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Social Media Usage for Social Comparison and Its Relationship to Identity Development

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SOCIAL MEDIA USAGE FOR SOCIAL COMPARISON
AND ITS RELATIONSHIP TO IDENTITY DEVELOPMENT

by

LILLIE DEL REAL

A Thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in The Burnett Honors College
at the University of Central Florida
Orlando, Florida

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ABSTRACT

Yang and colleagues (2018) found that social media comparison was related to identity distress. The purpose of the current study was to expand on their design, by examining multiple comparison factors (i.e., Ability, Opinion, Popularity, Likeness, Physical Appearance, Academic Status/Achievements, Work Status/Achievements, Relationship Status, Family Status, and Socioeconomic Status) and multiple identity development factors (i.e., Ruminative Exploration, Exploration in Breadth, Exploration in Depth, Commitment Making, and Identification with Commitment) on their ability to predict Identity Distress. College students ($N= 407$) in psychology courses participated in an anonymous online survey for course credit. The results were consistent with the findings of Yang and colleagues (2018) but expands upon their model and thereby adds to the literature on the effects of social media on identity, which raises some important concerns regarding identity development among today's youth.

DEDICATIONS

For my Mother and Father, who have always supported me in my ambitions and have never doubted my ability to achieve my goals. Thank you for always pushing me to achieve excellence and for giving me the tools to do so.

For my Brothers, who brought out my competitive nature from an early age, which aided in my ambitions. Thank you for giving me the tools to achieve my goals.

For Austin Lee, who has always supported me in my endeavors and has never doubted my abilities. Thank you for constantly motivating me to achieve my goals.

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INTRODUCTION

The purpose of this study is to investigate the possible relationship between social media use and identity distress. With the recent surge of social media popularity, social media comparison is at the forefront of adolescent and emerging adult identity development (Rideout & Robb, 2019). This study tests Yang and colleagues' (2018) dual-path model of social media comparison of ability/opinion and its relationship to identity distress. In addition to replicating their findings, the model will be expanded by adding additional social media comparison categories and replacing Yang and colleagues' general rumination and reflection with Koen Luyckx and colleague's (2008) more specific identity reflection and identity rumination.

Social Media

In the last two decades, social media has seen a surge in popularity. With the emergence of social media platforms such as Facebook, Instagram, Twitter, and Snapchat, young people spend more time in front of a screen than ever before. A national survey (Rideout & Robb, 2019) revealed that adolescents spend an average of 9 hours and 49 minutes every day on media (i.e., playing games, using social media, browsing websites, watching online videos, etc.). This survey also revealed that 84% of adolescents own a smartphone and 63% of adolescents use social media every day. In Barry and colleagues' (2017) study, 92.9% of adolescents had at least one social media account. Keles and colleagues (2020) have also found social media to be associated with psychological distress, anxiety, and depression. These studies demonstrate a drastic change in the way young people spend their time and how social media has become an integral and possibly destructive part of adolescence.

Identity Distress

The developmental psychologist Erik Erikson (1968) created an eight-stage lifespan theory of psychosocial development. In this theory, each stage represents an age range where people experience a psychosocial crisis. In the first stage, infancy, the psychosocial crisis is *Trust vs. Mistrust*, questioning if one can trust the people and the world around them to take care of their needs. In the second stage, toddlerhood, the psychosocial crisis is *Autonomy vs. Shame and Doubt*, developing a sense of self-control. Then during the third stage, preschool age, the psychosocial crisis is *Initiative vs. Guilt*, where the child starts to set goals. In stage four, elementary school age, the psychosocial crisis is *Industry vs. Inferiority* where the child develops perseverance toward achieving those goals. Then, in adolescence, the psychosocial crisis is *Identity vs. Role Confusion* whereby the teen begins to develop a sense of direction and purpose. In the sixth stage, young adulthood, the psychosocial crisis is *Intimacy vs. Isolation*, with a focus on achieving romantic relationships. In stage seven, middle adulthood, the psychosocial crisis is *Generativity vs. Stagnation*, and the focus is on giving back to the world. And finally, in the eighth stage, late adulthood, the psychosocial crisis is *Integrity vs. Despair*, or putting life into philosophical perspective.

According to Erikson (1968), the fifth psychosocial crisis known as identity versus role confusion, occurs in most young people during adolescence through emerging adulthood. During this period of psychosocial crisis, young people begin to ask themselves questions such as “What do I want out of life?” and “Who am I?” These questions are often the catalyst for anxiety, depression, and existential angst (Berman, 2020). Some young people can go through this period of anxiety and uneasiness feeling a strong excitement and optimism for the many

possibilities the future can bring. However, other adolescents and young adults can become overwhelmed with the uncertainties of the future and the anxiety it brings. They experience depression, anxiety, and obsessive rumination over their identity issues as well as their inability to resolve those issues. This reaction to the psychosocial crisis of identity versus role confusion is known as identity distress (Berman, 2020).

Among certain variables of identity development, identity resolution has been found to be negatively correlated with identity distress (Sica, et al., 2014), as well as, sense of coherence, and self-concept clarity (Ward, et al., 2011). Presence of meaning in life and existential well-being have also been found to be negatively correlated with identity distress (Beaumont & Scammell, 2012). Amongst other measures of adjustment and maladjustment, it has been found that internalizing symptoms such as depression and anxiety have a strong link to identity distress. Externalizing symptoms such as antisocial behavior (Hernandez, Montgomery, & Kurtines, 2006), overwhelming anger (Samoulis & Griffin, 2014), and peer aggression (Cyr et al., 2015) have also been found to be related to identity distress. In a study examining identity and social media usage, Cyr and colleagues (2015) found that identity distress was positively correlated with a more frequent use of communication technology. Similarly, in Deatherage's (2016) study on motivation and Facebook use, it was found that people reported greater identity distress if they had used Facebook to conform to the expectations of others or to enhance their own self-image. Higher identity distress was also correlated with people's tendency to post "selfies."

Koen Luyckx's Five-Dimensional Model of Identity Development

One way to measure a person's identity is to use Koen Luyckx's five-dimensional model of identity development processes. Luyckx and colleagues (2008) refined and expanded the

identity status model of James Marcia (1966). Marcia operationalized Erikson's concepts by suggesting that identity development is a process of exploration and commitment. One can explore identity possibilities (roles, goals, and values) and one can commit to specific choices from the various possibilities. If one neither explores, nor commits, they are considered to be in the diffusion identity status. Developmentally this would be typical of pre-adolescents but would be considered increasingly pathological the further one ages through adulthood. One can also commit without exploration. For instance, a young person might uncritically accept the identity choices that were assigned to them by an authority figure (typically the parents but also society). Marcia referred to this identity status as foreclosure. When one is actively exploring their options, they are considered to be in the moratorium identity status, and once they make commitments after a period of thorough exploration, they are said to be in the status of identity achievement.

Luyckx and colleagues (2006a) refined the dimensions of identity commitment and identity exploration and suggested three types of identity exploration, *exploration in breadth*, *exploration in depth*, and *ruminative exploration*, as well as two types of identity commitment, *commitment making* and *identification with commitment*. Amongst the three types of exploration, *exploration in breadth* refers to the pursuit of resolving identity issues through information seeking. *Exploration in depth* refers to the process of determining if previous commitments need to be refined or changed through reevaluation. And finally, *ruminative exploration* refers to a person's attempt at resolving their identity issues through obsessing and worrying over those issues, which fails to resolve them. Amongst the two types of commitment, *commitment making* refers to a person's process of resolving their identity issues by selecting from competing

alternatives. *Identification with commitment*, refers to a more in-depth level of commitment where identity decisions are internalized and later adopted into their secure and coherent sense of self. Sica and colleagues (2014) found that identification with commitment and commitment making were both negatively correlated with identity distress, while ruminative exploration was positively correlated with identity distress.

Identity Development & Identity Distress

As previously stated, Sica and colleagues (2014) found that identity distress was positively correlated with ruminative exploration while commitment making and identification with commitment were found to be negatively correlated with identity distress. Luyckx and colleagues (2008) developed a short and reliable self-report scale that was used to measure commitment making, identification with commitment, exploration in depth, exploration in breadth, and ruminative exploration in relation to a person's general plans for the future. These seemingly unrelated, yet interdependent components of exploration differentiated types of ruminative and reflective exploration (cf. Trapnell & Campbell, 1999) as well as between depth-based and breadth-based exploratory strategies (Luyckx et al., 2006b).

Luyckx and colleagues (2008) hypothesized that both exploration in breadth and exploration in depth were more reflective types of exploration. As expected, they were found to be significantly associated with higher levels of self-reflection. Ruminative exploration was significantly associated with higher levels of self-rumination. Additionally, higher levels of anxiety symptoms and depressive symptoms, as well as lower levels of self-esteem, were significantly associated with ruminative exploration, but not associated with exploration in breadth and exploration in depth, except for a small positive correlation between anxiety and

exploration in depth. These findings suggest that psychological distress is not broadly correlated with identity exploration but is specifically correlated with the type of identity exploration that is ruminative since both exploration in breadth and exploration in depth were not significantly correlated with psychological distress.

Based on their findings, Luyckx and colleagues (2008) assumed people that engage in exploration in breadth and exploration in depth are internally based and reflective individuals. While self-ruminative individuals are more likely to use rumination to explore identity related issues; those same individuals who score high on ruminative exploration, while feeling overwhelmed by the abundance of identity alternatives (Shwartz, 2000), may struggle with identity deficit or motivation crisis (Baumeister et al., 1985). This reflects the issue of a self-concept that is inadequately defined. As to be expected, struggling to make commitments and engagement in protracted self-questioning also occurs.

Although Luyckx and colleagues (2008) found exploration in breadth and exploration in depth to have no significant correlation with identity distress, other studies have found the opposite. It has been found that identity exploration is directly correlated with identity distress (Berman, 2020). More specifically, exploration in breadth, exploration in depth, and ruminative identity exploration have all been found to have a direct correlation with identity distress. Additionally, Albrecht's (2007) study has found identity exploration to be correlated with higher identity distress. Due to these conflicting findings, this study will also be used to further test identity exploration and its relationship with identity distress.

Yang's Model of Social Comparison & Identity Distress

Yang and colleagues (2018) examined social media comparison and identity distress at

the transition to college on emerging adults. They used a dual-path model where both paths were to different types of social media comparison: comparison of ability and comparison of opinion. They linked them to two types of introspective processes, rumination, and reflection, to determine which paths were most likely to lead to identity distress (see Figure 1). Using a short-term longitudinal survey, they collected data from two hundred and nineteen freshmen at a state college in the United States of America. They found that on social media, the comparison of ability had a positive correlation with rumination which then positively predicted identity distress. However, the comparison of opinion on social media, was positively correlated with reflection and negatively predicted identity distress.

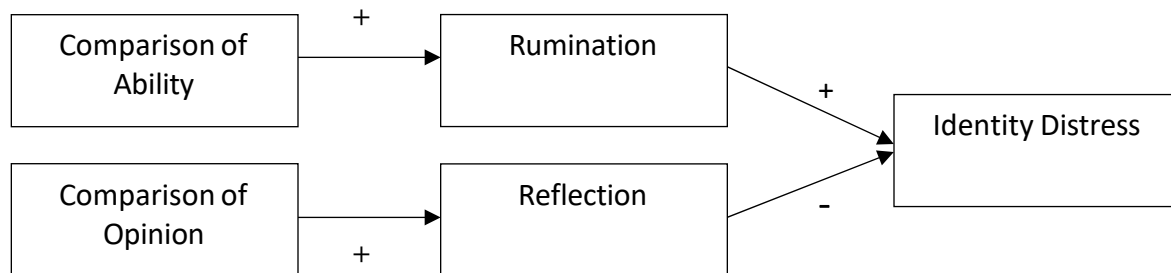


Figure 1. Yang and colleagues' (2018) dual-path model of social media comparison of ability/opinion and its relationship to identity distress.

In the current study, the aim is to replicate and expand on Yang's model by seeking its direct relevance to identity formation. In Yang and colleagues (2018) study they suggest replicating their model and testing more outcome variables. Yang's model is not specific to identity variables and is incomplete when testing social media comparison in relation to identity formation. Luyckx's five-dimensional model of identity development will be used in place of Yang's use of general reflection and rumination. This will yield an opportunity to examine rumination and reflection specific to identity. Additionally, more social comparison categories

will be added to Yang’s social media comparison of ability (e.g., comparing what you have done to what others have done in order to examine one’s competence) and social media comparison of opinion (e.g., comparing one’s own thought processes to that of others as a way to broaden one’s judgement). The added categories will consist of popularity (i.e., number of followers and tagged photos), likeness (i.e., amount of engagement such as likes and comments one has on his or her post), and physical appearance (i.e., perceived physical attractiveness), as well as academic status/achievements (i.e., major type, honors college, grades), work status/achievements (i.e., internships, job category, job pay), relationship status (i.e., single, in a relationship, married, divorced), family status (i.e., children vs. no children), and finally socioeconomic status (i.e., luxury lifestyle vs. average lifestyle). See Figure 2 for the expansion of the Yang model with these additional categories.

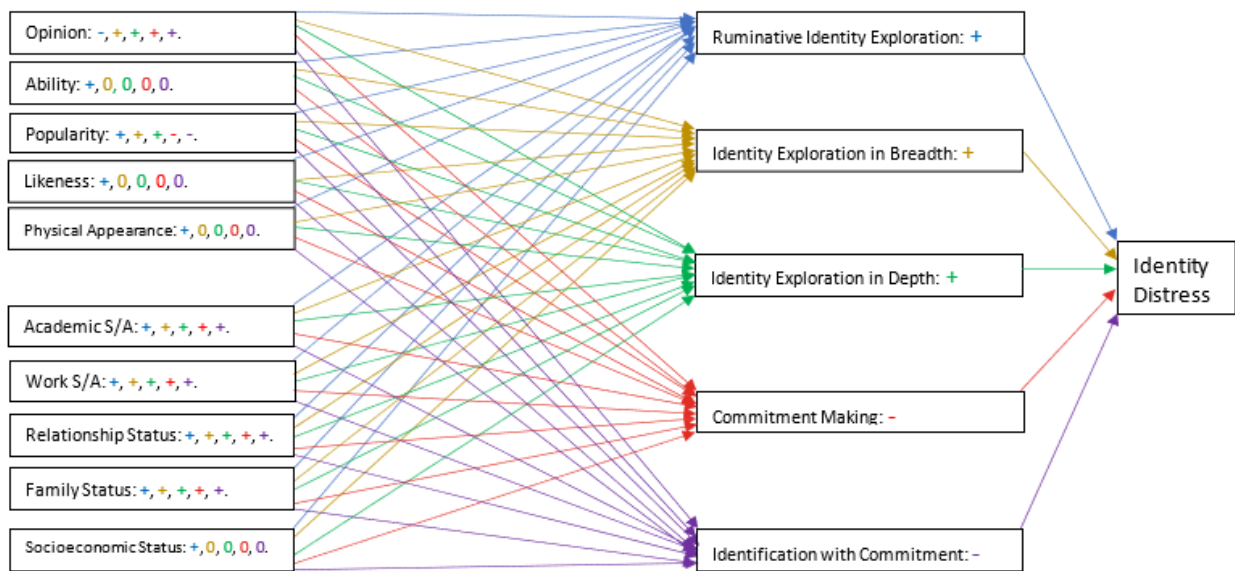


Figure 2. Expansion of Yang and colleagues’ dual-path model of social media comparison.

Note: +, -, 0, refer to the direction of association, positive, negative, or not related (respectively).

Expanding on Yang’s Model

In this thesis we will expand on Yang and colleague's (2018) model. Amongst these newly added social comparison categories, the model also shows the predictions for this study of how each category will be related to Luyckx's five stages of identity development and predictions on how those stages relate to identity distress. With Yang and colleagues' (2018) categories of ability and opinion, the predictions follow his results. It is predicted that comparison of opinion will have a negative correlation with ruminative identity exploration but have a positive correlation with identity exploration in breadth, identity exploration in depth, commitment making and identification with commitment. Luyckx and colleagues (2008) found that exploration in breadth and exploration in depth were significantly associated with higher self-reflection. Additionally, Yang's findings show that opinion is positively related to reflection. Therefore, it is predicted that opinion will be positively related to types of reflective exploration, as well as types of identity commitments. It is predicted that the social comparison of ability will have a positive correlation with ruminative identity exploration and no correlation with the other four stages of identity development. Based on Yang's findings, ability had a positive correlation with rumination and no correlation with reflection. This suggests that ability will be positively correlated with ruminative identity exploration and have no correlation with the identity development stages that are more reflective such as identity exploration in breadth, identity exploration in depth, commitment making, and identification with commitment.

The category of popularity (i.e., number of followers and tagged photos) is predicted to be positively correlated with identity exploration (i.e., ruminative identity exploration, exploration in breadth, and exploration in depth) and is predicted to be negatively correlated with identity commitment (i.e., commitment making and identification with commitment). Based on

Dumas and colleagues' (2019) study, adolescents who prioritize popularity have stronger popularity motivations and thus greater motivations to preserve and/or achieve popularity. This predicted the increase of relational aggression perpetration, as well as victimization and antiauthority behavior. This greater motivation to achieve and/or preserve popularity shows identity exploration without identity commitment. This is because what is perceived by one's peers as "cool" changes over time and amongst different peer groups. This deters adolescents and emerging adults from commitment making or having identification with commitment. Likeness (i.e., amount of engagement such as likes and comments one has on his or her post) is predicted to be positively correlated with ruminative identity exploration and no correlation with the other four stages of identity development. Engagement on social media posts such as likes, and comments usually come from friends and peers. If a person receives frequent engagement on his or her social media posts, it is assumed they are a liked person with many close friendships and peers. Past studies found that adolescents' use of social media is related to friendship closeness across six-month time intervals (Rousseau et al., 2019; Valkenburg & Peter, 2009a). Maintaining and forming close friendships is one of adolescents' important developmental tasks (Berndt, 2002), so when an adolescent has little to no engagement on their social media posts, it is predicted that they will begin to ruminate and wonder why they do not have the same number of close friends as others.

Physical appearance (i.e., perceived physical attractiveness) is predicted to be positively correlated with ruminative identity exploration and having no correlation with the other four stages. Previous studies have found that social media use directly links with appearance, a major concern adolescents and emerging adults have (Fardouly & Vartanian, 2015, 2016; Holland &

Tiggemann, 2016; Webb & Zimmer-Gembeck, 2014; Webb et al., 2016; Zimmer-Gembeck & Webb, 2017). Social Media platforms serve as a space to display and compare physical appearance, which results in adolescents receiving direct feedback from others about their appearance and in turn, causes them to frequently compare their appearance to that of others as well as societal ideals (Saunders & Eaton, 2018; Talbot et al., 2017; Uhlmann et al., 2018). This suggests that when adolescents compare their appearance on social media, they begin to ruminate and have appearance anxiety, body dissatisfaction and body dysmorphia (Roberts et al., 2018, Veale et al., 2014; Zimmer-Gembeck et al., 2018).

Additionally, categories such as academic status/achievements (i.e., major type, honors college, grades) are predicted to be positively correlated with all five of Luyckx's identity development stages. An adolescents' level of identity development is one of the most important factors correlated with their level of academic success (Berger, 1998; Berzonsky, 1989, 1993; Streitmatter, 1989). As well as having an actualized definition of self in terms of roles, beliefs, attitudes, and aspirations (Erikson, 1982); Berzonsky (1989, 1993) also suggests that emerging adults who have not yet formed an adult identity might have their own understanding of their academic capabilities disrupted by their identity development. In Lange & Byrd's (2002) study, they found that students who had formulated an adult identity used better study strategies and had a more accurate prediction of how they would do in a course than students who had not. Those who had not developed an adult identity used less productive study strategies and were less accurate with their course grade predictions. Emerging adults who have not yet formed an adult identity would not be able to accurately assess their academic capabilities nor be able to understand from where their academic failures stem. It is predicted this would lead emerging

adults to explore their shortcomings in ruminative identity exploration as well as their own academic capabilities in exploration in breadth and in depth. Additionally, commitment making and identification with commitment would play a part in an emerging adult who understands their academic capabilities.

Similarly, work status/achievements (i.e., internships, job category, job pay) is predicted to be positively correlated with all five of Luyckx's identity development stages. When emerging adults see a peer of theirs in a job position they have sought after and failed to obtain, this might lead them to ruminative identity exploration. They might ruminate on why they were not picked for the position. Additionally, emerging adults who were to view an individual in a career they had never considered before might engage in identity exploration in breadth and depth, as well as commitment making and identification with commitment, assuming this career interested them enough to reconsider their own career path and choices. Relationship status (i.e., single, in a relationship, married, divorced) is predicted to be positively correlated with all five of Luyckx's stages of identity development based on previous findings. In Adamczyk and Luyckx's (2015) study, the associations between relationship status, identity dimensions, and self-construals were examined. The results showed that single young adult participants scored higher on ruminative exploration, exploration in breadth, and exploration in depth when compared with partnered participants. Single young adult participants also scored lower on commitment making and identification with commitment when compared with partnered participants. These results suggest a difference in relationship to each of Luyckx's five stages of identity development based on the relationship status an emerging adult may have.

Family status (i.e., children vs. no children) is predicted to have a positive correlation

with all five of Luyckx's stages of identity development. If emerging adults were to view others on social media with children, this may cause them to engage in ruminative identity exploration, assuming they want children and are not able to have them at that time. Moreover, emerging adults might begin to examine if they want children in the future or reevaluate their past opinions on it by engaging in identity exploration in breadth and in depth. Finally, emerging adults who have formed their identity around their opinion on having or not having children might also want to investigate the competing alternatives through commitment making and form a decision on the matter with identification with commitment. And finally, socioeconomic status (i.e., luxury lifestyle vs. average lifestyle) is predicted to be positively correlated with ruminative identity exploration and having no correlation with the other four stages of identity development. If emerging adults who led an average lifestyle were to consistently see others flaunting their wealth on social media, they might engage in ruminative identity exploration and ruminate as to why they are not able to lead a luxurious lifestyle.

The model also shows predictions for this study of how Luyckx's five stages of identity development will relate to identity distress. Based on Luyckx and colleagues (2008) findings, it is predicted that ruminative identity exploration is positively correlated with identity distress. Luyckx also found that both commitment making and identification with commitment were negatively correlated with identity distress. The predictions replicate his findings. It is predicted that both commitment making and identification with commitment are negatively correlated with identity distress. Although Luyckx did not find a relationship between exploration in breadth as well as exploration in depth and identity distress, based on Albrecht's (2007) and Berman's (2020) findings, identity exploration in general was found to be consistently correlated with

higher identity distress. Based on these findings, it is predicted that exploration in breadth and exploration in depth are both positively correlated with identity distress.

Rationale

This study will attempt to replicate and expand on the model of Yang and colleagues (2018) by expanding the number of categories of social media comparison and by replacing the general concepts of reflection and rumination with concepts that are more specific to identity development, and thus better predict identity distress. Additions of categories such as the social comparison of socioeconomic status regarding social media (i.e., luxury lifestyle vs average lifestyle), and social comparison of physical appearance regarding social media (i.e., perceived physical attractiveness) will further our understanding of how social media effects the way one views themselves.

Additionally, more social media comparison categories will be added such as academic status/achievements (i.e., major type, honors college, grades), work status/achievements (i.e., internships, job category, job pay), relationship status (i.e., single, in a relationship, married, divorced), family status (i.e., children vs no children), likeness (i.e., amount of engagement one has on his or her post), and finally popularity (i.e., amount of followers and tagged photos). These additions will further our understanding of how social comparison via social media effects the identity development of emerging adults.

Hypotheses

Hypothesis 1: Ruminative Identity Exploration will be positively predicted by social media comparison of ability, popularity, likeness, physical appearance, academic status/achievement, work status/achievement, relationship status, family status, and

socioeconomic status, as well as negatively predicted by comparison of opinion.

Hypothesis 2: Identity Exploration in Breadth will be positively predicted by social media comparison of opinion, popularity, academic status/achievement, work status/achievement, relationship status, and family status, but unrelated to comparison of ability, likeness, physical appearance, and socioeconomic status.

Hypothesis 3: Identity Exploration in Depth will be positively predicted by social media comparison of opinion, popularity, academic status/achievement, work status/achievement, relationship status, and family status, but unrelated to comparison of ability, likeness, physical appearance, and socioeconomic status.

Hypothesis 4: Commitment Making will be positively predicted by social media comparison of opinion, academic status/achievement, work status/achievement, relationship status, and family status, as well as negatively predicted by comparison of popularity. Commitment Making will be unrelated to comparison of ability, likeness, physical appearance, and socioeconomic status.

Hypothesis 5: Identification with Commitment will be positively predicted by social media comparison of opinion, academic status/achievement, work status/achievement, relationship status, and family status, as well as negatively predicted by comparison of popularity. Identification with Commitment will be unrelated to comparison of ability, likeness, physical appearance, and socioeconomic status.

Hypothesis 6: Identity Distress will be positively predicted by Ruminative Identity Exploration, Identity Exploration in Breadth, and Identity Exploration in Depth, as well as negatively predicted by Commitment Making and Identification with Commitment.

Hypothesis 7: Identity Distress will be predicted by both Social Media Comparison factors and Identity Development factors; however, the Identity Development factors will be much better predictors (account for a greater percentage of the variance) than the Social Media factors alone.

METHODS

Participants

The participants ($N = 407$) were recruited from the University of Central Florida's large undergraduate student population. Students in large enrollment psychology courses, such as General Psychology, were offered SONA credit for their participation. Participant age ranged from 18 to 58 ($M_{\text{age}} = 20.60$, $SD = 4.74$). Participant year at the university included 39.3% Freshmen, 17.7% Sophomore, 25.3% Junior, 16.5% Senior, 0.5% Non-degree Seeking, 0.2% Graduate students, and 0.5% Other. Participant sex included 66.3% Female, 31.4% Male, 1.2% Transgender, and 1.0% Non-binary. Participant ethnic/racial backgrounds included 47.2% White (non-Hispanic), 28.7% Hispanic or Latino/a, 9.3% Asian or Pacific Islander, 7.9% Black (non-Hispanic), 0.2% Native American or Alaskan Native, and 6.6% Mixed ethnicity or Other.

Measures

Demographic Questionnaire. Students were asked to report their sex, age, ethnicity, and education level.

Social Media Comparison Measure. Created for this research project, this measure contains 50 items with 10 subscales representing different types of comparisons, each containing 5 items. Participants were asked to indicate in a 5-point scale (1 = never, 2 = rarely, 3 = some of

the time, 4 = most of the time, 5 = all the time) how often you they use social media for each listed purpose. The internal consistency, coefficient Alpha, were Opinion, .86, Ability, .77, Popularity, .86, Likeness, .86, Physical Appearance, .85, Academic Status/Achievements, .88, Work Status/Achievements, .90, Relationship Status, .67, Family Status, .68, and Socioeconomic Status, .81.

Dimensions of Identity Development Scale (DIDS; Luyckx et al., 2008). This measure consists of 25 items that measure 5 different identity development processes. These processes include Ruminative Identity Exploration, Exploration in Breadth, Exploration in Depth, Commitment Making, and Identification with Commitment. Participants were asked to indicate their level of agreement with each item on a 7-point scale (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = unsure, 5 = slightly agree, 6 = agree, 7 = strongly agree). An example item of the Commitment Making subscale would be selecting to what degree you agree or disagree with the item, "I have decided on the direction I am going to follow in my life." An example item of the Identification with Commitment subscale would be, "My future plans give me self-confidence". An example item of the Exploration in Breadth subscale would be, "I think actively about different directions I might take in my life". An example item of the Exploration in Depth subscale would be, "I think about the future plans I already made." An example item of the Ruminative Exploration subscale would be, "I am doubtful about what I really want to achieve in life". According to Luyckx and colleagues (2008), the internal consistency reliabilities for commitment making, identification with commitment, exploration in breadth, exploration in depth, and ruminative exploration were .86, .83, .86, .80, and .85, respectively. In this study the Alpha coefficients were found to be .96, .93, .88, .75, and .91.

Identity Distress Scale (IDS; Berman et al., 2004). This measure consists of 7 items that measure unresolved identity issues and how they affect the participant's current distress. The seven different domains of identity are: long term goals, career choice, friendships, sexual orientation and behavior, religion, values and beliefs, and group loyalties. Participants were asked to indicate in a 5-point scale (1 = not at all, 2 = mildly, 3 = moderately, 4 = severely, 5 = very severely) the degree to which they have recently been upset, distressed, or worried over the following issues in their life. An example of this scale would be answering, "To what degree have you been upset, distressed, or worried over the following issues in your life"? in regard to the item "Long term goals (e.g., finding a good job, being in a romantic relationship, etc.)." While using this scale, previous studies have shown an internal consistency of .84 with a test-retest reliability of .82 (Berman et al., 2004). In this study the internal consistency was found to be .81.

Procedure

This project was submitted to the Institutional Review Board (IRB) of the University of Central Florida for approval. Once the project's approval was received, it was then submitted for further review and approval from the Psychology participant recruitment system (SONA). The SONA participants were made up of mainly the students of psychology courses such as General Psychology. After the project's second approval was received, this study became available for students to choose amongst the list of other available studies currently being conducted in the department of psychology. Participants were able to access the study through the research participant website (SONA) and received academic credit towards a psychology course. Students who chose this study clicked on a link that directed them to the

Explanation of Research where they were offered the option to participate in the study. Those who chose to participate in the study were directed to the surveys and those who chose not to participate were directed to the end of the survey and no data was collected or credit given. The surveys were distributed online and anonymously through Qualtrics. Students who did not wish to participate in research but still wanted the equivalent credit were offered alternative assignments that required similar time and participation.

RESULTS

Preliminary and Descriptive Analyses

The possible range, actual range, mean, and standard deviation for all measures are reported (see Table 1, Appendix C). Each measure was tested for differences in Age, Sex, Ethnicity, and Grade. Age relationships for each measure were tested by a correlation matrix (see Table 2, Appendix D). A regression analysis with Social Media Comparison factors to predict identity factors was conducted (see Table 3, Appendix E). Additionally, a regression analysis with the Social Media Comparison factors, Identity factors, Age, and Sex, to predict Identity Distress was conducted (see Table 4, Appendix F). Sex differences were tested with a t-test for independent samples. Results indicate that on the Social Media Comparison Measure (SMCM), females scored significantly higher on the Ability comparison subscale, ($t_{(396)} = -4.09, p < .001$), the Popularity comparison subscale ($t_{(396)} = -3.45, p < .001$), the Likeness comparison subscale ($t_{(396)} = -6.11, p < .001$), the Physical Appearance comparison subscale ($t_{(396)} = -6.23, p < .001$), and the Academic S/A comparison subscale ($t_{(395)} = -1.96, p = .05$).

Ethnic differences were tested with a ONEWAY Analysis of Variance (ANOVA). Results indicate that significant differences were found for comparison of Ability ($F_{(4, 402)} = 2.91$,

$p = .021$) and Average Distress Rating ($F_{(4, 402)} = 3.60, p = .007$). LSD post-hoc tests indicate that White (non-Hispanic) participants scored significantly higher on Ability comparison than Black (non-Hispanic) participants, Hispanic or Latino/a participants, and Asian or Pacific Islander participants. Additionally, Mixed ethnicity or Other participants scored significantly higher on Ability comparison than Black (non-Hispanic) and Asian or Pacific Islander Participants. With Average Distress Rating, Black (non-Hispanic) participants scored significantly higher on Identity Distress than White (non-Hispanic), Hispanic or Latino/a, and Asian or Pacific Islander Participants.

Grade differences were also tested with a ONEWAY Analysis of Variance (ANOVA). Results indicate that significant differences were found for comparison of Opinion ($F_{(5, 401)} = 3.75, p = .002$), comparison of Popularity ($F_{(5, 401)} = 4.34, p < .001$), comparison of Likeness ($F_{(5, 401)} = 2.74, p = .019$), and comparison of Socioeconomic Status ($F_{(5, 400)} = 3.50, p = .004$). LSD post-hoc tests indicate that Freshmen scored significantly higher on comparison of Opinion than Sophomore, Junior, and Senior participants. Similarly, Freshmen scored significantly higher on comparison of Popularity than Sophomore, Junior, Senior, and Other participants. In the comparison of Likeness subscale, Freshmen scored significantly higher than both Sophomore and Junior participants. Finally, Non-Degree Seeking participants scored significantly higher on comparison of Socioeconomic Status than Freshmen, Sophomore, Junior, and Senior participants. Additionally, Freshmen also scored significantly higher than Junior participants on comparison of Socioeconomic Status.

Main Analyses

Hypotheses 1 (Ruminative Identity Exploration will be positively predicted by social

media comparison of Ability, Popularity, Likeness, Physical Appearance, Academic Status/Achievement, Work Status/Achievement, Relationship Status, Family Status, and Socioeconomic Status, as well as negatively predicted by comparison of Opinion) was tested with a multiple regression analysis. Ruminative Identity Exploration served as the dependent variable for the regression analysis. Sex and Age were entered on Step 1 with all the Social Media Comparison factors listed on Step 2. Due to the possibility of increasing the likelihood of a type 1 error from multiple predictors, a Bonferroni correction on the p-value was established such that to reach statistical significance the p-value must be $p < .004$ (p value of .05 divided by 12 predictors). The model was significant ($R^2 = .24$, Adjusted $R^2 = .22$, $F_{(12, 389)} = 10.43$, $p < .001$). Ruminative Identity Exploration was positively predicted by comparison of Work S/A ($\beta = .22$, $t = 3.01$, $p = .003$). For the curious reader it might be of note to mention that Age ($\beta = -.132$, $t = -2.78$, $p = .006$), Sex ($\beta = .110$, $t = 2.34$, $p = .020$), and comparison of Opinion ($\beta = .109$, $t = 2.05$, $p = .041$), did not reach the $p < .004$ significance level, they did however, reach a significance level of $p < .05$. The other Social Media Comparison factors were not significant predictors of Ruminative Identity Exploration, therefore, hypothesis one was only partially supported.

Hypothesis 2 (Identity Exploration in Breadth will be positively predicted by social media comparison of Opinion, Popularity, Academic Status/Achievement, Work Status/Achievement, Relationship Status, and Family Status, but unrelated to comparison of Ability, Likeness, Physical Appearance, and Socioeconomic Status) was tested with a multiple regression analysis. Identity Exploration in Breadth served as the dependent variable for the regression analysis. Sex and Age were entered on Step 1 with all the Social Media Comparison

factors listed on Step 2. Due to the possibility of increasing the likelihood of a type 1 error from multiple predictors, a Bonferroni correction on the p-value was established such that to reach statistical significance the p-value must be $p < .004$ (p value of .05 divided by 12 predictors). The model was significant ($R^2 = .12$, Adjusted $R^2 = .09$, $F_{(12, 389)} = 4.31$, $p < .001$). Identity Exploration in Breadth was positively predicted by comparison of Opinion ($\beta = .199$, $t = 3.46$, $p < .001$). For those who might be interested, while comparison of Physical Appearance ($\beta = -.142$, $t = -2.02$, $p = .044$), comparison of Work S/A ($\beta = .162$, $t = 2.07$, $p = .039$), and comparison of Socioeconomic Status ($\beta = .188$, $t = 2.83$, $p = .005$), did not reach the $p < .004$ significance level, they did however, reach a significance of $p < .05$. The other Social Media Comparison factors were not significant predictors of Identity Exploration in Breadth, therefore, hypothesis two was only partially supported.

Hypothesis 3 (Identity Exploration in Depth will be positively predicted by social media comparison of Opinion, Popularity, Academic Status/Achievement, Work Status/Achievement, Relationship Status, and Family Status, but unrelated to comparison of Ability, Likeness, Physical appearance, and Socioeconomic Status) was tested with a multiple regression analysis. Identity Exploration in Depth served as the dependent variable for the regression analysis. Sex and Age were entered on Step 1 with all the Social Media Comparison factors listed on Step 2. Due to the possibility of increasing the likelihood of a type 1 error from multiple predictors, a Bonferroni correction on the p-value was established such that to reach statistical significance the p-value must be $p < .004$ (p value of .05 divided by 12 predictors). The model was significant ($R^2 = .16$, Adjusted $R^2 = .13$, $F_{(12, 389)} = 6.08$, $p < .001$). Identity Exploration in Depth was positively predicted by comparison of Work S/A ($\beta = .264$, $t = 3.47$, $p < .001$). The other Social

Media Comparison factors were not significant predictors of Identity Exploration in Depth, therefore, hypothesis three was only partially supported.

Hypothesis 4 (Commitment Making will be positively predicted by social media comparison of Opinion, Academic Status/Achievement, Work Status/Achievement, Relationship Status, and Family Status, as well as negatively predicted by comparison of Popularity. Commitment Making will be unrelated to comparison of Ability, Likeness, Physical Appearance, and Socioeconomic Status) was tested with a multiple regression analysis. Commitment Making served as the dependent variable for the regression analysis. Sex and Age were entered on Step 1 with all the Social Media Comparison factors listed on Step 2. Due to the possibility of increasing the likelihood of a type 1 error from multiple predictors, a Bonferroni correction on the p-value was established such that to reach statistical significance the p-value must be $p < .004$ (p value of .05 divided by 12 predictors). The model was not significant ($R^2 = .04$, Adjusted $R^2 = .01$, $F_{(12, 389)} = 1.42$, $p = n.s.$). None of the Social Media Comparison factors were significant predictors of Commitment Making, therefore, hypothesis 4 was not supported.

Hypothesis 5 (Identification with Commitment will be positively predicted by social media comparison of Opinion, Academic Status/Achievement, Work Status/Achievement, Relationship Status, and Family Status, as well as negatively predicted by comparison of Popularity. Identification with Commitment will be unrelated to comparison of Ability, Likeness, Physical Appearance, and Socioeconomic Status) was tested with a multiple regression analysis. Identification with Commitment served as the dependent variable for the regression analysis. Sex and Age were entered on Step 1 with all the Social Media Comparison factors listed on Step 2. Due to the possibility of increasing the likelihood of a type 1 error from multiple predictors, a

Bonferroni correction on the p-value was established such that to reach statistical significance the p-value must be $p < .004$ (p value of .05 divided by 12 predictors). In compliance with the Bonferroni correction, the model was not significant ($R^2 = .05$, Adjusted $R^2 = .03$, $F_{(12, 389)} = 1.85$, $p = .039$). The Social Media Comparison factors were not significant predictors of Identification with Commitment, therefore, hypothesis five was not supported.

Hypothesis 6 (Identity Distress will be positively predicted by Ruminative Identity Exploration, Identity Exploration in Breadth, and Identity Exploration in Depth, as well as negatively predicted by Commitment Making and Identification with Commitment) was tested with a multiple regression analysis. Sex and Age were entered on Step 1, the 5 Identity Development factors listed on Step 2, with Identity Distress as the dependent measure. Due to the possibility of increasing the likelihood of a type 1 error from multiple predictors, a Bonferroni correction on the p-value was established such that to reach statistical significance the p-value must be $p < .007$ (p value of .05 divided by 7 predictors). The model was significant ($R^2 = .34$, Adjusted $R^2 = .32$, $F_{(7, 396)} = 28.51$, $p < .001$). Identity Distress was positively predicted by sex ($\beta = .140$, $t = 3.35$, $p < .001$), Ruminative Exploration ($\beta = .470$, $t = 8.19$, $p < .001$), and Exploration in Depth ($\beta = .147$, $t = 2.96$, $p = .003$), and negatively predicted by Commitment Making ($\beta = -.223$, $t = -3.47$, $p < .001$). While Identification with Commitment ($\beta = .142$, $t = 2.02$, $p = .045$), did not reach the $p < .007$ significance level, it did however, reach a significance of $p < .05$. Not all the Identity Development factors significantly predicted Identity Distress, therefore, hypothesis six was only partially supported.

Hypothesis 7 (Identity Distress will be predicted by both Social Media Comparison factors and Identity Development factors; however, the Identity Development factors will be much better

predictors (account for a greater percentage of the variance) than the Social Media factors alone) was tested with a multiple regression analysis. Sex and Age were entered on Step 1, the Social Media Comparison factors were listed on Step 2, the 5 Identity Development factors listed on Step 3, with Identity Distress as the dependent measure. The model was significant ($R^2 = .38$, Adjusted $R^2 = .35$, $F_{(17, 384)} = 13.91$, $p < .001$). On step 2, significant predictors were comparison of Opinion ($\beta = .114$, $t = 2.13$, $p = .034$), Work S/A ($\beta = .165$, $t = 2.28$, $p = .023$), and Relationship Status ($\beta = .174$, $t = 2.56$, $p = .011$). However, on step 3 when the identity factors were entered, the comparison factors were no longer significant predictors of Identity Distress. On step 3, Identity Distress was positively predicted by Sex ($\beta = .127$, $t = 2.93$, $p = .004$) and Ruminative Identity Exploration ($\beta = .360$, $t = 5.97$, $p < .001$), and negatively predicted by Commitment Making ($\beta = -.226$, $t = -3.55$, $p < .001$). Hypothesis seven was supported in that Identity Development factors were better predictors of Identity Distress than Social Media Comparison factors, however not all Identity Development factors were significant predictors. See Figure 3 for the results of the expanded model.

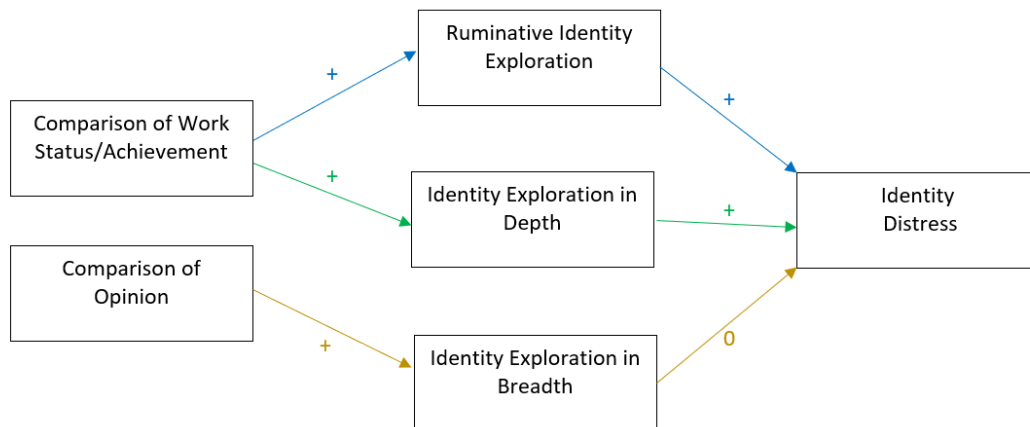


Figure 3. Results for the tests of the expansion of Yang and colleague’s model.

Note: +, -, 0, refer to the direction of association, positive, negative, or not related (respectively).

DISCUSSION

While the various hypotheses presented for this thesis were only partially supported, the resulting data are generally consistent with the findings of Yang and colleagues (2018), and the idea that identity factors mediate the relationship between social media comparison and identity distress, however, the correlational design of this study precludes any assertion of proof of mediation.

With Hypothesis 1, Ruminative Identity Exploration was positively predicted by comparison of Work S/A. This is consistent with this study's hypothesis that if emerging adults were to see a peer of theirs in a job position, they had sought after and failed to obtain, this might lead them to ruminate as to why they were not picked for the position. Additionally, participants are currently attending university, assuming the end goal is to receive a bachelor's degree to further pursue a career, participants might ruminate over their Work Status/Achievements. Comparison of Popularity did not predict Ruminative Identity Exploration which could be due to participant age. It is possible that emerging adults would not have a great motivation to achieve and/or preserve popularity like younger adolescents might. Similarly with comparison of Physical Appearance and Likeness, it is possible that many emerging adults are no longer ruminating over their appearance or their amount of likes and followers on social media. Furthermore, Relationship, Family, and Socioeconomic Status were not significant predictors of Ruminative Identity Exploration. Participants were not asked to specify if they were currently in a relationship or not at the time of data collection, which depending on their response, may or may not be a significant indicator of rumination. Adamczyk and Luyckx's (2015) study found that single young adult participants scored higher on ruminative exploration, exploration in

breadth, and exploration in depth when compared with partnered participants. Additionally, participants were not asked if they want children or have considered having children, regarding Family Status. It is possible that many emerging adults might not consider or want children at this time in their lives. Similarly, participants were not asked about their Socioeconomic Status. It can be assumed many students at a metropolitan university have a comfortable living wage which would not lead to rumination over their own socioeconomic status. Comparison of Academic S/A was not a significant predictor of Ruminative Exploration which might be due to a couple possibilities. Participants might have an already formed adult identity which allows them to accurately predict their academic strengths and weakness (Lange & Byrd, 2002); therefore, the participant might not need to ruminate. Additionally, if participants were exceptional students, they might not ruminate over their academic standing.

Regarding comparison of Opinion and Ability, Yang and colleagues (2018) found comparison of Ability positively predicted general rumination which then positively predicted identity distress. In the current study, general rumination was replaced with Ruminative Identity Exploration and comparison of Ability was not a significant predictor. This could be due to participants already having formed an adult identity which makes their rumination more general and not identity specific. Additionally, Yang (2018) found that comparison of Opinion positively predicted general reflection which then negatively predicted identity distress. In the current study, it was predicted that comparison of Opinion would negatively predict Ruminative Identity Exploration; however, Opinion was not a significant predictor. While the comparison of Opinion did not meet significance due to the Bonferroni correction, it would have significantly predicted Ruminative Identity Exploration if the correction were not in place. This indicates that more

studies should be done to further test these social media comparison categories and their relationship with identity exploration.

With Hypothesis 2, Identity Exploration in Breadth was positively predicted by comparison of Opinion. This is consistent with the idea that a more reflective type of identity exploration would be positively predicted by comparison of Opinion, as per Yang and colleagues (2018) findings. Additionally, comparison of Ability, Likeness, Physical Appearance and Socioeconomic Status were not significantly related to Exploration in Breadth. Yang and colleagues' (2018) findings suggest comparison of Ability does not predict general reflection. Therefore, Identity Exploration in Breadth, a self-reflective type of exploration, is not significantly predicted by comparison of Ability. Furthermore, this study hypothesized comparison on Likeness, Ability, Physical Appearance, and Socioeconomic Status were to only correlate with Ruminative Identity Exploration and to have no relationship with any type of self-reflective identity development. Additionally, comparison of Work S/A, Academic S/A, Popularity, Relationship, and Family Status did not significantly predict Exploration in Breadth like previously hypothesized in this study. While Dumas and colleagues' (2019) study found that adolescents who prioritize popularity have stronger popularity motivations and thus greater motivations to preserve and/or achieve popularity, which would require identity exploration, it is possible many participants had already formed an adult identity and thus did not hold as much value toward their own popularity. Similarly, an already formed adult identity would not require participants to explore their academic capabilities (Lange & Byrd, 2002), and thus, would not predict identity exploration in the comparison of Academic S/A. Moreover, participants were not asked their current relationship status for prediction purposes. It is possible many participants

were in a relationship at the time of the study which would not predict identity exploration (Adamczyk & Luyckx's, 2015). As previously stated, due to participant age, comparison of Family Status could be of no concern to participants and thus would not correlate with Exploration in Breadth. While the comparison of Work S/A did not meet significance due to the Bonferroni correction, it would have significantly predicted Exploration in Breadth if the correction were not in place. Additionally, comparison of Physical Appearance and Socioeconomic Status would be a significant predictor as well. This further indicates that more studies should be done to further test these social media comparison categories and their relationship with identity exploration.

Similarly with Ruminative Identity Exploration, only comparison of Work S/A positively predicted Identity Exploration in Depth in Hypothesis 3. Luyckx and colleagues (2008) found a small positive association between anxiety and Exploration in Depth, along with a larger positive association with anxiety and Ruminative Identity Exploration. This suggests Exploration in Depth is more similar to rumination and less self-reflective. As hypothesized in this study, emerging adults who were to view an individual in a career they had never considered before would engage in identity exploration. Students attending university might reevaluate their previous identity commitments by comparing their Work Status/Achievements with others via social media. Additionally, comparison of Ability, Likeness, Physical Appearance, and Socioeconomic Status were not significant predictors of Exploration in Depth. As previously hypothesized by this study, these categories would not predict self-reflective types of identity exploration. Moreover, comparison of Opinion, Popularity, Academic S/A, Relationship and Family Status were not positive predictors of Identity Exploration in Depth. While comparison of

Opinion positively predicted the more self-reflective type of Identity Exploration of Breadth, it did not positively predict Exploration in Depth. This could be due to Exploration in Depth being less self-reflective than breadth-based exploration. As previously stated, participants who have already formed an adult identity might not value their own popularity enough to compare their own to that of their peers. Comparison of Academic S/A might also not occur as their academic capabilities do not require exploration (Lange & Byrd, 2002). While participants could have formed an adult identity, this does not necessarily predict their readiness in life to consider having children or a need to compare their Family Status to their peers. Furthermore, many participants might have been in a relationship and thus less likely to be engaged in identity exploration (Adamczyk & Luyckx's, 2015).

With Hypothesis 4, Commitment Making was not significantly predicted by comparison of Ability, Likeness, Physical Appearance and Socioeconomic Status. This is in line with the idea put forth in this thesis that these social media comparison categories would not predict self-reflective types of identity development. Additionally, none of the other social media comparison categories significantly predicted Commitment Making which is inconsistent with what was hypothesized in this study. This is the same result as in Hypothesis 5, where Identification with Commitment was not significantly predicted by comparison of Ability, Likeness, Physical Appearance and Socioeconomic Status. However, the other comparison categories did not predict Identification with Commitment which is inconsistent with the hypotheses of this study. With both Commitment Making and Identification with Commitment, Sex and Age were not significant predictors like with Ruminative Identity Exploration. It could be that participants have already formed an adult identity and therefore would have completed these stages of their

identity development. Interestingly, while Identification with Commitment did not meet the level of significance due to the Bonferroni correction, it would have been significant had the correction not been in place, with comparison of Physical Appearance being a significant predictor of Identification with Commitment. This further indicates that more studies should be done to test these social media comparison categories and their relationship with the dimensions of identity development.

Hypothesis 6 is different from the previous hypotheses in that it concerns Identity Distress in relation to the dimensions of identity development. Ruminative Identity Exploration and Identity Exploration in Depth positively correlated with Identity Distress while Commitment Making was negative correlated. This is consistent with previous findings (Luyckx et al., 2008) that Ruminative Exploration positively associated with Identity Distress and Commitment Making negatively associated with Identity Distress. Additionally, Luyckx (2008) found that both Exploration in Breadth and Depth had no significant correlation with Identity Distress. While in the current study Exploration in Breadth was not found to be significantly correlated, Exploration in Depth was. In both Albrecht's (2007) and Berman's (2020) findings, identity exploration in general was found to be correlated with higher Identity Distress. Additionally, without the Bonferroni correction, Identification with Commitment positively associated with Identity Distress. These conflicting results indicate further tests should be done on the relationship between the dimensions of identity development and Identity Distress.

Hypothesis 7 predicted that the social media comparison categories would predict Identity Distress, but the identity development factors would consist of stronger predictors. While both Ruminative Identity Exploration and Commitment Making were strong positive

predictors of Identity Distress, which is consistent with Hypothesis 6 findings, none of the social media comparison categories were significant predictors once the identity variables were added into the regression equation. This is consistent with Yang and colleagues (2018) findings, and the idea that identity factors mediate the relationship between social media comparison. However, mediation cannot be established for certain with cross-sectional data, so longitudinal studies might be helpful to further explore this possible relationship.

Limitations and Future Studies

The limitations of this thesis include the cross-sectional nature of this study versus a longitudinal study. A cross-sectional study involves gathering data from participants only once in a single moment in time. With this design, researchers are not able to observe any developments or changes in the participant over time, as well as the intra-individual range of responding (e.g., observation of good vs. bad days). The correlational design of this study precludes any assertion of proof of mediation. Additionally, making causal inferences with cross-sectional data is discouraged as the data captured at one point in time should not necessarily be used to make assumptions about causal processes. Longitudinal studies would help in this regard. These studies follow a participant over a long period of time and can observe changes over time. Another limitation to this study is that participants self-reported their social media comparison behavior in the survey. Participants may be dishonest with the researchers and themselves. They may want to believe they do not inherently compare aspects of their lives to that of others via social media, but outside sources may report differently. Interviewing participant peers in order to receive multiple collateral reports would help with this problem. Finally, the use of the Bonferroni correction is a limitation in this study. While necessary to prevent a Type I error, this

correction ultimately limited significant results in the study. Certain categories tested were made not significant due to the correction, which otherwise may have been. To correct this limitation in future studies, researchers could test a smaller, more select group of social media categories and/or identity development factors, that would not put them at risk of making a Type I error.

Appendix A: IRB Approval Letter



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board
FWA00000351
IRB00001138, IRB00012110
Office of Research
12201 Research Parkway
Orlando, FL 32826-3246

EXEMPTION DETERMINATION

May 18, 2022

Dear Steven Berman:

On 5/18/2022, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Initial Study
Title:	Social Media Usage
Investigator:	Steven Berman
IRB ID:	STUDY00004290
Funding:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> • Social_Media_Usage Survey.docx, Category: Survey / Questionnaire; • Study4920, Consent 2.pdf, Category: Consent Form; • Study4920,Protocol 2.docx, Category: IRB Protocol

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Jonathan Coker
Designated Reviewer

Appendix B: Explanation of Research



UNIVERSITY OF
CENTRAL FLORIDA

EXPLANATION OF RESEARCH

Title of Project: Social Media Usage

Principal Investigator: Steven L. Berman

Co-Investigators: Lillie del Real, Reilly Branch

You are being invited to take part in a research study. Whether you take part is up to you.

For this research, we are interested in observing the relationship between the ways in which you use social media and your identity (the roles, goals, and values that give your life direction and meaning). You will be asked to answer questions on an online survey about your demographics, the ways in which you use social media, and questions about your sense of identity. The survey will take approximately 30 minutes to complete.

Please be assured that your responses on this survey are anonymous. No identifiable information will be collected. Your data will be stored on a password protected computer for five years after study closure per Florida law. The only people with access to this data are the members of the research team.

To take part in this research study, you must be 18 years of age or older and use social media.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, please contact Dr. Steven L. Berman (principal investigator): steven.berman@ucf.edu or Lillie del Real (co-investigator): ldelreal@knights.ucf.edu.

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

Appendix C: Means, Standard Deviations, and Ranges for All Study Variables

Table 1

Descriptive Statistics for All Study Variables

	<i>M</i>	<i>SD</i>	Possible Range	Actual Range
Opinion	3.02	.85	1.00 – 5.00	1.00 – 5.00
Ability	3.00	.84	1.00 – 5.00	1.00 – 5.00
Popularity	2.31	.91	1.00 – 5.00	1.00 – 5.00
Likeness	2.62	1.04	1.00 – 5.00	1.00 – 5.00
Physical Appearance	3.24	1.04	1.00 – 5.00	1.00 – 5.00
Academic Status/Achievement	2.21	1.02	1.00 – 5.00	1.00 – 5.00
Work Status/Achievement	2.44	1.03	1.00 – 5.00	1.00 – 5.00
Relationship Status	2.44	.72	1.00 – 5.00	1.00 – 5.00
Family Status	2.22	.69	1.00 – 5.00	1.00 – 5.00
Socioeconomic Status	2.94	.85	1.00 – 5.00	1.00 – 5.00
Commitment Making	5.37	1.36	1.00 – 7.00	1.00 – 7.00
Identity Exploration in Breadth	5.40	1.09	1.00 – 7.00	1.00 – 7.00
Ruminative Identity Exploration	4.02	1.60	1.00 – 7.00	1.00 – 7.00
Identification with Commitment	5.33	1.21	1.00 – 7.00	1.00 – 7.00
Identity Exploration in Depth	5.28	1.00	1.00 – 7.00	1.00 – 7.00
Average Identity Distress Rating	2.17	.75	1.00 – 5.00	1.00 – 5.00

Appendix D: Correlation Matrix of Age Relationships

Table 2

Correlation Matrix of Age Relationships

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	--															
2. Opinion	-.20**	--														
3. Ability	-.18**	.48**	--													
4. Popularity	-.23**	.28**	.54**	--												
5. Likeness	-.17**	.24**	.55**	.75**	--											
6. Physical Appearance	-.15**	.33**	.59**	.58**	.58**	--										
7. Academic S/A	-.12*	.37**	.41**	.38**	.29**	.40**	--									
8. Work S/A	-.02	.42**	.42**	.36**	.30**	.39**	.73**	--								
9. Relationship Status	-.18**	.35**	.51**	.52**	.51**	.54**	.49**	.53**	--							
10. Family Status	.02	.27**	.42**	.36**	.36**	.35**	.40**	.44**	.57**	--						
11. SES	-.15**	.32**	.52**	.45**	.46**	.57**	.39**	.49**	.58**	.47**	--					
12. Commitment Making	.09	-.02	-.02	-.12*	-.09	-.13**	-.06	-.07	-.08	.02	-.06	--				
13. Exploration in Breadth	-.03	.26**	.17**	.14**	.09	.09	.15**	.23**	.14**	.15**	.23**	.06	--			
14. Ruminative Exploration	-.19**	.29**	.26**	.25**	.22**	.32**	.35**	.38**	.35**	.22**	.35**	-.49**	.29**	--		
15. Identification with Commitment	.02*	-.04	-.02	-.06	-.07	-.17**	-.05	-.05	-.05	.04	-.07	.76**	.10*	-.55**	--	
16. Exploration in Depth	-.02*	.25**	.24**	.15**	.11*	.14**	.24**	.34**	.27**	.20**	.25**	.29**	.40**	.13**	.32**	--
17. Average Distress Rating	-.09	.29**	.26**	.25**	.23**	.33**	.35**	.37**	.37**	.27**	.30**	-.30**	.17**	.53**	-.24**	.18**

* $p < .05$, ** $p < .01$, *** $p < .001$

**Appendix E: Regression Analysis with Social Media Comparison Factors to
Predict Identity Factors**

Table 3

Regression Analysis with Social Media Comparison Factors to Predict Identity Factors

	Ruminative Exploration			Exploration in Breadth			Commitment Making			Exploration in Depth			Identification with Commitment		
	β	t	P	β	t	p	β	t	p	β	t	p	β	t	p
Age	-.13	-2.78	.006	.02	.40	.693	.07	1.39	.166	-.08	-1.50	.135	.10	1.85	.065
Sex	.11	2.34	.020	.01	.22	.824	-.01	-.21	.838	.05	.92	.360	-.01	-.12	.901
Social Media Comparison:															
Opinion	.11	2.05	.041	.20	3.46	<.001	.01	.17	.869	.08	1.46	.146	-.01	-.20	.844
Ability	-.07	-1.13	.258	.01	.14	.886	.12	1.68	.094	.11	1.55	.122	.12	1.70	.089
Popularity	.01	.14	.889	.10	1.28	.203	-.09	-1.12	.266	.01	.12	.905	.04	.45	.652
Likeness	-.04	-.51	.614	-.04	-.51	.608	-.01	-.08	.937	-.10	-1.32	.187	-.02	-.29	.775
Physical	.07	1.13	.260	-.14	-2.02	.044	-.14	-1.85	.066	-.11	-1.56	.119	-.24	-3.28	.001
Academic S/A	.04	.60	.549	-.07	-.89	.375	.02	.30	.763	-.06	-.85	.395	.02	.23	.816
Work S/A	.22	3.01	.003	.16	2.07	.039	-.09	-1.13	.260	.26	3.47	<.001	-.07	-.88	.382
Relationships	.12	1.73	.085	-.06	-.80	.422	-.03	-.43	.671	.13	1.84	.067	.01	.12	.905
Family	-.05	-.85	.394	.01	.23	.819	.08	1.26	.208	-.00	-.01	.992	.09	1.34	.181
SES	.12	1.94	.053	.19	2.83	.005	.03	.40	.693	.07	1.04	.297	.00	.02	.987

Appendix F: Regression Analysis Predicting Identity Distress

Table 4

Regression Analysis Predicting Identity Distress

	Identity Distress			Identity Distress		
	Step 2			Step 3		
	β	t	p	β	t	p
Age	-.04	-.79	.428	.02	.49	.623
Sex	.17	3.65	<.001	.13	2.93	.004
Social Media Comparison:						
Opinion	.11	2.13	.034	.08	1.53	.126
Ability	-.08	-1.18	.238	-.05	-.80	.425
Popularity	-.01	-.07	.944	-.03	-.48	.630
Likeness	-.03	-.42	.677	-.01	-.11	.910
Physical	.11	1.70	.089	.09	1.49	.137
Academic S/A	.06	.94	.348	.06	.91	.365
Work S/A	.17	2.28	.023	.06	.81	.418
Relationship	.17	2.56	.011	.11	1.75	.081
Family	.01	.13	.898	.03	.64	.526
SES	.02	.27	.788	-.02	-.38	.702
Identity Variables:						
Commitment Making				-.23	-3.55	<.001
Exploration in Breadth				-.03	-.53	.597
Ruminative Exploration				.36	5.97	<.001
Identification with Commitment				.12	1.76	.079
Exploration in Depth				.09	1.81	.071

Appendix G: Survey Battery

Social Media Usage

Start of Block: Demographic Survey

Q1 How do you define your Sex?

- Male (1)
- Female (2)
- Transgender (3)
- Non-binary (4)
- Other (5)

Display This Question:

If How do you define your Sex? = Other

Q30 If you chose "Other" please specify or explain how you define your sex.



Q2 What is your age?

Skip To: End of Survey If Condition: What is your age? Is Less Than or Equal to 17. Skip To: End of Survey.

Q3 Select the ethnic/racial identifier that best describes you:

- White, non-Hispanic (1)
- Black, non-Hispanic (2)
- Hispanic or Latino/a (3)
- Asian or Pacific Islander (4)
- Native American or Alaskan Native (5)
- Mixed ethnicity or Other (6)

Display This Question:

If Select the ethnic/racial identifier that best describes you: = Mixed ethnicity or Other

Q31 If you chose "Mixed ethnicity or Other" please specify or explain the ethnic/racial identifier that best describes you.

Q4 What year are you at university?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Non-degree Seeking (5)
- Graduate student (6)
- Other (7)

Display This Question:

If What year are you at university? = Other

Q32 If you chose "Other" please specify or explain what year you are at university.

End of Block: Demographic Survey

Start of Block: Social Media Comparison Measure

Q6 SMCM

Opinion Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I try to know what others would do in a similar situation. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I try to know other's views on political issues to expand my own views. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I try to know other's views on social issues to expand my own views. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I try to know other's opinions on things I like and am passionate about. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I try to know what other's opinions are on things I dislike. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 SMCM

Ability Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I try to know how well I have done something by comparing what I have done to others. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I compare my photo taking skills to others to determine if my skills are adequate. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I pay attention to what others can do. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I follow those who do things I want to do. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I showcase my own abilities. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q9 SMCM

Popularity Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the

following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I pay attention to the number of followers others have. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I pay attention to the number of photos others have been tagged in. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I compare the number of followers I have to others. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I look at who is following certain people. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I follow others based on how many followers they have. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q10 SMCM

Likeness Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I pay attention to the number of comments and likes others have on their posts. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I compare the amount of likes and comments I receive to others. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I try to maximize the amount of likes and comments I receive. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I use the feature to hide the amount of likes I receive because I am embarrassed for not having as many likes as others. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I check the amount of likes and comments I receive after posting. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q11 SMCM

Physical Appearance Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I pay attention to the physical appearance of others. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I compare the way I look to how others look. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I only post photos of myself if I believe I look attractive in them. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I compare my body to others. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I avoid posting photos of myself out of fear of being judged on my appearance. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q12 SMCM

Academic Status/Achievements Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I compare my grades to others. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I pay attention to when my peers are graduating. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I pay attention to who is in the honors college. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I compare the difficulty of my major to that of others. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I compare my academic standing to others. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q13 SMCM

Work Status/Achievements Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I look to see what type of jobs others have. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I compare my career path to others. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I pay attention to internships others may have. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I compare the amount of money my job pays to others. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I look to see what types of careers others have as a way of determining my career path. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q14 SMCM

Relationship Status Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I follow those who are in a relationship. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I enjoy seeing other's relationships. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I tend to not follow those who are in a relationship. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I compare my relationship status (single, in a relationship, married, divorced) to others. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I view others' relationships to determine if I want a similar relationship of my own. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q15 SMCM

Family Status Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I follow those who have children. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I view others' families to determine if I want a similar family of my own. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I compare my family status (children vs. no children) to others. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I avoid others who have children. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I enjoy seeing others' families/children. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q17 SMCM

Socioeconomic Status Subscale

Instructions: Look at each of the statements and respond with how often you use social media for the following purposes.

	Never (1)	Rarely (2)	Some of the time (3)	Most of the time (4)	All the time (5)
1. On social media, I follow those who live a luxurious lifestyle. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On social media, I compare my lifestyle (average vs. luxurious) to others. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On social media, I envy those who live a luxurious lifestyle. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On social media, I follow those who lead an average lifestyle. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. On social media, I like to see posts of others luxurious lifestyle. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Social Media Comparison Measure

Start of Block: DIDS

Q19 DIDS

Please select to what degree you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Unsure (4)	Slightly agree (5)	Agree (6)	Strongly agree (7)
1. I have decided on the direction I am going to follow in my life. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I have plans for what I am going to do in the future. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I know which direction I am going to follow in my life. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I have an image about what I am going to do in the future. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have made a choice on what I am going to do with my life. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q20 DIDS

Please select to what degree you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Unsure (4)	Slightly agree (5)	Agree (6)	Strongly agree (7)
6. I think actively about different directions I might take in my life. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I think about different things I might do in the future. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I am considering a number of different lifestyles that might suit me. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I think about different goals that I might pursue. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I am thinking about different lifestyles that might be good for me. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q21 DIDS

Please select to what degree you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Unsure (4)	Slightly agree (5)	Agree (6)	Strongly agree (7)
11. I am doubtful about what I really want to achieve in life. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I worry about what I want to do with my future. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I keep looking for the direction I want to take in my life. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I keep wondering which direction my life has to take. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. It is hard for me to stop thinking about the direction I want to follow in my life. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q22 DIDS

Please select to what degree you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Unsure (4)	Slightly agree (5)	Agree (6)	Strongly agree (7)
16. My plans for the future match with my true interests and values. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. My future plans give me self-confidence. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Because of my future plans, I feel certain about myself. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I sense that the direction I want to take in my life will really suit me. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I am sure that my plans for the future are the right ones for me. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q23 DIDS

Please select to what degree you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Unsure (4)	Slightly agree (5)	Agree (6)	Strongly agree (7)
21. I think about the future plans I already made. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I talk with other people about my plans for the future. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I think about whether the aims I already have for life really suit me. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. I try to find out what other people think about the specific direction I decided to take in my life. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. I think about whether my future plans match with what I really want. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: DIDS

Start of Block: IDS

Q24 IDS

To what degree have you recently been upset, distressed, or worried over the following issues in your life?

	Not at all (1)	Mildly (2)	Moderately (3)	Severely (4)	Very severely (5)
1. Long term goals? (e.g., finding a good job, being in a romantic relationship, etc.) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Career choice? (e.g., deciding on a trade or profession, etc.) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Friendships? (e.g., experiencing a loss of friends, change of friends, etc.) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Sexual orientation and behavior (e.g., feeling confused about sexual preferences, intensity of sexual needs, etc.) (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Religion (e.g., stopped believing, changed your belief in God/religion, etc.) (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Values or beliefs? (e.g., feeling confused about what is right or wrong, etc.) (6)

7. Group loyalties? (e.g., belonging to a club, school group, gang, etc.) (7)

End of Block: IDS

Start of Block: Validity Check

Q29 It is vital to our study that we only include responses from people that devoted their full attention to this study. Otherwise, years of effort (the researchers and the time of other participants) could be wasted. Often there are several distractions present during online studies (e.g., other people, television, music).

In your honest opinion, should we use your data in our analyses in this study?

We appreciate your honesty! (You will receive credit for this study no matter what.)

Yes (1)

No (2)

End of Block: Validity Check

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