, participants were asked for demographic information, including gender identity, and ethnicity. See Appendix E for the complete list of questions.

Data Validation, Anonymous Identification, and Incentives

Data Validation

A compliance check question (e.g., "For this question, please respond with 'somewhat agree'.") was included once during the measure administration to assess participants' compliance with the instructions to read and respond to each question. No participants answered the question incorrectly.

Unique Anonymous Identification

To identify and remove duplicates, participants were asked to create an identification key based on (a) the first three letters of their first name, (b) first three letters of their street name, and (c) final three numbers of their student identification number. No duplicates were found. The identification key creates a method of linking data for a potential follow-up study without identifying the individual.

Enrollment in Incentive Drawing

At the conclusion of the survey, participants were automatically redirected to a separate optional Qualtrics form to enter their email addresses for a drawing for one of ten $50 gift cards. Email addresses were not connected to participants' responses and are stored separately. All identifying information will be destroyed after five years.

Results

We first report the descriptive results of the main variable measures, followed by analyses of the relation between identity and pandemic processing. No differences were found for the variables for first-generation students or graduation years; thus, these variables were not considered in the main analyses (all ps > .041, with Bonferroni-corrected alphas of .025 and .008, respectively). Age differences were tested on all dependent variables and are reported where found. Differences were found based on military connections and are reported below, but given the limited number of respondents, military status was not included in the main analyses. In the two cases where significant differences were found (for campus and gender), those differences are reported and are controlled for in the main analyses.

Dimensions of Identity Development

Participants' scores on the DIDS dimensions were computed by averaging their scores on the five items for commitment making ($\alpha = 0.90$), exploration in breadth ($\alpha = 0.84$), ruminative exploration ($\alpha = 0.86$), identification with commitment ($\alpha = 0.88$), and exploration in depth ($\alpha = 0.52$). See Table 2 for descriptives. There was a significant difference between campuses in the omnibus ANOVA for commitment making (DIDS dimension), $F(2, 228) = 7.116$, $p = .001$, $\eta^2 = .059$, 95% CI [0.011, 0.121]. Post hoc analyses indicated a significant difference between University of Montana-Missoula ($n = 171$, $M = 3.82$, $SD = .78$) and University of Montana-Western ($n = 49$, $M = 4.22$, $SD = .83$), Scheffé, $p = .008$, 95% CI [-0.7191, -0.0878] with a Bonferroni-corrected alpha of $p < .017$, such that UM-Western students were more likely to agree with statements related to commitment making than were students at UM-Missoula. Significant differences were also found for DIDS ruminative exploration and campus, however

Table 2

Descriptive Statistics of Main Variables

	N	Min.	Max.	Mean	Std. Dev.
Dimensions of Identity Development Scale (DIDS)					
Commitment Making	231	1	5	3.94	0.81
Exploration in Breadth	231	1	5	4.05	0.69
Ruminative Exploration	231	1	5	3.12	0.95
Identification with Commitment	231	1.6	5	3.77	0.77
Exploration in Depth	231	2.4	5	3.80	0.56
Political Identity	141	1	9	3.89	2.45
Patient Health Questionnaire (PHQ-8)	141	0	24	9.04	6.19
COVID-19 Processing and Identity Questionnaire					
Future Plans	143	1	5	3.07	1.25
Sense of Self	143	1	5	3.42	0.96
Relationships with Others	142	1	5	3.42	1.09
Social Life	143	1	5	3.99	1.01
Group Affiliations	143	1	5	3.87	0.93
Mean Score	142	2	5	3.52	0.70
Identity Narratives					
Positive Narrative					
Redemption (Total)	135	0	4	1.44	0.94
Redemption (unelaborated)	134	0	1	0.82	0.39
Agency	134	0	1	0.37	0.49
Communion	134	0	1	0.24	0.43
Ultimate concerns	134	0	1	0.02	0.15
Contamination	134	0	1	0.05	0.22
Negative Narrative					
Redemption (Total)	120	0	3	0.66	0.80
Redemption (unelaborated)	115	0	1	0.50	0.50
Agency	116	0	1	0.16	0.36
Communion	116	0	1	0.05	0.22
Ultimate concerns	135	0	0	0.00	0.00
Contamination	136	0	1	0.36	0.48

these differences were not evident in post hoc analyses, (all ps > .039, Bonferroni-corrected alpha of $p < .017$). No other significant differences were found.

Political Identity

Participants' responses to the voting tendency and political ideology questions were highly correlated ($r = .92$, $p < .001$). Consistent with previous research (Conway et al., 2021), a 'political identity' score was computed by averaging participants' responses to the two questions. As reported in Table 2, the mean political identity score was 3.89 ($SD = 2.45$), indicating the sample overall was slightly more progressive/Democratic (a score of 5 was the midpoint).

A significant difference was found between the three campuses for political identity, $F(2, 138) = 18.090$, $p < .001$, $\eta^2 = .208$, 95% CI [0.094, 0.313]. Post hoc analyses revealed the omnibus difference was driven by a significant difference between UM-Missoula ($n = 101$, $M = 3.20$, $SD = 2.08$) and UM-Western ($n = 31$, $M = 5.79$, $SD = 2.70$), Scheffé, $p < .001$, 95% CI [-3.71, -1.47] with a Bonferroni-corrected alpha of $p < .017$. This reflects stronger conservative identity at UM-Western than UM-Missoula. There was also a significant difference between men ($n = 39$, $M = 4.65$, $SD = 2.29$) and gender queer or gender non-conforming ($n = 7$, $M = 1.71$, $SD = 0.81$) participants for political identity, Scheffé, $p = .013$, 95% CI [0.52, 5.36] with a Bonferroni-corrected alpha of $p < .017$. Participants identifying as gender queer or gender non-conforming were more liberal than those identifying as men.

Well-Being

Well-being was computed by summing scores across the eight PHQ-8 items ($n = 141$, $M = 9.04$, $SD = 6.185$). Participants were further categorized in one of three categories for risk of depression based on their scores (see Table 3), indicating that nearly 40% of the sample indicated moderate to severe depressive symptoms.

Table 3

Frequency of Depressive Symptom Categories (PHQ-8)

	f	%
No to mild depressive level (0-9)	97	60.2
Moderate depressive symptoms (10-14)	36	22.4
Severe depressive symptoms (15-24)	28	17.4
Total	161	100

Pandemic Processing Questionnaire

This questionnaire assessed the pandemic's effects on participants' sense of self (personal identity), relationships with others (relational identity), social life (social identity), or group affiliations (collective identity), and directly asked their perception of the effects of COVID-19 on their future. The Cronbach's alpha for these five items was 0.684, which is acceptable (Cortina, 1993), thus the items were averaged to form a single combined pandemic processing quantitative score ($M = 3.52$, $SD = 0.70$; Table 2).

Through an independent samples *t*-test, preliminary analyses indicated significant differences between active duty military and non-military affiliated individuals on pandemic impacts on sense of self (active duty military: $n = 2$, $M = 1.50$, $SD = .707$ and non-military: $n = 139$, $M = 3.27$, $SD = .945$), $t(139) = -2.629$, $p = .010$, Cohen's $d = -1.873$, 95% CI [-3.282, -0.453] and active duty military and non-military affiliated individuals on pandemic impacts on the pandemic processing mean measure (active duty military: $n = 2$, $M = 2.3$, $SD = .141$ and non-military: $n = 138$, $M = 3.5$, $SD = .689$), $t(138) = -2.520$, $p = .013$, Cohen's $d = -1.795$, 95% CI [-3.203, -0.380]. This means that active duty military reported less negative impacts of the pandemic than non-military affiliated individuals. No other significant differences were found.

Since there were only two active duty military respondents in the sample, military status was not included as a co-variate in subsequent analyses.

For campus, questionnaire responses on close personal relationships, significant omnibus ANOVA findings did not hold in post hoc analyses, ps > .039 (Bonferroni-corrected alpha of p < .017). No other significant differences were found.

Pandemic Processing Narratives

Participants identified the most significant events in their lives over the preceding 12 months. As reported in Figure 3, the pandemic was the top-ranked event among respondents (47%), followed by family and relationships (17%), and non-COVID health issues and loss (9%).

Figure 3

Participant-reported most impactful event from March 2020 to March 2021
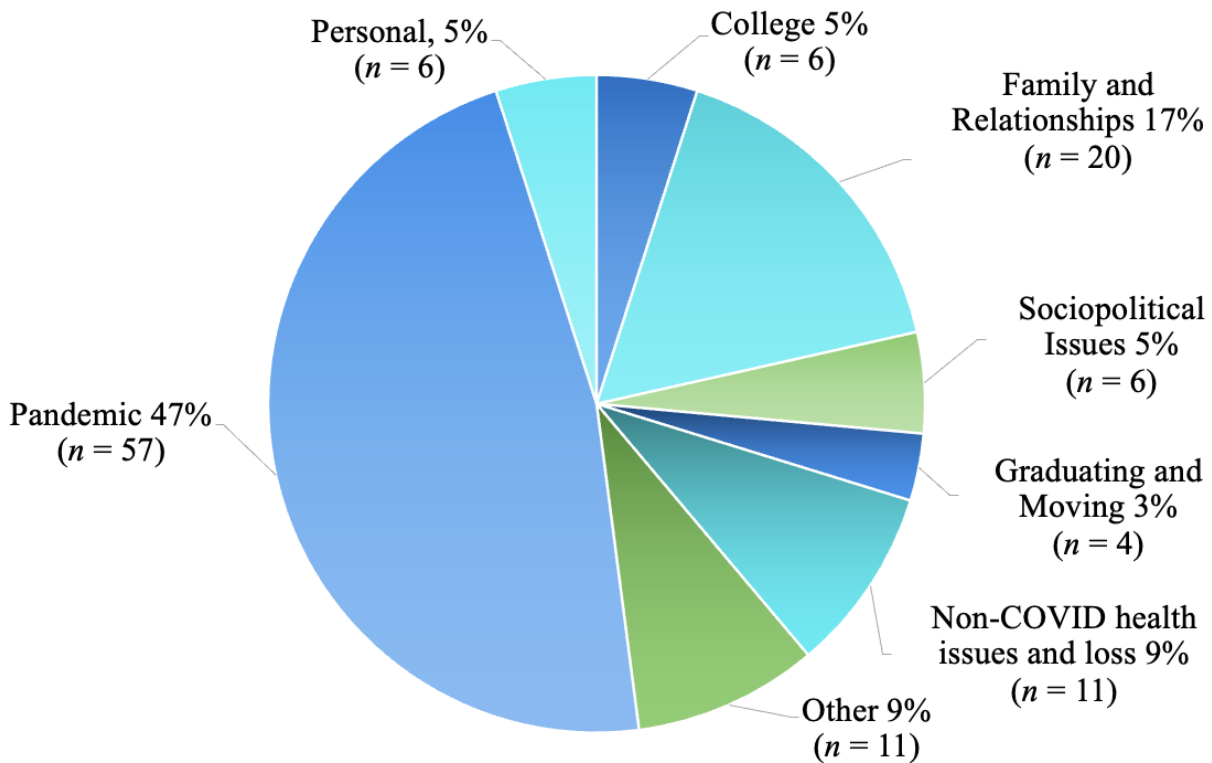
Narrative responses to the positive and negative prompts were coded by a researcher trained in the methodology and coding systems—Coding System for Redemption Sequences (McAdams et al., 2001) and Coding System for Contamination Sequences (McAdams et al., 2001). A second coder independently re-coded a portion of the data (25%) to assess the reliability of the coding system. Inter-rater reliability was calculated using Cohen's kappa ($\kappa = .72$) indicating moderate reliability (where $\kappa = .60$-$.79$). Agreement was 88.6% between coders. Where there were disagreements, the official coder's scores were retained.

In the narrative analysis, redemption indicates a transition from negativity or neutrality to positivity, whereas contamination includes language in which the respondent indicates a change in perspective from good to bad or neutral to worse (see Table 4 for examples). If redemption language, as articulated by McAdams et al. (2001), was present in the narrative, coders indicated a 1 and if absent, a 0. Positive or negative imagery may reflect positive or negative emotional states, personal improvements or declines, or increased perspective or insight. Coders assessed the presence or absence of enhanced agency (personal control over the situation), enhanced communion (effects on relationships or sense of community), and ultimate concerns (connecting to existential factors), indicating the presence or absence of each subcategory with a 0 or 1, for a total possible redemption score of 4. The same process was utilized for contamination sequences with a focus on the presence (1) or absence (0) of contamination imagery. In the analyses, there were no significant findings when redemption was analyzed as a continuous variable (0-4), but there were significant findings when it was analyzed as a dichotomous variable (0,1). All analyses are discussed in detail.

Table 4

Examples of Narrative Responses

Narrative Arc

Redemption in Positive Narrative

"I moved into a new house. This evoked a strong feeling because I wasn't happy about where I was living before. Now that I live in my new house, I feel more relaxed and confident in my daily life because I don't have to focus on the negative aspects of my past living space."

Contamination in Positive Narrative

"I have had no "positive" experiences related to school during the pandemic. All of my classes have been plagued by technical difficulties that result in zoom meetings and homework programs failing. The Universities [sic] response to the pandemic has been pitiful. Tuition has gone up despite the reduced services and opportunities. The events of the pandemic have changed me..."

Redemption in Negative Narrative

"Due to the pandemic, my team and I did not get the opportunity to compete in the state cheer championship. This was an event that we had worked for since July... To not have the opportunity to perform for the last time with my team on the state stage was heartbreaking...It just was taken away. Having this event that we had all worked our asses off to be able to compete in be taken away reminded me to enjoy the experience of getting there just as much as the end goal. Even though we didn't get to have a state competition my senior season was still amazing and so many good memories were made."

Contamination in Negative Narrative

"When I was trying to go home to see my family during the pandemic, after both of us isolating for weeks and being really nervous about everything, we didn't end up getting to go. The car slipped on a patch of ice on the highway and ended up skidding into a median, and though my partner and I were okay, the car was pretty hurt and we couldn't make it home. It made me feel so horrible and hopeless--it was my fault, I wouldn't get to see my parents after so long without them, we'd have to spend Thanksgiving alone, and everything felt horrible. It didn't change anything major, but it was definitely the start of me having a lot of mental health problems."

For closure, responses were coded on a 5-point scale from "5 = very resolved" to "1 = very unresolved," indicating whether the respondent has moved beyond the pandemic's role in their story. This coding process, similar to the approach by Adler and Poulin (2009), was intended to reflect positive and negative language. Ultimately, the closure variable was dropped from the analyses due to the low frequency of closure language ($n = 15$), likely because of the ongoing nature of the pandemic.

As reported in Table 2, in the positive narratives, participants exhibited redemption ($M = 1.44$, $SD = 0.94$) and contamination language ($M = 0.05$, $SD = 0.22$), whereas in the negative narratives participants exhibited redemption ($M = 0.66$, $SD = 0.88$) and contamination language ($M = 0.36$, $SD = 0.48$). A significant difference was found between the three campuses for references to ultimate concerns in the positive narrative, $F(2, 131) = 9.947$, $p < .001$, $\eta^2 = .132$, 95% CI [0.037, 0.234]. Post hoc analyses revealed the omnibus difference was driven by a significant difference between UM-Missoula ($n = 97$, $M = 0.01$, $SD = 0.10$) and Montana Technological University ($n = 9$, $M = 0.22$, $SD = 0.44$), Scheffé, $p < .001$, 95% CI [-0.33, -0.09] with a Bonferroni-corrected alpha of $p < .017$. A significant difference was also found between UM-Western ($n = 28$, $M = 0.00$, $SD = 0.00$) and Montana Technological University ($n = 9$, $M = 0.22$, $SD = 0.44$), Scheffé, $p < .001$, 95% CI [-0.35, -0.09] with a Bonferroni-corrected alpha of $p < .017$. This means that students at Montana Technological University were more likely to use references to ultimate concerns than students at UM-Missoula or UM-Western.

There was a significant difference among genders[6] (woman: $n = 94$; man: $n = 39$; gender queer or gender non-conforming: $n = 7$) in the omnibus ANOVA for communion language in negative narrative, $F(2, 109) = 5.880$, $p = .004$, $\eta^2 = .097$, 95% CI [0.012, 0.202]. Post hoc

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[6] The response indicating "questioning" as gender identity was dropped from this analysis because there were too few responses to run an ANOVA ($n = 1$).

analyses indicated a significant difference between men ($n = 29$, $M = .00$, $SD = .00$) and gender queer or gender non-conforming ($n = 6$, $M = 0.33$, $SD = 0.52$), Scheffé, $p = .004$, 95% CI [-0.57, -0.09] with a Bonferroni-corrected alpha of $p < .017$. There was also a significant difference between women ($n = 77$, $M = 0.05$, $SD = 0.22$) and gender queer or non-conforming participants ($n = 6$, $M = 0.33$, $SD = 0.52$), Scheffé, $p = .011$, 95% CI [-0.51, -0.05] with a Bonferroni-corrected alpha of $p < .017$. This indicated that gender queer or non-conforming participants were more likely to use communion language in their negative narratives than participants identifying as either men or women.

No post hoc significance was found for ultimate concerns in the positive narrative, agency in the negative narrative, or the redemption total for the negative narrative (all ps > .032, with a Bonferroni-corrected alpha of $p < .017$).

Main Analyses

The main analyses examined the primary question of how pandemic processing is affected by or affects identity development. We explore whether there is, indeed, any relation between identity and pandemic processing, whether well-being is related to pandemic processing, and if there are any relations between political identity, well-being, and pandemic processing. As a first step, we examined correlations between the main variable of interest (see Table 5). Significant correlations were found, thereby providing an empirical rationale for examining the specific relation between predictor and outcome variables, as well as potential moderating effects on those relations.

Table 5

Correlations of Key Variables

Correlations

		1	2	3	4	5	6	7	8	9	10
1. Age (in years)	Pearson	--									
	N	231									
2. Questionnaire Mean	Pearson	-0.018	--								
	Sig. (2-tailed)	0.827									
	N	142	142								
3. Commitment making	Pearson	0.100	-0.14	--							
	Sig. (2-tailed)	0.131	0.097								
	N	231	142	231							
4. Exploration in breadth	Pearson	0.028	-0.057	-.249**	--						
	Sig. (2-tailed)	0.669	0.502	<.001							
	N	231	142	231	231						
5. Ruminative exploration	Pearson	-0.092	0.125	-.604**	.379**	--					
	Sig. (2-tailed)	0.165	0.137	<.001	<.001						
	N	231	142	231	231	231					
6. Identification with commitment	Pearson	0.044	-0.11	.709**	-.174**	-.652**	--				
	Sig. (2-tailed)	0.507	0.194	<.001	0.008	<.001					
	N	231	142	231	231	231	231				
7. Exploration in depth	Pearson	0.028	0.1	-0.069	.317**	.302**	-0.073	--			
	Sig. (2-tailed)	0.672	0.236	0.294	<.001	<.001	0.269				
	N	231	142	231	231	231	231	231			
8. Political Ideology	Pearson	0.057	-.179*	.244**	0.001	-0.125	.180*	0.122	--		
	Sig. (2-tailed)	0.499	0.034	0.004	0.993	0.139	0.032	0.149			
	N	141	140	141	141	141	141	141	141		
9. Sum of PHQ	Pearson	-0.083	.295**	-.218**	0.085	.267**	-.270**	0.121	-.174*	--	
	Sig. (2-tailed)	0.325	<.001	0.009	0.316	0.001	0.001	0.151	0.039		
	N	141	140	141	141	141	141	141	141	141	
10. Redemption (pos)	Pearson	0.001	-0.138	-0.029	.195*	0.016	0.029	0.105	0.082	-0.125	--
	Sig. (2-tailed)	0.988	0.13	0.74	0.024	0.852	0.738	0.227	0.370	0.171	
	N	134	121	134	134	134	134	134	121	121	134
11. Redemption total (pos)	Pearson	0.028	-0.14	-0.011	0.122	0.081	-0.044	.185*	0.125	-0.061	.727**
	Sig. (2-tailed)	0.748	0.125	0.895	0.157	0.349	0.611	0.032	0.171	0.501	<.001
	N	135	122	135	135	135	135	135	122	122	134
12. Agency (pos)	Pearson	0.093	-.182*	-0.069	0.07	0.098	-0.092	0.164	0.037	-0.066	.360**
	Sig. (2-tailed)	0.287	0.046	0.426	0.423	0.26	0.292	0.058	0.691	0.471	<.001
	N	134	121	134	134	134	134	134	121	121	134
13. Communion (pos)	Pearson	-0.027	0.014	0.043	-0.013	0.079	-0.027	0.11	0.083	0.047	.262**
	Sig. (2-tailed)	0.759	0.879	0.622	0.885	0.364	0.754	0.205	0.365	0.609	0.002
	N	134	121	134	134	134	134	134	121	121	134
14. Ultimate concerns (pos)	Pearson	-0.064	-0.016	0.057	0.096	0.062	-0.059	0.022	0.167	0.062	0.071
	Sig. (2-tailed)	0.462	0.86	0.512	0.271	0.476	0.501	0.799	0.067	0.497	0.417
	N	134	121	134	134	134	134	134	121	121	134
15. Contamination (pos)	Pearson	-0.019	0.148	-0.089	-0.124	-0.002	-0.053	-0.065	-0.040	.210*	-.503**
	Sig. (2-tailed)	0.829	0.106	0.308	0.155	0.985	0.542	0.454	0.665	0.021	<.001
	N	134	121	134	134	134	134	134	121	121	134
16. Redemption (neg)	Pearson	0.004	-0.09	-.194*	-0.025	0.125	-0.008	0.136	-0.001	-0.122	0.096
	Sig. (2-tailed)	0.969	0.341	0.036	0.791	0.178	0.928	0.144	0.992	0.198	0.306
	N	117	113	117	117	117	117	117	113	113	116
17. Redemption total (neg)	Pearson	0.039	-0.157	-.206*	-0.063	0.129	-0.037	0.077	-0.017	-0.103	0.034
	Sig. (2-tailed)	0.675	0.095	0.024	0.497	0.16	0.692	0.403	0.856	0.272	0.717
	N	119	115	119	119	119	119	119	115	115	118
18. Agency (neg)	Pearson	0.04	-.196*	-.195*	-0.014	0.131	-0.083	0.085	-0.071	-0.081	0.016
	Sig. (2-tailed)	0.668	0.038	0.035	0.877	0.16	0.374	0.361	0.452	0.393	0.865
	N	117	113	117	117	117	117	117	113	113	116
19. Communion (neg)	Pearson	0.003	-0.009	-0.028	-0.167	-0.027	0.018	-0.146	0.036	0.057	-0.092
	Sig. (2-tailed)	0.975	0.928	0.761	0.072	0.774	0.848	0.116	0.707	0.549	0.324
	N	117	113	117	117	117	117	117	113	113	116
20. Ultimate concerns (neg)	Pearson	.a	.a	.a	.a	.a	.a	.a	.a	.a	.a
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.
	N	117	113	117	117	117	117	117	113	113	116
21. Contamination (neg)	Pearson	-0.004	0.059	0.124	-0.027	-0.011	0.044	-0.09	-0.091	0.109	-0.027
	Sig. (2-tailed)	0.969	0.537	0.183	0.77	0.905	0.639	0.335	0.335	0.252	0.773
	N	117	113	117	117	117	117	117	113	113	116

** Sig. at 0.01

* Sig. at the 0.05

Table 5

Correlations of Key Variables (cont.)

Correlations

		11	12	13	14	15	16	17	18	19	20	21
1. Age (in years)	Pearson											
	N											
2. Questionnaire Mean	Pearson											
	Sig. (2-tailed)											
	N											
3. Commitment making	Pearson											
	Sig. (2-tailed)											
	N											
4. Exploration in breadth	Pearson											
	Sig. (2-tailed)											
	N											
5. Ruminative exploration	Pearson											
	Sig. (2-tailed)											
	N											
6. Identification with commitment	Pearson											
	Sig. (2-tailed)											
	N											
7. Exploration in depth	Pearson											
	Sig. (2-tailed)											
	N											
8. Political Ideology	Pearson											
	Sig. (2-tailed)											
	N											
9. Sum of PHQ	Pearson											
	Sig. (2-tailed)											
	N											
10. Redemption (pos)	Pearson											
	Sig. (2-tailed)											
	N											
11. Redemption total (pos)	Pearson	--										
	Sig. (2-tailed)											
	N	135										
12. Agency (pos)	Pearson	.730**	--									
	Sig. (2-tailed)	<.001										
	N	134	134									
13. Communion (pos)	Pearson	.626**	0.111	--								
	Sig. (2-tailed)	<.001	0.203									
	N	134	134	134								
14. Ultimate concerns (pos)	Pearson	.250**	0.092	0.034	--							
	Sig. (2-tailed)	0.004	0.291	0.700								
	N	134	134	134	134							
15. Contamination (pos)	Pearson	.365**	-.181*	-0.131	-0.036	--						
	Sig. (2-tailed)	<.001	0.036	0.13	0.684							
	N	134	134	134	134	134						
16. Redemption (neg)	Pearson	.194*	0.134	.199*	-0.128	-0.148	--					
	Sig. (2-tailed)	0.036	0.153	0.032	0.171	0.114						
	N	117	116	116	116	116	117					
17. Redemption total (neg)	Pearson	0.121	0.054	.184*	-0.110	-0.146	.878**	--				
	Sig. (2-tailed)	0.189	0.565	0.046	0.237	0.115	<.001					
	N	119	118	118	118	118	117	119				
18. Agency (neg)	Pearson	0.072	0.058	0.082	-0.057	-0.1	.445**	.749**	--			
	Sig. (2-tailed)	0.441	0.54	0.379	0.545	0.285	<.001	<.001				
	N	117	116	116	116	116	117	117	117			
19. Communion (neg)	Pearson	0.071	-.183*	0.135	-0.031	-0.055	.243**	.472**	0.116	--		
	Sig. (2-tailed)	0.447	0.05	0.149	0.742	0.561	0.008	<.001	0.214			
	N	117	116	116	116	116	117	117	117	117		
20. Ultimate concerns (neg)	Pearson	.a	.a	.a	.a	.a	.a	.a	.a	.a	.a	
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.	
	N	117	116	116	116	116	117	117	117	117	117	
21. Contamination (neg)	Pearson	0.076	-0.058	-0.094	0.179	-0.010	-.646**	-.564**	-.270**	-0.174	.a	--
	Sig. (2-tailed)	0.413	0.539	0.317	0.054	0.917	<.001	<.001	0.003	0.061	.	
	N	117	116	116	116	116	117	117	117	117	117	117

** Sig. at 0.01
* Sig. at the 0.05

Identity measures and pandemic processing

        The relation between identity and pandemic processing was assessed for both pandemic processing measures: questionnaire and narrative responses.

        DIDS and pandemic processing questionnaire. Simple linear regression (Table 6) was used to test if the DIDS identity measures significantly predicted the mean score for the five COVID-19 Processing and Identity Questionnaire questions. In Model 1, we examined the predictive effects of the DIDS dimensions on pandemic processing (quantitative measure), controlling for any effects of gender and campus. The overall regression was not statistically significant ($R^2 = .061$, $F(7, 132) = 1.231$, $p = .290$). In Model 2, we added age as a predictor and age did not significantly predict pandemic processing as measured by the pandemic processing questionnaire ($b = 0.014$, $p = .76$). The overall regression was not statistically significant ($R^2 = .062$, $F(8, 131) = 1.082$, $p = .380$). Model 3 looked at whether the DIDS measures predicted pandemic processing questionnaire responses with political identity added into the regression. The overall regression was not statistically significant ($R^2 = .079$, $F(9, 130) = 1.233$, $p = .280$).

        Finally, for the pandemic processing questionnaire measure, Model 4 examined whether the DIDS dimensions predicted pandemic processing questionnaire responses with the well-being measure (PHQ-8) in the regression. The overall regression was statistically significant ($R^2 = .142$, $F(10, 129) = 2.141$, $p = .026$). It was found that the PHQ-8 significantly predicted the pandemic processing questionnaire mean ($b = 0.030$, $p = .002$). This means that a higher PHQ score (lower reported well-being) predicts a higher pandemic processing questionnaire mean (which indicates greater negative impacts of the pandemic).

Table 6

Linear regression testing whether identity measures (DIDS) predict pandemic processing

(pandemic processing questionnaire mean)

	b (.95 CI)	p
Model 1	Total $R^2 = .061$, $\Delta R^2 = .034$ $p = .446$	
Campus	-0.156 [-0.359, 0.048]	.13
Gender	0.002 [-.0127, 0.130]	.98
CM	-0.062 [-0.259, 0.135]	.53
EB	-0.137 [-0.328, 0.053]	.16
RE	0.040 [-0.146, 0.226]	.67
IC	-0.014 [-0.246, 0.217]	.90
ED	0.163 [-0.057, 0.383]	.14
Model 2	Total $R^2 = .062$, $\Delta R^2 = .035$, $p = .565$	
Campus	-0.161 [-0.367, 0.046]	.13
Gender	-0.001 [-0.131, 0.129]	.99
CM	-0.066 [-0.265, 0.133]	.52
EB	-0.137 [-0.329, 0.054]	.16
RE	0.044 [-0.115, 0.233]	.64
IC	-0.012 [-0.245, 0.221]	.92
ED	0.158 [-0.064, 0.381]	.16
Age	0.014 [-0.075, 0.102]	.76
Model 3	Total $R^2 = .079$, $\Delta R^2 = 0.051$, $p = .408$	
Campus	-0.099 [-0.320, 0.121]	.37
Gender	-0.028 [-0.162, 0.106]	.68
CM	-0.053 [-0.252, 0.145]	.60
EB	-0.137 [-0.327, 0.054]	.16
RE	0.042 [-0.146, 0.230]	.66
IC	0.002 [-0.230, 0.234]	.99
ED	0.186 [-0.039, 0.410]	.10
Age	0.012 [-0.076, 0.100]	.80
Political Ideology	-0.043 [-0.098, 0.012]	.13
Model 4	Total $R^2 = .076$, $\Delta R^2 = .115$, $p = .034$	
Campus	-0.139 [-0.354, 0.076]	.20
Gender	-0.022 [-0.152, 0.108]	.74
CM	-0.047 [-0.240, 0.145]	.63
EB	-0.124 [-0.309, 0.060]	.19
RE	0.017 [-0.165, 0.200]	.85
IC	0.037 [-0.189, 0.263]	.75
ED	0.148 [-0.071, 0.367]	.18
Age	0.019 [-0.067, 0.104]	.67
Political Identity	-0.028 [-0.082, 0.026]	.21
PHQ	**0.030 [0.011, 0.50]**	**.002**

DIDS and narrative responses. Logistic and linear regressions were used to test if the narrative measures of pandemic processing were predicted by identity measures.

First, linear regression was used to analyze the relation between the DIDS identity measures and pandemic processing in the positive and negative narratives (Tables 7 and 8, respectively). For these two linear regressions, the presence of redemption, in general, in addition to the presence of the subcategories of agency, communion, and ultimate concerns, were analyzed with a total of four redemption points possible for each narrative. For redemption in the positive narrative, no regression or variable was significant (all ps > .15). For redemption in the negative narrative, Model 4 was the only statistically significant model (R^2 = .188, $F(10, 104)$ = 2.401, p = .013). It was found that commitment making (b = -0.362, p = .005) and exploration in breadth (b = -0.248, p = .039) significantly predicted the redemption total in the negative narrative. Commitment making was significant in all models. This means that lower agreement with statements related to commitment making and exploration in breadth predicts a greater likelihood of a higher score for redemption language in the negative narrative.

Next, logistic regression was used to analyze the relation between the five DIDS identity measures and whether or not redemption language was present in the respondents' positive narratives (Table 9). It was found in each model (Model 1: Identity statuses, Model 2: Age, Model 3: Political, Model 4: PHQ) holding all other predictor variables constant, the odds of redemption language in the positive narrative occurring increased with a higher score for exploration in breadth. This means that language of redemption in the positive narrative was more likely to be present when students reported greater agreement with statements related to exploration in breadth.

Table 7

Linear regression testing whether identity measures (DIDS) predict pandemic processing

(Redemption language total in positive narrative)

	b (.95 CI)	p
Model 1	Total $R^2 = .062$, $\Delta R^2 = .035$ $p = .514$	
Campus	0.227 [-0.079, 0.534]	.15
Gender	0.097 [-0.099, 0.292]	.33
CM	0.046 [-0.246, 0.338]	.76
EB	0.117 [-0.161, 0.395]	.41
RE	0.010 [-0.261, 0.281]	.94
IC	-0.052 [-0.397, 0.292]	.76
ED	0.218 [-0.096, 0.532]	.17
Model 2	Total $R^2 = .062$, $\Delta R^2 = .035$, $p = .644$	
Campus	0.229 [-0.80, 0.538]	.15
Gender	0.099 [-0.101, 0.299]	.33
CM	0.047 [-0.247, 0.341]	.75
EB	0.118 [-0.162, 0.397]	.41
RE	0.007 [-0.271, 0.285]	.96
IC	-0.054 [-0.402, 0.293]	.76
ED	0.220 [-0.097, 0.538]	.17
Age	-0.007 [-0.138, 0.124]	.92
Model 3	Total $R^2 = 0.067$, $\Delta R^2 = 0.042$, $p = .650$	
Campus	0.173 [-0.160, 0.505]	.31
Gender	0.127 [-0.83, 0.336]	.23
CM	0.027 [-0.270, 0.324]	.86
EB	0.119 [-0.161, 0.398]	.40
RE	0.007 [-0.271, 0.286]	.96
IC	-0.057 [-0.405, 0.291]	.75
ED	0.192 [-0.131, 0.516]	.24
Age	-0.009 [-0.140, 0.122]	.89
Political Identity	0.037 [-0.043, 0.117]	.36
Model 4	Total $R^2 = 0.075$, $\Delta R^2 = 0.048$, $p = .670$	
Campus	0.194 [-0.142, 0.530]	.26
Gender	0.124 [-0.086, 0.333]	.24
CM	0.016 [-0.283, 0.315]	.92
EB	0.103 [-0.179, 0.386]	.47
RE	0.025 [-0.257, 0.306]	.86
IC	-0.065 [-0.414, 0.284]	.71
ED	0.204 [-0.121, 0.529]	.22
Age	-0.013 [-0.144, 0.118]	.85
Political Identity	0.031 [-0.050, 0.113]	.45
PHQ	-0.013 [-0.044, 0.018]	.40

Table 8

Linear regression testing whether identity measures (DIDS) predict pandemic processing

(Redemption language total in negative narrative)

	b (.95 CI)	p
Model 1	Total R^2 = .153, ΔR^2 = .093 p = .046	
Campus	0.149 [-0.115, 0.413]	.27
Gender	**0.209 [0.046, 0.373]**	**.01**
CM	**-0.328 [-0.573, -0.082]**	**.01**
EB	-0.220 [-0.455, 0.015]	.07
RE	0.140 [-0.093, 0.374]	.24
IC	0.268 [-0.024, 0.560]	.07
ED	0.113 [-0.157, 0.383]	.41
Model 2	Total R^2 = .153, ΔR^2 = .093, p = .081	
Campus	0.147 [-0.119, 0.413]	.28
Gender	**0.206 [0.039, 0.374]**	**.02**
CM	**-0.329 [-0.577, -0.082]**	**.01**
EB	-0.220 [-0.456, 0.016]	.07
RE	0.144 [-0.095, 0.384]	.23
IC	0.271 [-0.024, 0.566]	.07
ED	0.110 [-0.162, 0.383]	.42
Age	0.010 [-0.101, 0.121]	.86
Model 3	Total R^2 = .158, ΔR^2 = 0.098, p = .105	
Campus	0.104 [-0.183, 0.390]	.48
Gender	**0.226 [0.051, 0.400]**	**.01**
CM	**-0.343 [-0.593, -0.093]**	**.01**
EB	-0.230 [-0.457, 0.017]	.07
RE	0.148 [-0.092, 0.388]	.22
IC	0.270 [-0.025, 0.566]	.07
ED	0.089 [-0.189, 0.367]	.53
Age	0.010 [-0.102, 0.121]	.86
Political Identity	0.028 [-0.040, 0.096]	.42
Model 4	**Total R^2 = .188, ΔR^2 = .128, p = .048**	
Campus	0.146 [-0.118, 0.447]	.31
Gender	**0.221 [0.019, 0.361]**	**.01**
CM	**-0.362 [-0.623, -0.132]**	**.005**
EB	**-0.248 [-0.488, -0.020]**	**.04**
RE	0.180 [-0.075, 0.397]	.14
IC	0.254 [-0.053, 0.527]	.09
ED	0.110 [-0.154, 0.393]	.43
Age	-0.001 [-0.105, 0.115]	.98
Political Identity	0.017 [-0.053, 0.080]	.62
PHQ	-0.025 [-0.049, 0.002]	.06

Table 9

Logistic regression analyses of identity (DIDS) on pandemic processing in positive narratives

Predictors	Redemption		Contamination	
	OR [.95 CI]	*p*	*OR [.95 CI]*	*p*
Model 1				
Campus	0.972 [0.401, 2.354]	.95	2.863 [0.654, 12.536]	.16
Gender	1.124 [0.575, 2.195]	.73	**0.082[0.010, 0.663]**	**.02**
Constant	0.065	.36	1082.552	.17
CM	0.928 [0.406, 2.117]	.86	0.297 [0.071, 1.240]	.10
EB	**2.368 [1.105, 5.073]**	**.03**	**0.262 [0.074, 0.936]**	**.04**
RE	0.795 [0.354, 1.788]	.58	1.733 [0.374, 8.020]	.48
IC	1.323 [0.502, 3.485]	.57	1.913 [0.353, 10.367]	.45
ED	1.189 [0.476, 2.967]	.71	0.660 [0.127, 3.426]	.62
Model 2				
Campus	.979 [0.400, 2.391]	.96	2.935 [0.671, 12.844]	.15
Gender	1.133 [0.574, 2.234]	.72	**0.081 [0.10, 0.661]**	**.02**
Constant	0.104	.64	8257.768	.31
CM	0.824 [0.407, 2.120]	.86	0.285 [0.065, 1.245]	.10
EB	**2.022 [1.106, 5.110]**	**.03**	**0.266 [0.075, 0.941]**	**.04**
RE	0.787 [0.344, 1.802]	.57	1.666 [0.355, 7.822]	.52
IC	1.283 [0.499, 3.472]	.58	1.977 [0.354, 11.053]	.44
ED	1.305 [0.478, 2.990]	.70	0.665 [0.128, 3.447]	.63
Age	0.996 [0.672, 1.419]	.90	0.907 [0.455, 1.808]	.78
Model 3				
Campus	0.838 [0.331, 2.122]	.71	3.776 [0.794, 17.958]	.10
Gender	1.235 [0.604, 2.526]	.56	**0.059 [0.006, 0.594]**	**.02**
Constant	0.107	.64	3044.869	.37
CM	0.877 [0.376, 2.049]	.76	0.301 [0.068, 1.327]	.11
EB	**2.367 [1.100, 5.094]**	**.03**	**0.257 [0.071, 0.934]**	**.04**
RE	0.803 [0.347, 1.856]	.61	1.666 [0.342, 8.105]	.53
IC	1.317 [0.495, 3.509]	.58	2.176 [0.370, 12.806]	.39
ED	1.104 [0.422, 2.892]	.84	0.815 [0.144, 4.607]	.82
Age	0.979 [0.675, 1.420]	.91	0.943 [0.467, 1.904]	.87
Political Identity	1.122 [0.888, 1.417]	.34	0.807 [0.520, 1.253]	.34
Model 4				
Campus	0.903 [0.347, 2.346]	.83	3.141 [0.607, 16.251]	.17
Gender	1.204 [0.595, 2.437]	.61	**0.077 [0.008, 0.783]**	**.03**
Constant	0.272	.27	35.270	.71
CM	0.827 [0.351, 1.947]	.66	0.372 [0.084, 1.657]	.20
EB	**2.216 [1.034, 4.751]**	**.04**	0.323 [0.090, 1.160]	.08
RE	0.844 [0.363, 1.963]	.69	1.711 [0.324, 9.020]	.53
IC	1.277 [0.479, 3.399]	.62	2.810 [0.424, 18.634]	.28
ED	1.209 [0.466, 3.134]	.70	0.571 [0.094, 3.458]	.54
Age	0.962 [0.660, 1.401]	.84	1.015 [0.477, 2.160]	.97

Political Identity	1.100 [0.871, 1.390]	.42	0.866 [0.560, 1.338]	.52
PHQ	0.954 [0.877, 1.038]	.28	1.113 [0.960, 1.290]	.16

For contamination language in the positive narrative, Model 4 showed that the odds of contamination language in the positive narrative increased with an increased PHQ score. Contamination language in the positive narrative was more likely when students reported lower well-being.

Finally, logistic regression was used to analyze the relation between the five DIDS identity measures and whether redemption language was present in the respondents' negative narratives (Table 10). Across three logistic regression models (Model 1: Identity only, Model 2: Age, Model 3: Political), holding all other predictor variables constant, the odds of redemption language in the negative narrative occurring increased with lower averages in commitment making and identification with commitment. This means that language of redemption in the negative narrative was more likely to be present when students reported lesser agreement with statements related to commitment making. In Model 4, when well-being was added, PHQ and commitment making were the only significant predictors. The relation with commitment making remained the same; that is, as commitment making increased, the chances of redemption language decreased for the negative narratives. For PHQ, a lower score for well-being (better well-being) was predictive of a greater likelihood of redemption in the negative narrative. No significance was found for the identity variables and contamination language in the negative narrative (all $ps > .10$).

Well-Being and Pandemic Processing. Through an independent samples t-test, analyses indicated significant differences for PHQ-8 scores and whether someone wrote a narrative for the positive prompt (positive narrative present: $n = 121$, $M = 8.58$, $SD = 6.095$ and positive narrative

Table 10

Logistic regression analyses of identity (DIDS) on pandemic processing in negative narratives

Predictors	Redemption		Contamination	
	OR (.95 CI)	*p*	*OR (.95 CI)*	*p*
Model 1				
Campus	1.511 [0.733, 3.112]	.26	0.838 [0.413, 1.702]	.63
Gender	1.276 [0.806, 2.021]	.30	0.910 [0.581, 1.426]	.68
Constant	0.156	.45	0.162	.45
CM	**0.410 [0.202, 0.829]**	**.01**	1.629 [0.823, 3.223]	.16
EB	0.5581 [0.302, 1.115]	.10	1.163 [0.623, 2.174]	.64
RE	1.409 [0.740, 2.683]	.30	1.176 [0.634, 2.180]	.61
IC	**2.280 [0.740, 2.683]**	**.05**	0.999 [0.459, 2.176]	.10
ED	1.792 [0.850, 3.776]	.13	0.702 [0.343, 1.434]	.33
Model 2				
Campus	1.514 [0.733, 3.128]	.26	0.841[0.413, 1.709]	.63
Gender	1.282 [0.804, 2.043]	.30	.914 [0.578, 1.446]	.91
Constant	0.224	.71	0.211	.69
CM	**0.411 [.203, .833]**	**.01**	1.631 [0.823, 3.234]	.16
EB	0.582 [.303, 1.117]	.10	1.164 [0.623, 2.174]	.63
RE	1.398 [.725, 2.697]	.32	1.169 [0.620, 2.201]	.63
IC	**2.269 [0.990, 5.199]**	**.05**	0.995 [0.455, 2.179]	.99
ED	1.802 [0.850, 3.820]	.13	0.704 [0.343, 1.449]	.34
Age	0.982 [0.724, 1.333]	.91	0.987 [0.731, 1.333]	.93
Model 3				
Campus	1.445 [0.594, 2.725]	.35	1.040 [0.487, 2.223]	.92
Gender	1.311 [0.787, 2.203]	.38	0.832 [0.513,[1.350]	.46
Constant	0.234	.71	0.166	.65
CM	**0.405 [0.233, 0.972]**	**.01**	1.775 [0.876, 3.596]	.11
EB	0.581 [0.324, 1.181]	.10	1.168 [0.622, 2.196]	.63
RE	1.409 [0.634, 2.346]	.31	1.153 [0.609, 2.180]	.66
IC	**2.269 [0.705, 3.740]**	**.05**	0.996 [0.450, 2.206]	.99
ED	1.759 [0.787, 3.551]	.15	0.780 [0.370, 1.645]	.51
Age	0.982 [0.766, 1.401]	.91	0.985 [0.727, 1.334]	.92
Political Identity	1.030 [0.842, 1.208]	.75	0.875 [0.727, 1.052]	.16
Model 4				
Campus	1.699 [0.750, 3.850]	.20	0.955 [0.440, 2.072]	.91
Gender	1.297 [0.788, 2.135]	.31	0.841 [0.518, 1.367]	.49
Constant	1.025	.995	0.060	.49
CM	**0.375 [0.181, 0.775]**	**.008**	1.862 [0.912, 3.803]	.09
EB	0.528 [0.269, 1.033]	.06	1.231 [0.654, 2.317]	.52
RE	1.578 [0.799, 3.117]	.19	1.087 [0.570, 2.073]	.80
IC	2.168 [0.941, 4.995]	.07	1.047 [0.472, 2.325]	.91
ED	1.953 [0.855, 4.459]	.11	0.741 [0.351, 1.568]	.43
Age	0.948 [0.696, 1.292]	.74	1.002 [0.738, 1.362]	.99

Political Identity	0.988 [0.811, 1.204]	.91	0.890 [0.738, 1.074]	.22
PHQ	**0.920 [0.852, 0.994]**	**.04**	1.055 [0.982, 1.133]	.14

absent: $n = 20$, $M = 11.8$, $SD = 6.152$), $t(139) = 2.187$, $p = .030$, Cohen's $d = 6.103$, 95% CI

[0.050, 1.004]. This means that individuals with a lower PHQ-8 scores (better well-being) were

more likely to give a response to the positive narrative prompt.

Political Identity and Pandemic Processing. One of the strongest identity predictors of

pandemic processing was political identity. Participants identified along the political spectrum

where 1 = Democrat/liberal and 9 = Republican/conservative ($n = 141$, $M = 3.89$, $SD = 2.45$).

As shown in Table 5, political identity was correlated with the measures of commitment making

(CM) ($r = 0.24$, $p = .004$), identification with commitment (IC) ($r = 0.18$, $p = .032$), pandemic

processing questionnaire mean ($r = -0.179$, $p = .034$), and a person's overall well-being score (as

measured by the PHQ) ($r = -0.174$, $p = .039$). In other words, individuals who were more

conservative scored lower on the PHQ measure of well-being (indicating better well-being) and

reported more positive impacts of the pandemic on the pandemic processing questionnaire.

These same individuals reported higher scores on the DIDS measures of commitment making

and identification with commitment, meaning that those expressing more conservative political

ideologies were more likely than their liberal and Democratic counterparts to be strongly

committed to their future goals and reported higher levels of identification with their

commitments. In other words, higher political scores (more conservative identity) corresponded

with higher scores for commitment making and identification with commitment. No other values

were significant.

Political Identity Moderates the Relation between Commitment Making and Pandemic

Processing. To test the hypothesis that pandemic processing is related to a person's identity, and

more specifically whether political identity moderates the relation between the predictor variable, identity (commitment making), and the outcome variable, pandemic processing (redemption language in the negative narrative), a hierarchical multiple regression analysis was conducted. In the first step, logistic regression between the two variables was run. Next, political identity, the predicted moderator between commitment making and redemption language in the negative narrative, was analyzed via PROCESS (Hayes, 2018; model 1). The interaction between commitment making and political identity was found to be statistically significant (b = -0.2499, 95% C.I. [-0.4725, -0.0272], p = .03). The conditional effect of commitment making on redemption language in the negative narrative showed corresponding results: at low political identity (liberal) = 1.12, (conditional effect = 0.1321, 95% C.I. [-0.5498, 0.8140], p = .70), at middle political identity (moderate) = 3.5, (conditional effect = -0.4626, 95% C.I. [-0.9641, 0.0390], p = .07), and at high political identity (conservative) = 7.38, (conditional effect = -1.4320, 95% C.I. [-2.4843, -0.3797], p = .008).

As seen in Figure 4, these results identify political identity as a moderator of the relationship between commitment making and redemption language in the negative narrative, but only for conservatives. This means that a conservative individual with a neutral level of commitment making shows a greater likelihood of redemption language use in the negative narrative. For a conservative individual with higher levels of commitment making, redemption language in the negative narrative was less likely. This could mean that higher levels of commitment hinder a person's ability to evoke redemptive moments in a negative narrative, but only if that individual is conservative. For liberal or moderate political identities, there is no effect of political identity on commitment making on redemption in the negative narrative.

Figure 4

Redemption Language (Neg) and Commitment Making by Political Ideology
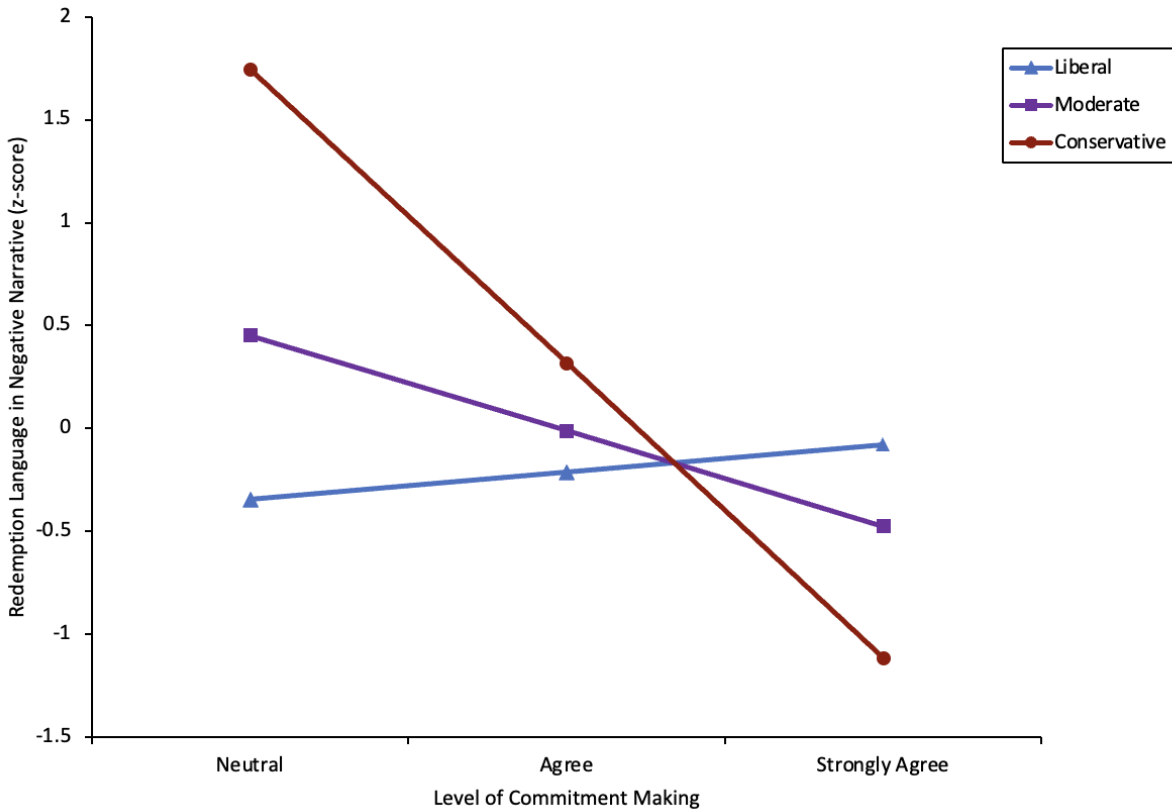
After the linear regressions were run for the pandemic processing questionnaire on the identity

measures, moderation was conducted using PROCESS. There were no significant interaction

effects, but the models were significant for the relation between exploration in breadth on

pandemic processing questionnaire mean (moderator: PHQ), exploration in depth on pandemic

processing questionnaire mean (moderators: political ideology and PHQ), and PHQ-8 on

pandemic processing questionnaire mean (moderators: age and political ideology).

Discussion

The purpose of this study was to explore how emerging adults processed the COVID-19

pandemic and whether identity was a factor in an individual's perception of the pandemic. The

results of the present study support the hypothesis that emerging adults' identity development

does affect their pandemic processing, including, but not limited to, political identity. Further, well-being was also an important factor in the processing of the COVID-19 pandemic. The key findings of this research are as follows.

Identity Development Affects Pandemic Processing

Positive relations were found between exploration in breadth and redemption language in the positive narrative. That is, as individuals engaged in identity exploration broadly, they were more likely to have a redemptive arc (from bad to good or okay to better) in their positive narratives. A possible explanation of this finding could be that individuals who are more broadly exploring their future identity may have a greater sense of possibility. It may be that their optimism is reflected in how they share their positive experiences; that is, when talking about positive events they are more likely to hone in on the redemptive shift from bad to good or okay to better.

On the other hand, negative relations were found between commitment making and redemption in the negative narrative. As individuals were more committed to an identity, they were less likely to exhibit a redemptive arc in their negative narratives. In contrast, individuals with lower levels of commitment making appear to be able to find a redemptive arc when asked to write about a negative experience. This could be due to the fact that, as hypothesized, individuals with stronger commitments may have more at stake and, thus, find it more difficult to find the silver lining in a negative experience. This study and others have found that commitment making is negatively correlated with depression and anxiety, meaning that higher commitment making is indicative of lower levels of depression and anxiety (Mastrotheodoros & Motti-Stefanidi, 2017; Luyckx et al., 2008). Others have found a lack of coherence in narratives with low commitment. This study did not look at the complexity or simplicity of narratives which

may be areas for future exploration (McLean & Pratt, 2006). Therefore, the conjecture that it's easier to find a redemptive arc with lower commitment levels is speculative and warrants additional consideration.

Mental Well-Being was Directly Related to Pandemic Processing

There was a relation between higher PHQ scores (lower mental well-being) and greater likelihood of contamination in positive narratives and PHQ and a higher mean pandemic processing questionnaire response (indicative of greater negative impacts of the pandemic). In other words, on both pandemic processing measures, lower mental well-being predicted a more negative perception of the pandemic. Others argue that conservatives have a greater tendency to make overly positive self-evaluations, which could be part of the reason for the differences in PHQ scores (Wojcik & Ditto, 2015; Ruisch & Stern, 2020).

Political Identity was Associated with Identity Development, Pandemic Processing, and Well-being

Political Identity and Commitment Measures

Conservative respondents indicated higher levels of agreement on both commitment making and identification with their commitments. This pattern of results aligns with past findings that conservatives score higher on need-for-structure measurements (Jost et al., 2003; Ruisch & Stern, 2020), for which commitment measures may serve as a proxy in this study. Further, Napier and Jost (2008) also found that conservatives were more likely to lean into simple, unambiguous answers and be more likely to preserve the status quo. This could be seen in the findings in this study that revealed higher levels of commitment for conservative students, which may be explained by reluctance to change behaviors or perspectives during the COVID-19 pandemic.

Political Identity and Pandemic Processing

Given how politicized the COVID-19 pandemic has become, it is unsurprising that there are differences based on political identity that warrant discussion and further exploration (Conway et al., 2021). As Conway and colleagues discuss, political identity greatly impacts how people have behaved during the pandemic and how worried they are about it, which may explain why conservatives reported lesser negative impacts. Since the pandemic processing questionnaire explored the impacts of the pandemic on various aspects of a person's life, it is unsurprising that liberal respondents reported greater negative impacts on social life and close personal relationships due to the likelihood of greater disruption to social facets wrought by the pandemic. Family and community ties are important for a meaningful life (Newman et al., 2018) and these facets of life were reported to be more negatively affected by COVID-19, according to liberal respondents (as reflected in the individual pandemic processing questionnaire responses and pandemic processing questionnaire mean).

Political Identity and Well-Being

The differential in the mental health of individuals based on political identity places the discussion of mental health during the pandemic, particularly for emerging adults, in stark relief. Many researchers studying political differences are exploring relative happiness, meaning in life, and more. Many allege that conservatives are happier (Napier & Jost, 2008; Schlenker et al., 2011) and others suggest there are different means to the same "end" of happiness (Choma et al., 2009). Our study found conservatives reporting better levels of well-being than liberals, which aligns with findings by Napier and Jost (2008) and Schlenker et al. (2011), although they argue about the "why?"

The current study suggests that conservatives were at least reporting themselves to be happier, which could be because as Jost et al. (2004) suggest in the system justification theory, inequality takes a greater psychological toll on liberals. The pandemic has revealed vast differences in equality across the world, including uneven vaccine distribution, vastly different trajectories in economic recovery, income loss, and educational disparities (The World Bank, 2022). Schlenker et al. (2011) in rejecting Napier and Jost's theory, believe that liberals are less happy because of lower levels of religiosity, marriage, and reduced personal agency. Each of these elements focuses on community and personal impact which could also explain the lower reported well-being of liberals whose interpersonal relationships were more negatively impacted.

The fact that conservatives are both reporting better mental health and more positive impacts of the pandemic aligns with the findings of Conway et al. (2021) who claim that the lack of concern by conservatives could be motivated by desired political outcomes. Conway and colleagues distilled their findings to state that if the pandemic benefits ideological ends then it is more likely to be seen as a threat (liberals) and if the pandemic hinders ideological ends, then it is less likely to be seen as a threat (conservatives). This runs counter to the findings that conservatives often hold beliefs that the world is a dangerous place (Brenner & Inbar, 2015; Inbar et al., 2012; Liuzza et al., 2018; Oosterhoff et al., 2018; Shook et al., 2017).

Political Identity Plays an Important Moderating Role for Conservatives

Some elements can and do moderate the response to the pandemic, even for conservatives. Conservatives with lower commitment making scores were more likely to write redemption into their negative narratives and conservatives with higher commitment making scores are less likely to write redemption into their negative narrative. Conservatives who have yet to commit to their future identity were more likely to find a silver lining (redemption) in a

negative experience, whereas conservatives who have strongly committed to their future identity struggled to find the good in a bad situation. Liberals and moderates, on the other hand, showed no relation between commitment making and redemption language; that is the likelihood of finding the silver lining in a negative situation was unrelated to how committed they were to their future identity. As discussed, conservatives are more likely to be highly committed to their identities and identify deeply with their commitments, but that is not the end of the story.

Limitations and Future Directions

This study represents an early review of emerging adults' experiences during the first year of the COVID-19 pandemic and future research could shed light on some of the possible limitations. Primarily, it appears that to some extent students selectively addressed questions in the survey. For example, students with lower well-being (higher PHQ score) were less likely to respond to the positive narrative prompt. Finally, it has been found that priming for COVID-19 made people more conservative (Karwowski et al., 2020). The pandemic questions could have primed conservatives to report better well-being on the PHQ-8, even if they weren't actually experiencing more positive mental health. Future research could include an exploration of top events and narrative themes by political ideology; differences in identity development timelines or trajectories by political affiliations and beliefs; or include a more narrow focus on agency and political identity.

Conclusion

This study has enhanced our understanding of the relation between identity and pandemic processing and has brought to light potential factors that may inform differences in student perceptions or experiences. We hope that this research becomes part of the foundation of

research on the COVID-19 pandemic and identity and informs best practices for higher

education to address student needs in this and future prolonged crises.

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Appendix A
Campus Experience Questionnaire

1. Which UM campus do you attend?
   1. University of Montana – Missoula
   2. University of Montana –Western
   3. Montana Technical University
   4. Helena College
   5. Missoula College
2. What year are you in school?
   1. Freshman
   2. Sophomore
   3. Junior
   4. Senior
3. What year do you intend to graduate?

4. Age (in years)

5. For Fall 2020, what were your class modalities (all that apply)?
   1. Remote (synchronous course, meets at the same time each week and instruction is live via video)
   2. Online (learning is asynchronous and never meets live)
   3. In-person (meetings in-person for each class)
   4. Hybrid (courses are a mix of in-person and remote instruction)

6. For Spring 2021, what were your class modalities (all that apply)?
   1. Remote (synchronous course, meets at the same time each week and instruction is live via video)
   2. Online (learning is asynchronous and never meets live)
   3. In-person (meetings in-person for each class)
   4. Hybrid (courses are a mix of in-person and remote instruction)

7. What is your living arrangement?
   1. I live on campus with a roommate
   2. I live on campus without a roommate
   3. I live off campus because of COVID
   4. I live in campus housing but not a residence hall
   5. I live off campus

Appendix B

COVID-19 and Identity (Narrative)

1. Think about a positive experience (single event) during the pandemic that evokes a particularly strong feeling. Please describe that experience in detail including what happened and when. Make sure that this is a particular and specific incident (particular time and particular place). Explain why this event was important or meaningful to you. Additionally, describe how the event changed how you think about yourself and/or who you want to become.

2. Think about a negative experience (single event) during the pandemic that evokes a particularly strong feeling. Please describe that experience in detail including what happened and when. Make sure that this is a particular and specific incident (particular time and particular place). Explain why this event was important or meaningful to you. Additionally, describe how the event changed how you think about yourself and/or who you want to become.

3. Reflecting on the past 12 months, please list (in order of importance) the pandemic and three events, personal to global, that had a significant influence on you, other than the COVID-19 pandemic.

Appendix C
The Dimensions of Identity Development Scale (Luyckx et al., 2008)

Participants will respond to each question on a 5-point scale:
1 = Strongly disagree
2 = Disagree
3 = Neither disagree/Neither agree
4 = Agree
5 = Strongly Agree

Commitment making
1. I have decided on the direction I am going to follow in my life.
2. I have plans for what I am going to do in the future.
3. I know which direction I am going to follow in my life.
4. I have an image about what I am going to do in the future.
5. I have made a choice on what I am going to do with my life.

Exploration in breadth
6. I think actively about different directions I might take in my life.
7. I think about different things I might do in the future.
8. I am considering a number of different lifestyles that might suit me.
9. I think about different goals that I might pursue.
10. I am thinking about different lifestyles that might be good for me.

Ruminative exploration
11. I am doubtful about what I really want to achieve in life
12. I worry about what I want to do with my future.
13. I keep looking for the direction I want to take in my life.
14. I keep wondering which direction my life has to take.
15. It is hard for me to stop thinking about the direction I want to follow in my life.

Identification with commitment
16. My plans for the future match with my true interests and values.
17. My future plans give me self-confidence.
18. Because of my future plans, I feel certain about myself.
19. I sense that the direction I want to take in my life will really suit me.
20. I am sure that my plans for the future are the right ones for me.

Exploration in depth
21. I think about the future plans I already made.
22. I talk with other people about my plans for the future.
23. I think about whether the aims I already have for life really suit me.
24. I try to find out what other people think about the specific direction I decided to take in my life.
25. I think about whether my future plans match with what I really want.

Appendix D

COVID-19 Processing and Identity Questionnaire

1. The COVID-19 pandemic has affected my sense of self
    1. Very negatively
    2. Negatively
    3. Neutral
    4. Positively
    5. Very positively
2. The COVID-19 pandemic has affected my close personal relationships with others
    1. Very negatively
    2. Negatively
    3. Neutral
    4. Positively
    5. Very positively
3. The COVID-19 pandemic has affected my social life
    1. Very negatively
    2. Negatively
    3. Neutral
    4. Positively
    5. Very positively
4. The COVID-19 pandemic has affected my group affiliations (clubs, memberships, fraternity/sorority, religious organizations, etc.)
    1. Very negatively
    2. Negatively
    3. Neutral
    4. Positively
    5. Very positively
5. To what extent are you concerned about COVID affecting your planning for future?
    1. Very concerned
    2. Moderately concerned
    3. No change
    4. Moderately optimistic
    5. Very optimistic

Appendix E
PHQ-8
Over the last two weeks, how often have you been bothered by:

1. Little interest or pleasure in doing things?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
2. Feeling down, depressed, or hopeless?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
3. Trouble falling or staying asleep, or sleeping too much?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
4. Feeling tired or having little energy?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
5. Poor appetite or overeating?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
7. Trouble concentrating on things, such as reading the newspaper or watching television?
    1. Not at all
    2. Several days
    3. More than half the days
    4. Nearly every day
8. Moving or speaking so slowly that other people could have noticed? Or the opposite— being so fidgety or restless that you have been moving around a lot more than usual?
    1. Not at all
    2. Several Days
    3. More than half the days
    4. Nearly every day

Appendix F
Demographic Questions

What is your gender identity?
- Man
- Woman
- Transgender Man
- Transgender Woman
- Gender queer or gender non-conforming
- Questioning
- Something else

Ethnicity
What are your ethnic origins? Ethnicity refers to the origins of the respondent's ancestors and should not be confused with citizenship, nationality, or place of birth. (Check any/all that apply)
- African
- American Indian/Alaskan Native
- Asian
- Caribbean
- East Indian
- European
- Latin/Central/South American
- Middle Eastern
- Pacific Islander
- Another ethnicity: _____

Political
1. Based on what you know about politics, are you [circle the number that best represents your political attitudes] **[circle a __number__]**
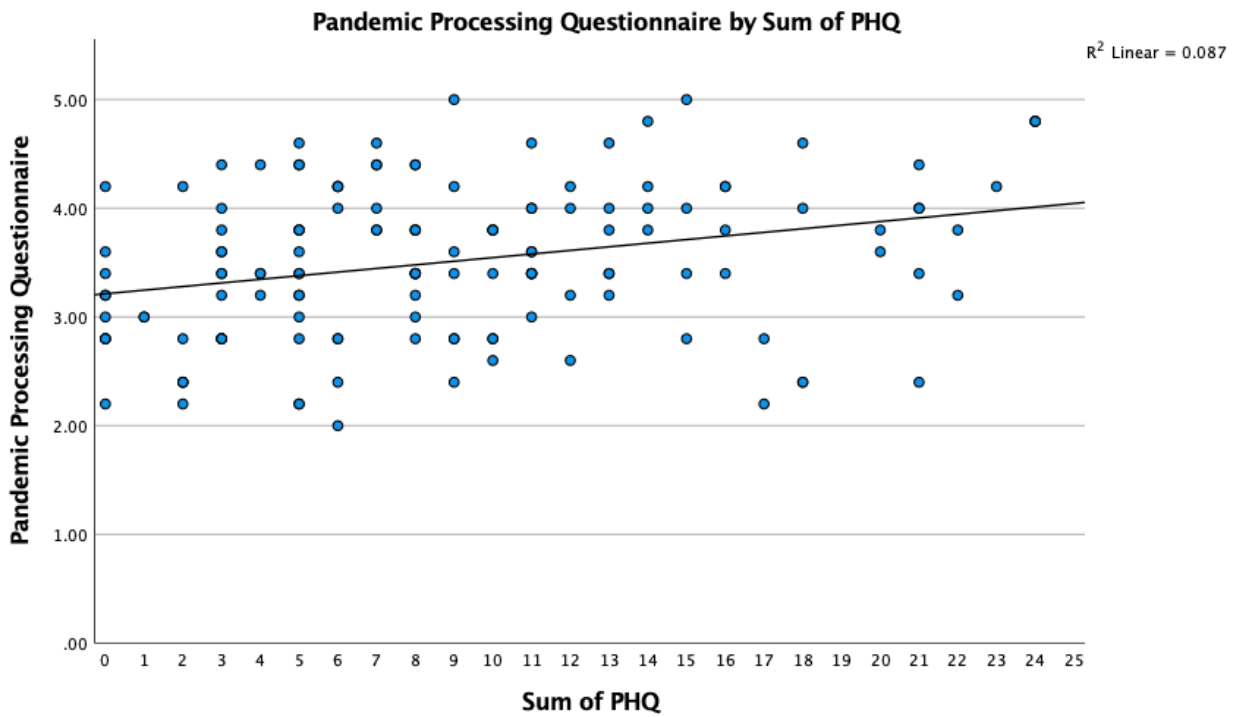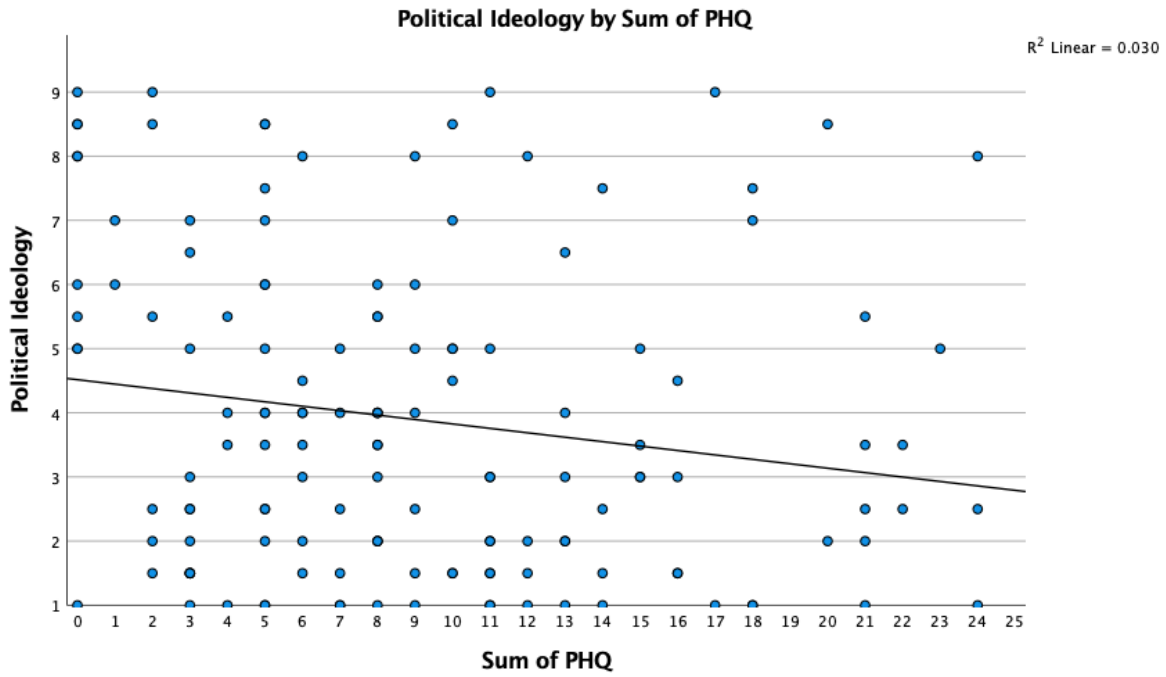
[Liberal]   **1   2   3   4   5   6   7   8   9**   [Conservative]

2. Based on what you know about politics, are you most likely to vote [circle the number that best represents your political attitudes] **[circle a __number__]**

 [Democrat]   **1   2   3   4   5   6   7   8   9**   [Republican]

Appendix G

Regressions

Political Ideology by Sum of PHQ

Pandemic Processing Questionnaire by Sum of PHQ

Political Ideology by Commitment Making Average

Political Ideology by Identification with Commitment Average