The Impact of Financial Influencers on Social Media on the Financial Literacy of Young Adults

Stef Geenen

SNR: 2086387

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Communication and Information Sciences

Business Communication and Digital Media

School of Humanities and Digital Science

Tilburg University

Supervisor: Dr. L. Coenen

Second Reader: Dr. J. Verhoeven

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Abstract

In recent years, the emergence of financial influencers on social media has introduced a new avenue for financial advice among young adults. Financial advice given by financial influencers on social media could improve the financial literacy of young adults. However, little research has been done to explore the impact of these influencers, as they are relatively new on social media. Therefore, this study aimed to investigate the relationship between exposure to financial influencers and the financial literacy of young adults, while also exploring the potential moderating role of education in this relationship. The relationship between financial knowledge, financial attitude, and financial behavior was investigated as components of financial literacy. In line with the Theory of Planned Behavior, subjective norms and perceived behavioral control were examined as possible predictors of financial behavior. A total of 318 participants between the age of 18 and 29 years old completed the online questionnaire. The findings from the study indicate that exposure to financial influencers does not significantly impact financial knowledge, and this relationship is not influenced by educational level. Additionally, it was observed that financial knowledge does not directly affect financial attitude. However, both financial knowledge and financial attitude were found to positively influence financial behavior. The results demonstrated that perceived behavioral control significantly predicts financial behavior, while subjective norms do not play a significant role. Overall, the study highlights the importance of financial knowledge, financial attitude, and perceived behavioral control in shaping the financial behavior of young adults, validating the Theory of Planned Behavior. No evidence of the role of exposure to financial influencers in this process was found. Practical implications are discussed.

Keywords: financial influencers, social media, financial literacy, financial knowledge, financial attitude, financial behavior

The Impact of Financial Influencers on Social Media on the Financial Literacy of Young Adults

The economic crisis that resulted from the COVID-19 pandemic has affected people all over the world. The cost of living has risen, many people lost their jobs, and people have been struggling to pay their bills (OECD, 2021). Young adults also struggled with these consequences of the pandemic, whether they were enrolled in school or had recently begun their careers. They face important financial decisions that will significantly impact their financial future. However, young adults are commonly known to struggle with managing their finances. Research has shown that young adults lack basic financial knowledge (Lusardi et al., 2010), lack financial literacy (De Bassa Scheresberg, 2013), and are not prepared to face the many financial challenges in their lives (Mottola, 2015). At the same time, young adults are aware that they will benefit from improving their financial literacy and they are highly motivated to do so (Davis & Hasler, 2021). To handle financial setbacks properly, and to be able to make important financial decisions, financial literacy is a necessary skill for young adults (Van Rooij et al., 2011). Financial literacy could be described as "the knowledge of basic economic and financial concepts, as well as the ability to use that knowledge and other financial skills to manage financial resources effectively for a lifetime of financial well-being" (Hung et al., 2009).

Young adults have grown interested in their finances in recent years. The economic instability resulting from the COVID-19 pandemic is an important reason for this, which functioned as a wake-up call for young adults to get a better grip on their financial situation (Ameriprise Financial, Inc., 2021). Social media further fuel this interest, as many financial topics such as saving, investing, and budgeting are discussed on social media platforms (Yang, 2023). A survey by Sortlist Data Hub (2022), which specializes in marketing data reports, revealed that social media is the main source of financial information for 36% of the respondents. Another study found that 56% of young adults intentionally seek out financial advice online or through social media (Credit Karma, 2021). Young adults rely on social media to learn new things, and using social media for personal finance has shown successful financial outcomes. As a consequence of experiencing favorable financial outcomes, users opt to

continue using social media for personal finance purposes (Cao et al., 2020). Recent research has focused on the role of social media in building financial literacy among young adults. For example, a study by Mountain et al. (2021) found what types of financial learning activities affected young adults' financial knowledge and financial behavior. Another study by Cao et al. (2020) found that social media could serve as a credible and beneficial resource for young adults seeking to enhance their financial well-being. The same results were found in a study by Yanto et al. (2021), who argue that students' exposure to social media improves financial literacy.

Young adults prioritize financial advice that is easy to understand, personalized, and free (Noore, 2023). Moreover, it is important for young adults to receive financial advice from someone they identify with (Principato, 2022). This may cause young adults to seek their information from a financial influencer rather than from more traditional forms of financial information. As social media gains prominence as a significant source of financial information for young adults, the role of financial influencers in this process becomes increasingly crucial. These so-called 'finfluencers', who provide financial advice to their followers, have been on the rise since the pandemic, outpacing other industries in subscriber growth and activity (Emplifi, 2022). Chikhi (2021) discovered that the vast amount of content produced by financial influencers ensures personalized financial education for young adults on social media. Additionally, 78% of the respondents of a study by Sortlist Data Hub (2022) say that financial influencers have convinced them to buy a financial asset. However, it remains unclear what the role of financial influencers in improving young adults' financial literacy is, as it is a relatively new phenomenon. Understanding the link between financial influencers and the financial literacy of young adults is important as financial influencers are becoming increasingly popular and influential on social media. The current study aims to explore the following research question:

RQ: What is the relationship between exposure to financial influencers on social media and the financial literacy of young adults?

Theoretical Framework

Financial (il)literacy

According to the Corporate Finance Institute (2023), financial literacy is "the cognitive understanding of financial components and skills such as budgeting, investing, borrowing, taxation, and personal financial management". The lack of such skills is commonly referred to as financial illiteracy. Hung et al. (2009) found that researchers use numerous interpretations of financial literacy in the present literature. After reviewing multiple definitions, Hung et al. formulated a composite definition of financial literacy that builds upon the concepts presented in those previous definitions, namely; "the knowledge of basic economic and financial concepts, as well as the ability to use that knowledge and other financial skills to manage financial resources effectively for a lifetime of financial well-being". Some studies only focus on financial knowledge when assessing financial literacy. However, as noted by Hung et al. in their definition, financial literacy encompasses more than just financial knowledge; it also involves the capacity to effectively apply that knowledge. In research on how to measure financial literacy, Huston (2009) also explains that financial literacy not only consists of knowledge but also the ability and confidence to apply or use this knowledge.

According to the Organization for Economic Cooperation and Development (OECD), financial literacy consists of not only financial knowledge but also encompasses two other crucial components: financial attitude and financial behavior (OECD INFE, 2011). The OECD, alongside other studies (Agarwalla et al., 2013; Atkinson & Messy, 2012), measures financial literacy as a combination of financial knowledge, financial attitude, and financial behavior. Studies have regularly adhered to the OECD components in their research. Nevertheless, summing up the scores of the components to yield an overall financial literacy score was shown to potentially produce deceptive results (Fessler et al., 2020).

When treating the components as separate variables, and thus not adding them up for a total financial literacy score, a positive link between financial knowledge and financial behavior was found

in the study by Fessler et al. This relationship was mediated by financial attitude (Fessler et al., 2020; Yahaya et al., 2019). Examining financial literacy based on the three components of knowledge, attitude, and behavior seems justified, as positive financial outcomes of financial literacy can not only be based on financial knowledge but also rely on financial attitude and behavior (Atkinson & Messy, 2012). As Atkinson & Messy also mention in their study, financial literacy and the financial well-being that follows from it, are not a result of mere financial knowledge. A positive attitude towards finances and adequate financial behavior are needed for an individual to be considered financially literate (Vidovićová, 2021).

Social Media & Financial Influencers

Several factors can influence an individual's financial knowledge, attitude, and behavior. While the social environment, past experiences, and education are recognized as influential factors, the role of media, particularly social media, is becoming increasingly important in this process (Stephen, 2016). Social media has become a prominent platform that serves various purposes for individuals, including social interaction, information seeking, entertainment, and sharing of information (Whiting & Williams, 2013). Previous research shows that the information that is shared on social media can impact young adults' financial decision-making and behavior. According to the study conducted by Yanto et al. (2021), financial exposure from social media accounts for 58% of the variance in financial management behavior. This suggests that exposure to financial information plays a significant role in shaping individuals' financial behavior and decisions. Furthermore, a study by Cao et al. (2020) intended to find out whether social media could be a useful tool for improving financial literacy. The findings of the study indicate that using social media for personal finance purposes was linked to favorable financial outcomes and that social media could be a useful tool to improve financial well-being.

Moreover, young adults find it increasingly important that they receive financial information and advice from someone they identify with, such as a social media influencer (Egan, 2023). A social

media influencer is “someone who can affect the purchasing decisions of others because of his or her authority, knowledge, position, or relationship with his or her audience and has a following in a distinct niche, with whom he or she actively engages” (Geyser, 2023). More recently, social media influencers have emerged within the financial niche, as mainly young adults are growing a strong interest in financial topics (Fanbytes, 2023). These so-called ‘financial influencers’ (or finfluencers) are individuals who utilize social media platforms or other digital channels to share their expertise, insights, and recommendations related to personal finance, investment, and financial management. These individuals actively engage with their audience, influencing their financial decision-making processes (Obodeze, 2023). Financial influencers mostly share personal experiences, tips, information, and trends related to financial topics through platforms such as TikTok, Instagram, and YouTube. An example of a financial influencer is Humphrey Yang, who is currently the most popular financial influencer with a total of 54 million followers, likes, and subscribers across his social media platforms. He mostly advises on personal finance and saving while also collaborating with other organizations to help his followers (Pardo, 2023). The key to the success of financial influencers is accessibility and relevance (Radey, 2015). The content they produce is understandable and relevant for the young audience they try to reach.

Theory of Planned Behavior

The relationships between knowledge, attitude, and behavior in the context of financial literacy are subject to frequent examination, with researchers often employing the Theory of Planned Behavior (1991) (TPB) as a valuable theoretical base for investigation. The TPB proposes that intentions to perform a certain behavior can be predicted by attitude towards the behavior, subjective norms, and perceived behavioral control. These three key concepts eventually shape an individual’s actual behavior.

Attitude

Attitudes refer to individuals' overall evaluations and beliefs about a particular behavior. The attitude towards a particular behavior is formed by personal values, experiences, and knowledge. A more positive attitude towards a behavior increases the chances of intending to engage in that behavior (Ajzen, 2008). In a financial context, the attitude toward financial behavior can positively predict the intention to perform the financial behavior. In line with the Theory of Planned Behavior, research has been done on the link between financial knowledge, attitude, and behavior. In their study, Coskun and Dalziel (2020) observed a positive association between financial knowledge and financial attitude. They also discovered that financial knowledge had a positive effect on financial behavior, and this relationship was mediated by financial attitude. Similarly, Yahaya et al. (2019) reported significant effects of financial knowledge on financial attitude, and in turn, financial attitude had a significant influence on financial behavior. These findings are consistent with the results obtained by Potrich et al. (2016) and Yong et al. (2018), where both studies revealed positive relationships between financial knowledge, financial attitude, and financial behavior. Yong et al. (2018) also found that attitude partially mediated the effect of knowledge on behavior.

The three components of financial literacy are treated separately in this study. An overview of the proposed relationships can be found in Figure 1. The following hypotheses are proposed:

H1: Exposure to financial influencers has a positive impact on the financial knowledge of young adults.

H2: There is a positive relationship between financial knowledge and financial attitude.

H3: There is a positive relationship between financial attitude and financial behavior.

H4: There is a positive relationship between financial knowledge and financial behavior.

H5: The relationship between financial knowledge and financial behavior is mediated by financial attitude.

Subjective norms

Subjective norms, a central construct in the Theory of Planned Behavior (Ajzen, 2008), represent the perceived social pressure individuals experience from significant others to engage in a specific behavior. In the context of financial behavior among young adults, the influence of subjective norms can be particularly strong. Young adults often highly value social approval and conformity, and their desire to fit in with their peers can significantly impact their financial decisions and behaviors (Smith-May, 2023). Numerous studies have demonstrated the role of subjective norms in shaping financial behaviors among young adults. Research by Salim and Pamungkas (2022) found that peer influence has a significant influence on saving behavior, while Alshebami and Aldhyani (2022) found that parental and peer influence can positively predict financial behavior. Watson and Barber (2016) found that parent and peer financial norms were associated with young adults' financial behavior. Therefore, it is hypothesized that:

H6: Subjective norms positively affect the financial behavior of young adults

Perceived behavioral control

Perceived behavioral control (PBC) is another essential factor in the Theory of Planned Behavior, representing an individual's belief in their capacity to carry out a specific behavior (Ajzen, 2008). In the context of financial behavior, PBC reflects an individual's confidence in their capacity to carry out desired financial actions, such as budgeting, saving, and making informed financial decisions. If young adults develop confidence in their ability to show responsible financial behavior, it is more likely that they will eventually perform this behavior. Studies have confirmed the role that perceived behavioral control has in shaping financial behavior. A study by Radianto et al. (2021) found that locus of control can affect financial behavior. Locus of control refers to the extent to which an individual has control over the outcomes in their lives (Gillette, 2022). In a study conducted by She et al. (2021), similar findings were reported, indicating that locus of control positively influences both financial behavior and financial well-being. Thus, the following hypothesis is proposed:

H7: Perceived behavioral control positively affects the financial behavior of young adults

Educational level

Research has shown that educational level is a determinant of financial literacy. For example, a study by Reswari et al. (2018) found that educational level significantly affects the level of financial literacy and financial behavior. Moreover, several studies, including those conducted by Kadoya and Khan (2020), Lusardi and Mitchell (2011), and Lusardi et al. (2010), have demonstrated a positive association between educational level and financial literacy. Furthermore, research conducted by Kaiser et al. (2021) has demonstrated that financial education has a positive causal effect on both financial knowledge and financial behavior. Cordero et al. (2020) found similar results as financial education is positively and significantly related to young adults' financial literacy in their study.

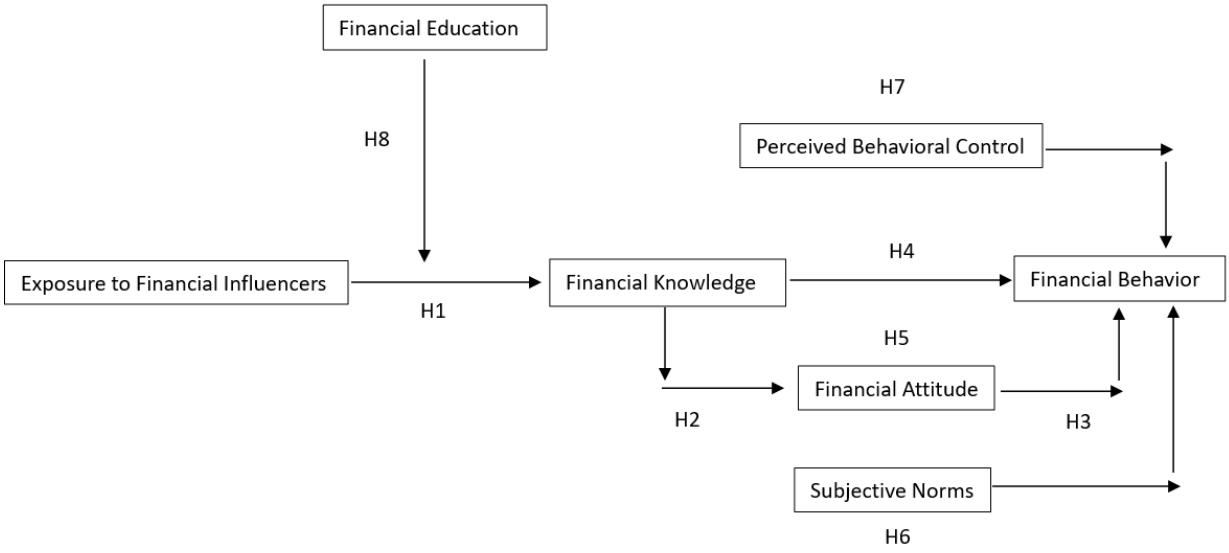
Given the influential role of education in financial literacy, it is reasonable to expect that education level may also moderate the relationship between exposure to financial influencers and financial literacy. Specifically, individuals with higher education levels may be more likely to effectively process and apply the information provided by financial influencers, leading to a greater impact on their financial literacy outcomes. This can be explained using the Elaboration Likelihood Model (ELM), as it provides valuable insights into understanding how individuals process information and as a result form attitudes. According to the ELM (Petty & Cacioppo, 1986), individuals process information through either the central route or the peripheral route, depending on their motivation and cognitive capacity. In the context of the current study, the ELM can shed light on how individuals with different education levels may respond to the messages disseminated by financial influencers. Individuals with higher education levels are likely to have a greater cognitive capacity and motivation to engage in central route processing. They will critically evaluate the information presented by financial influencers, considering its validity and relevance. As a result, their financial literacy may be more deeply influenced by the substantive content of the influencers' messages. On the other hand, individuals with lower education levels may rely more on peripheral route processing. They might be

less motivated or have limited cognitive resources to process complex financial information. Instead, they may form knowledge, attitudes, and behaviors based on superficial cues, such as the popularity of the influencer or emotional appeals. Therefore, the following hypothesis is proposed:

H8: Educational level moderates the relationship between exposure to financial influencers and financial knowledge

Figure 1

Conceptual Framework



Method

Design

The main objective of this study is to explore the relationship between exposure to financial influencers, financial knowledge, and financial behavior. Furthermore, this study will examine the potential mediating role of financial attitude in the association between financial knowledge and financial behavior. The variable educational level will also be measured, as it possibly influences the relationship between exposure to financial influencers and financial knowledge in a moderating role. Perceived behavioral control and subjective norms are also taken into account, as these variables have a possible influence on financial behavior, in line with the Theory of Planned Behavior. The previously mentioned variables were analyzed by a cross-sectional study. The data for this study was collected using an online questionnaire administered through the online survey software Qualtrics.

Participants

The target population for the current study consisted of young adults aged between 18 and 29 years old. The study specifically focused on young adults for multiple reasons. Firstly, 18 to 29-year-olds are the biggest group of social media users, and they spend the most time on social media out of all age groups. In addition, young adults are increasingly using social media as a primary source of information, also when it comes to financial advice (UNICEF & Gallup, inc, 2021).

In total, 495 people participated in the current study. However, 177 of the responses were eliminated due to not completing the entire questionnaire. The final sample consisted of 318 participants between the age of 18 and 29 years old (M = 21.94, SD = 2.89). Of the participants, 140 were male and 177 were female, and one of the participants stated ‘other’. In total, 161 of the participants finished higher education (HBO or WO), 55 finished MBO, 100 of the participants stated that their highest completed education was High school, and two of the participants finished primary education. An overview of the descriptives of the participants of this study can be found in Appendix A.

Procedure

The current study used a self-reported questionnaire via Qualtrics. For convenience sampling, a message containing a link to the online questionnaire was spread through multiple social networking sites such as Instagram, Facebook, and LinkedIn. Moreover, snowball sampling was used to reach out to possible participants. A message with a link to the online questionnaire was shared via WhatsApp, including a question asking if respondents would like to share the link even further.

Participation in the survey was limited to people within the age range of 18 to 29. After clicking the link to the online questionnaire, respondents were shown an informed consent form regarding the storage and processing of their data. Then, a screening question was shown to ensure that respondents fit the study's criteria. Thereafter participants were shown several demographic questions to get a better understanding of the participants of the study. Subsequently, the participants were required to fill in the items that aimed to measure exposure to financial influencers, financial knowledge, financial attitude, financial behavior, perceived behavioral control, and subjective norms.

Measures

Exposure to Financial influencers. This variable was measured by two types of self-report questions. Participants reported how often they viewed content from financial influencers on social media and how often they actively searched for content from financial influencers on social media, both on an 8-point scale (1 = *never* to 8 = *multiple times a day*). A larger scale of 8 points was chosen to provide the participant with more options. This makes it possible to measure more precisely (Bajracharya, 2022). A total score of exposure to financial influencers resulted from those questions (M = 3.74, SD = 2.65). Second, they reported whether they follow financial influencers on social media and how many financial influencers they follow.

Financial knowledge. The variable financial knowledge was measured using the 7-item financial knowledge scale (OECD, 2022). The scale measured the financial knowledge of participants

by utilizing open, multiple choice, and true/false questions. An example of one of the items is: "*Is the following statement true or false? It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares"*. The reliability of the scale, as measured by Cronbach's alpha, was found to be .39. In an effort to improve the scale's reliability, item five was removed, resulting in a slightly higher Cronbach's alpha of .41. Despite this improvement, the reliability of the financial knowledge scale remains below the generally accepted threshold of .60, indicating that caution is needed when interpreting the results as the scale may not fully capture financial knowledge. From the six items that were left to measure financial knowledge, the right answers from the participants were added up to provide an overall score of financial knowledge (*M* = 5.02, *SD* = 1.06, $\alpha = .41$). The full list of items can be found in Appendix B.

Financial attitude. The variable financial attitude was measured using the 3-item financial attitude scale (OECD, 2022). This scale consisted of the following items: **"***I tend to live for today and let tomorrow take care of itself*", "*I find it more satisfying to spend money than to save it for the long term*", and "*Money is there to be spent*". Reliability analysis was performed which resulted in a .57 Cronbach's alpha. To enhance the reliability of the financial attitude scale, item one was removed, leading to a Cronbach's alpha of .64. The two remaining items were rated on a 5-point scale, ranging from 1 (*completely agree*) to 5 (*completely disagree*) (*M* = 3.04, *SD* = 0.80, $\alpha = .64$).

Financial behavior. The variable financial behavior was measured using the 10-item financial behavior scale (OECD, 2022). The scale measured different kinds of financial behavior from participants, including saving behavior, budgeting behavior, and financial decision-making. Items five and six were removed, as they were deemed too sensitive as they focused on the participant's personal financial situation. The full list of items can be found in Appendix B. Eight items remained, and the participants answered the items which included yes/no questions, five-point scales, and multiple-choice questions. This resulted in an overall score of financial behavior (*M* = 6.46, *SD* = 1.87). This mix of response options counters possible differences in response behavior among the

respondents. An example of one of the items is "*Who is responsible for making day-to-day decisions about money in your household?*".

Perceived behavioral control. The current study measured the variable perceived behavioral control as a possible predictor of financial behavior. Perceived behavioral control was measured with five items rated on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). The items are constructed in accordance with Ajzen's (2006) recommendations for developing a TPB survey. Examples of the items used are: "*I am confident in my ability to make good financial decisions*" and "*I am confident in my ability to stick to my financial goals*" (*M* = 3.77, *SD* = 0.60, $\alpha = .80$).

Subjective norms. The variable subjective norms were measured as another possible predictor in the current study. Subjective norms were measured on the same 5-point scale as perceived behavioral control (1 = *strongly disagree* to 5 = *strongly agree*). Subjective norms were measured with four items and some of the items used in the survey were "*I feel pressure from my family or friends to make certain financial decisions*" and "*My financial decisions are influenced by the financial decisions of my peers and family*". The items are also constructed in accordance with Ajzen's (2006) recommendations for developing a TPB survey (*M* = 3.30, *SD* = 0.62, $\alpha = .64$).

Means, standard deviations, and Cronbach's alpha for the scales used in the current study can be found in Table 1.

Table 1

Means, Standard Deviations, and Cronbach's Alpha for the Scales

Variables	*M*	*SD*	Cronbach's α
Financial knowledge	5.02	1.06	.41
Financial attitude	3.04	0.80	.64
Financial behavior	6.46	1.87	
Perceived behavioral control	3.77	0.60	.80
Subjective norms	3.30	0.62	.64

Data analysis

To analyze the data collected from the online survey, SPSS software version 28 was used. First, Reliability Analysis was performed for some of the aforementioned scales and Cronbach's alpha was reported. Then, the PROCESS Macro version 4.3 (Hayes, 2023) was used in SPSS to test for moderated mediation. Specifically, model 83 was utilized to estimate the impact of financial influencers on financial knowledge, financial attitude, and financial behavior, while including financial attitude as a mediator, educational level as a moderator, and perceived behavioral control and subjective norms as predictors.

Results

Serial mediation analysis

For data analysis and hypothesis testing, the PROCESS macro Model 83 by Hayes (2013) was utilized. This model enabled a moderated mediation, which can be seen in Figure 2, providing a suitable approach to investigate all the proposed hypotheses. The dependent variable in the analysis was financial behavior, the independent variable was exposure to financial influencers, and the mediating variables were financial knowledge and financial attitude. Additionally, education was included as a moderator, while perceived behavioral control and subjective norms served as covariates.

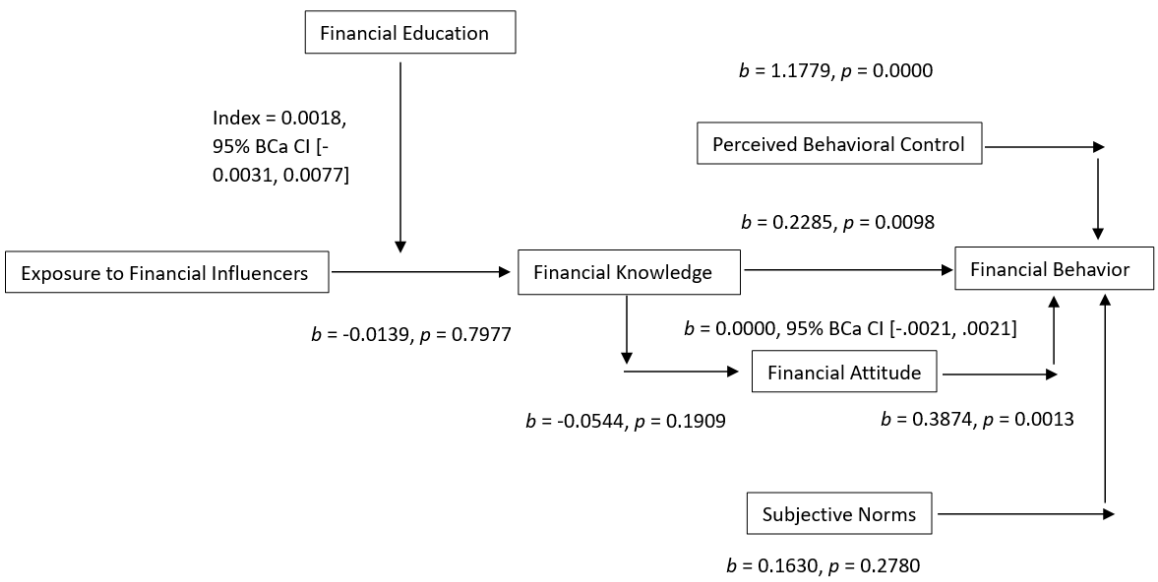
The analysis utilized 5000 bootstrapping samples, and 95% bias-corrected and accelerated (BCa) confidence intervals were applied using Model 83 of the Process Macro, following the guidelines by Preacher and Hayes (2013). The analysis revealed that exposure to financial influencers did not have a significant impact on financial knowledge (b = -0.0139, t = -0.2565, p = 0.7977). Therefore, the first hypothesis of this study, which stated that exposure to financial influencers has a positive impact on financial knowledge, was rejected. Moreover, the analysis revealed that there was no significant impact of financial knowledge on financial attitude (b = -0.0544, t = -1.3106, p = 0.1909), rejecting hypothesis two. However, both financial knowledge and financial attitude were found to significantly impact financial behavior. Financial attitude showed a positive relationship with financial behavior (b = 0.3874, t = 3.2424, p = 0.0013), as did financial knowledge (b = 0.2285, t = 2.5973, p = 0.0098). This confirmed hypotheses three and four, which stated that there is a positive relationship between financial attitude and financial behavior and between financial knowledge and financial behavior. No significant direct impact of exposure to financial influencers on financial behavior was found (b = 0.0664, t = 1.9025, p = 0.0580).

Further examination of the mediation model revealed no significant indirect impact of financial knowledge on financial behavior through financial attitude (b = 0.0000, SE = 0.0010, 95%

BCa CI [-.0021, .0021]). The presence of mediation was indicated when the 95% confidence interval did not include zero. This suggests that financial attitude does not mediate the relationship between financial knowledge and financial behavior and this rejects hypothesis five. Educational level was tested as a moderator between exposure to financial influencers and financial knowledge. However, the moderation analysis revealed no significant moderation effect (Index = 0.0018, *SE* = 0.0027, 95% BCa CI [-0.0031, 0.0077]). Thus, education does not appear to moderate this relationship and therefore hypothesis eight can be rejected. Moreover, the analysis revealed no moderated indirect effect of exposure to financial influencers on financial behavior (Index = -0.0002, *SE* = 0.0004, 95% BCa CI [-0.00011, 0.0004]). This suggests that education does not influence the relationship between exposure to financial influencers and financial behavior through financial knowledge and financial attitude. Lastly, the impact of perceived behavioral control and subjective norms on financial behavior was examined. Subjective norms did not significantly impact financial behavior (*b* = 0.1630, *t* = 1.0868, *p* = 0.2780), and therefore hypothesis six was rejected. However, perceived behavioral control had a significant positive impact on financial behavior (*b* = 1.1779, *t* = 7.3636, *p* = 0.0000), indicating its influence in shaping financial behavior and confirming hypothesis seven. Figure 2 displays the serial mediational model.

Figure 2

Serial Mediational Model



Discussion

The present study explored the relationship between exposure to financial influencers and young adults' financial knowledge, attitude, and behavior. Additionally, financial attitude was examined as a potential mediator between financial knowledge and financial behavior. Moreover, educational level was considered as a moderator, that could influence the relationship between exposure to financial influencers and financial knowledge. Furthermore, in line with the TPB, perceived behavioral control and subjective norms were included as predictors of financial behavior.

First, contrary to the hypothesis (H1), the current study found that increased exposure to financial influencers did not result in improved financial knowledge. This finding was unexpected, given previous research suggesting that social media has an impact on financial knowledge, behavior, and well-being (Cao et al., 2020). One plausible explanation for the non-significant result could be attributed to the use of self-report questions to measure exposure to financial influencers. Participants might have faced challenges accurately recalling and evaluating the extent of their exposure to financial influencers, potentially due to recall bias (Elikwu, 2022). Participants could have experienced difficulties in recalling the full extent of their exposure, leading to potential underestimation (Nikolopoulou, 2023). Moreover, participants may not have been fully conscious of their exposure to financial influencers due to selective exposure, unconsciously ignoring or forgetting instances where they encountered financial content on social media, which could also contribute to underestimation.

Educational level did not moderate the relationship between exposure to financial influencers and financial knowledge, which disconfirmed H8. This result contradicts previous research suggesting a positive association between educational level and financial knowledge and literacy (Reswari et al., 2018; Kadoya and Khan, 2020; Lusardi and Mitchell, 2011; Lusardi et al., 2010). In line with the Elaboration Likelihood Model (Petty & Cacioppo, 1986), it was expected that individuals with higher education would possess a greater cognitive capacity and motivation to receive and utilize information provided by financial influencers. One possible explanation for the current study's results

is that individuals with higher education already possessed higher baseline levels of financial knowledge, which was shown using a one-way ANOVA analysis ($F(7, 310) = 3{,}13$, $p = 0{,}003$). This is in line with research done by Tóth et al. (2015), who found that higher educational levels result in better financial knowledge. As a result of these higher baseline levels of financial knowledge, financial knowledge might not have been significantly influenced by exposure to financial influencers. This can be attributed to the Elaboration Likelihood Model, it was expected that individuals with higher education would possess a greater cognitive capacity and motivation to use the information provided by financial influencers and therefore find it easier to improve their financial knowledge. However, this also causes individuals with higher education to critically asses the information and this makes them less likely to accept it, which explains why their financial knowledge does not improve. Additionally, it is worth noting that the questionnaire utilized in this study asked for the highest completed education, leading to 31.4% of participants reporting high school as their highest completed education. However, it is likely that a portion of this group is currently enrolled in higher education. To enhance accuracy when examining the relationship between educational level, exposure to financial influencers, and financial knowledge, future studies should consider using current education as a more precise measure.

While it was hypothesized that a positive relationship would exist between financial knowledge and financial attitude (H2), the current study revealed no significant effect of financial knowledge on financial attitude. This finding contrasts with previous research by Coskun and Dalziel (2020) and Yahaya et al. (2019), both of whom reported that financial knowledge significantly influenced financial attitude. However, the current study's results align with the findings of Agarwalla et al. (2013), who observed no association between financial knowledge and financial attitude. One potential explanation for this outcome is that other factors may have a more dominant role in shaping attitudes compared to knowledge. Variables such as personal experiences, social influence, education, and observations may have a more profound impact on attitude formation, more so than the influence of specific financial knowledge (Cherry, 2023).

Furthermore, the current study demonstrated that financial knowledge significantly impacts financial behavior (H4), aligning with previous research conducted by Fessler et al. (2020), Coskun and Dalziel (2020), Potrich et al. (2016), Agarwalla et al. (2013), and Yong et al. (2018). This finding suggests that an elevated level of financial knowledge is associated with positive financial behavior. The link between financial knowledge and financial behavior could be attributed to informed decision-making, as young adults with higher levels of financial knowledge are better equipped to make well-informed and rational financial decisions (Lusardi & Mitchell, 2014). Moreover, financial knowledge empowers young adults to assess and manage financial risks effectively. Additionally, individuals with higher levels of financial knowledge demonstrate a greater propensity to engage in retirement planning, avoid debt, and prioritize saving and investing (Lusardi, 2019).

The current study also found a significant positive relationship between financial attitude and financial behavior (H3), which is consistent with previous research by Yahaya et al. (2019), Potrich et al. (2016), and Yong et al. (2018). This indicates that individuals with a positive attitude towards specific financial behaviors are more inclined to participate in those behaviors. The Theory of Planned Behavior (Ajzen, 1991) supports this relationship, as it suggests that attitudes towards a behavior influence the intention to perform that behavior, ultimately shaping actual behavior. In the context of financial decision-making, a favorable attitude towards saving and investing, for example, may lead individuals to adopt these practices in their daily lives.

Furthermore, financial attitude did not mediate the relationship between financial knowledge and financial behavior, which rejected hypothesis five. This finding goes against the findings from Coskun and Dalziel (2020) and Yong et al. (2018), who discovered that the relationship between financial knowledge and financial behavior was mediated by financial attitude. The finding of the current study makes it clear that the financial knowledge of young adults has a direct impact on financial behavior, regardless of their attitude towards financial behavior.

Finally, the findings of the current study reject the hypothesis that subjective norms impact financial behavior (H6), which contradicts findings by Salim and Pamungkas (2022) and Alshebami and Aldhyani (2022) who found peer influence to impact financial behavior. In line with the Theory of Planned Behavior, it was expected that subjective norms would affect the financial behavior of young adults. While this is not found in the current study, subjective norms may influence financial attitude, and financial attitude, in turn, influences financial behavior. This means subjective norms do not directly impact financial behavior, only indirectly through financial attitude. Future research could look into this relationship.

The current study's findings support the hypothesis (H7) that perceived behavioral control positively impacts financial behavior. This result is consistent with previous research conducted by Radianto et al. (2021) and She et al. (2021), who also found a positive relationship between perceived behavioral control and financial behavior. Additionally, these findings align with the Theory of Planned Behavior by Ajzen, who indicates that an individual's belief in their capacity to perform a behavior, known as perceived behavioral control, plays a crucial role in shaping their intentions and ultimately influencing their actual behavior. This highlights the importance of fostering young adults' beliefs in their ability to control their financial decisions.

The literature has shown that social media and financial influencers could influence young adults' financial literacy, financial knowledge, financial attitude, financial behavior, financial well-being, and financial decision-making. A relationship between exposure to financial influencers and financial knowledge was expected to be found in the current study, based on the existing literature. However, the results showed that increased exposure to financial influencers did not improve financial knowledge. This is an important finding that contributes to the research on financial influencers, and which calls for additional research. It is also possible that exposure to financial influencers has a negative impact on young adults' financial knowledge. The reason for this may be the large amount of misinformation and unauthorized financial influencers on social media.

A lot of research has been dedicated to the interplay between the components of financial literacy; financial knowledge, financial attitude, and financial behavior. Different relationships between the components are found in the literature, and oftentimes, financial attitude is considered to be the mediator. The Theory of Planned Behavior is regularly employed as a framework for research on the three components. In the current study, the three components of financial literacy were investigated, as well as subjective norms and perceived behavioral control, in line with the TPB. The findings of this study contribute to the complex interplay between knowledge, attitude, and behavior and also contribute to the literature on the TPB. The findings are partly consistent with the assumptions of the TPB, which describes how attitude, subjective norms, and perceived behavioral control predict behavior. However, subjective norms were not found to predict behavior in this study. A contribution to the current literature is that financial knowledge directly impacts financial behavior, without the interference of financial attitude.

Limitations and future research

While the present study offers valuable insights into the impact of financial influencers on the financial literacy of young adults, it is not without its limitations. First, it is important to note that not all scales in the study achieved the desired reliability, as indicated by low Cronbach's alpha values. This may suggest that the reliability of some measurement instruments was insufficient, potentially affecting the reliability of the results. Moreover, this could cause distorted relationships between the variables in the study, as certain relationships might appear weaker or non-existent due to incorrect measurement. The low reliability of the scales also reduces statistical power, making it more difficult to identify significant findings if they exist. It is crucial to consider these limitations when interpreting the results and drawing conclusions from the study. Therefore, future studies need to add or rephrase items or use other scales to measure the variables. The scales should be tested before conducting the study. By improving the reliability, the study can provide stronger statistical power and a more robust foundation for understanding the relationships between the

variables. This leads to more reliable findings and conclusions and in turn more reliable broader implications.

Second, the current study's questionnaire relied on self-reports. While this method is commonly used to collect data, it can be prone to certain biases and limitations. It is possible that participants had a social desirability bias, where participants provided responses that they perceive as socially acceptable rather than reflecting their true thoughts or behaviors. As a big part of the questionnaire touched on financial matters, which could be seen as a personal subject, participants may have presented themselves differently. Therefore, the self-report data may not fully capture the participants' financial attitudes and behaviors, even though participants were assured that their responses were dealt with confidentially. This may affect the statistical results negatively, as the scores for financial attitude and financial behavior do not represent the actual attitudes and behaviors of participants. Future research could implement mixed-method approaches to gain a more comprehensive understanding of the relationships in the current study. This could be done in the form of qualitative insights, combining self-report surveys with qualitative interviews or focus groups to uncover participants' actual motivations and experiences. Moreover, conducting longitudinal research could enhance the study's robustness. By tracking participants' exposure to financial influencers and changes in their financial knowledge, attitude, and behavior over time, patterns and relationships can be better identified. These approaches help mitigate the potential biases associated with self-report data.

Moreover, G-Power analysis indicated that a sample size of 395 participants was required for the current study to achieve adequate statistical power. However, the final sample size obtained for the study consisted of 318 participants. With a smaller sample size, the study might not have had sufficient power to detect smaller or more subtle effects between the variables. This has possibly led to limitations in the findings and conclusions of the study. Despite the limitation in sample size, it is important to recognize that the current study still provides valuable insights into the relationships

between the studied variables. Future studies should aim for a larger sample size to enhance the statistical power and to gain more reliable results.

Lastly, in the current study, one of the limitations is the broad and comprehensive nature of the financial behavior variable. Financial behavior encompasses a wide range of actions and decisions, such as budgeting, saving, investing, spending, and more. By examining financial behavior as a whole, the study might have diluted the specific effects of financial influencers, financial knowledge, and financial attitude on financial behavior. By investigating a specific financial behavior, such as saving behavior, it is possible to gain a more precise understanding of the impact of the other variables. In the current study, exposure to financial influencers may have had an impact on the saving behavior of young adults. However, as financial behavior was measured as a whole, a relationship like this cannot be discovered. Focusing on one specific behavior also leads to more precise conclusions and implications, which are more relevant and applicable to real-world financial situations. Future research should consider the above-mentioned limitations when conducting a similar study.

Theoretical Implications

This study provides useful new insights into how financial influencers on social media can impact the financial literacy of young adults. Financial influencers were found to not directly impact financial knowledge. However, an important finding of the current study was that financial knowledge and financial attitude both positively impact financial behavior, whereas the relationship between financial knowledge and financial behavior is not mediated by financial attitude. This means that financial knowledge and financial attitude are predictors of financial behavior and that financial knowledge directly impacts financial behavior, without the interference of attitude. Young adults with higher levels of financial knowledge and positive financial attitudes are more likely to exhibit responsible financial behaviors. However, young adults' financial knowledge directly shapes their financial behavior, regardless of their financial attitudes. Also, perceived behavioral control directly

influences financial behavior, which confirms the hypothesis of the Theory of Planned Behavior. Overall, this study provides valuable insights into the role of financial influencers and the complex interplay between the components of financial literacy. The study also contributes to the theoretical knowledge of what factors can shape young adults' financial behavior and validates the Theory of Planned Behavior in a financial context.

Practical implications

This study provides practical implications for the government, (financial) education programs, and financial influencers. Research has shown that young adults lack financial knowledge and financial literacy (Lusardi et al., 2010; De Bassa Scheresberg, 2013), but to handle financial issues and build a financially secure future, financial literacy is needed. The study shows that financial knowledge, financial attitude, and perceived behavioral control are important factors in building positive financial behavior. Therefore, the government, schools, and (financial) education programs should work together to provide financial education to young adults. However, as the literature and the study's findings show, financial education should not be solely based on improving financial knowledge. By incorporating comprehensive financial literacy programs into school curricula and educational programs, young adults can be empowered with knowledge, attitudes, and skills to improve financial behavior and manage their finances effectively. These programs should also focus on improving the confidence young adults have in managing their finances, as this study has shown that this will improve their financial behavior.

Conclusion

In summary, this study focuses on the effect of exposure to financial influencers on the financial literacy of young adults, with financial literacy broken down into three components, namely financial knowledge, financial attitude, and financial behavior. The study demonstrated that exposure to financial influencers had a non-significant relationship with financial knowledge, and this relationship was not moderated by educational level. A non-significant relationship between financial

knowledge and financial attitude was also found. However, it was revealed that financial attitude and financial knowledge both had a positive relationship with financial behavior. When financial attitude was introduced as a mediator between financial knowledge and financial behavior, no significant relationship was found. Moreover, it was found that subjective norms do not significantly predict financial behavior but perceived behavioral control does. The results give an insight into the interplay between the components of financial literacy, the role of educational level, the influence of the Theory of Planned Behavior, and the role of financial influencers in this process. Specifically, it was found that financial knowledge, financial attitude, and perceived behavioral control have a direct influence on the financial behavior of young adults.

References

Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2013). Financial Literacy Among Working Young in Urban India. *Social Science Research Network*. https://doi.org/10.2139/ssrn.2338723

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-t

Ajzen, I. A. (2006). Constructing a Theory of Planned Behavior Questionnaire. *TPB Questionnaire Construction*.

Alshebami, A. S., & Aldhyani, T. H. H. (2022). The Interplay of Social Influence, Financial Literacy, and Saving Behaviour among Saudi Youth and the Moderating Effect of Self-Control. *Sustainability*, *14*(14), 8780. https://doi.org/10.3390/su14148780

Ameriprise Financial, Inc. (2021). Financial Priorities. *Ameriprise Financial*. https://www.ameriprise.com/binaries/content/assets/ampcom/financial_priorities_research_report.pdf

Atkinson, A., & Messy, F. (2012). Measuring Financial Literacy. *OECD Working Papers on Finance, Insurance Private Pensions*. https://doi.org/10.1787/5k9csfs90fr4-en

Bajracharya, S. (2022, February 28). What is a Likert Scale? + Useful Likert Scale Examples. *WPEverest Blog*. https://wpeverest.com/blog/what-is-likert-scale/

Cao, Y., Gong, F., & Zeng, T. (2020). Antecedents and Consequences of Using Social Media for Personal Finance. *Journal of Financial Counseling and Planning*, *31*(1), 162–176. https://doi.org/10.1891/jfcp-18-00049

CFI Education Inc. (2023). Financial Literacy. *Corporate Finance Institute*. https://corporatefinanceinstitute.com/resources/management/financial-literacy/

Changing Childhood, Changing World. (2021).

Cherry, K. C. (2023). The components of attitude. *Verywell Mind*. https://www.verywellmind.com/attitudes-how-they-form-change-shape-behavior-2795897#:~:text=Attitudes%20can%20form%20through%20direct,%2C%20conditioning%20processes%2C%20and%20observation.

Chikhi, I. (2021). *Financial Influencers and Social Media: The Role of Valuable and Trusted Content in Creating a New Form of Authenticity* [Master Thesis]. The City University of New York.

Cordero, J. F., Gil-Izquierdo, M., & Pedraja-Chaparro, F. (2020). Financial education and student financial literacy: A cross-country analysis using PISA 2012 data. *Social Science Journal*, *59*(1), 15–33. https://doi.org/10.1016/j.soscij.2019.07.011

Coskun, A., & Dalziel, N. (2020). Mediation effect of financial attitude on financial knowledge and financial behavior. *International Journal of Research in Business and Social Science*, *9*(2), 01–08. https://doi.org/10.20525/ijrbs.v9i2.647

Credit Karma. (2021, July 13). *Gen Z turns to TikTok and Instagram for financial advice and actually takes it, study finds - Credit Karma*. https://www.creditkarma.com/about/commentary/gen-z-turns-to-tiktok-and-instagram-for-financial-advice-and-actually-takes-it-study-finds

Davis, H., & Hasler, A. (2021). Millennials' and Gen Z's Money Management During COVID-19: Challenges and Opportunities. *Global Financial Literacy Excellence Center*.

De Bassa Scheresberg, C. (2013). Financial Literacy and Financial Behavior among Young Adults: Evidence and Implications. *Numeracy*, *6*(2). https://doi.org/10.5038/1936-4660.6.2.5

De Vreese, C. H., & Neijens, P. (2016). Measuring Media Exposure in a Changing Communications Environment. *Communication Methods and Measures*, *10*(2–3), 69–80. https://doi.org/10.1080/19312458.2016.1150441

Egan, J. (2023, March 4). Nearly 80% Of Young Adults Get Financial Advice From This Surprising Place. *Forbes Advisor*. https://www.forbes.com/advisor/investing/financial-advisor/adults-financial-advice-social-media/

Elikwu, D. E. (2022). How memory bias affects your memories. *The Knowledge*. https://www.theknowledge.io/memory-bias/

Elsinger, H., Fessler, P., Feyrer, J., Richter, K. K., Silgoner, M. A., & Timel, A. (2018). Digitalization in financial services and household finance: fintech, financial literacy and financial stability. *Financial Stability Report*, *35*, 50–58. https://econpapers.repec.org/article/onboenbfs/y_3a2018_3ai_3a35_3ab_3a1.htm

Fanbytes. (2023). TikTok For Finance: The Rise Of Fintech & 'Fin-fluencers.' *Fanbytes*. https://fanbytes.co.uk/fintech-influencers-tiktok/

Fessler, P., Silgoner, M. A., & Weber, R. (2020). Financial knowledge, attitude and behavior: evidence from the Austrian Survey of Financial Literacy. *Empirica*, *47*(4), 929–947. https://doi.org/10.1007/s10663-019-09465-2

Finance Influencers Footprint Growing. (n.d.). Emplifi | Customer Experience & Social Media Marketing Software. https://emplifi.io/press/finance-influencers-footprint-growing

Geyser, W. (2023). What is an Influencer? – Social Media Influencers Defined [Updated 2023]. *Influencer Marketing Hub*. https://influencermarketinghub.com/what-is-an-influencer/

Gillette, H. (2022, May 17). *Locus of Control: What it is and why it matters*. Psych Central. https://psychcentral.com/blog/cultivating-an-internal-locus-of-control-and-why-its-crucial

Hayes, A. F., & Preacher, K. J. (2013). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, *67*(3), 451–470. https://doi.org/10.1111/bmsp.12028

Hung, A. A., Parker, A., & Yoong, J. (2009). Defining and Measuring Financial Literacy. *Social Science Research Network*. https://doi.org/10.2139/ssrn.1498674

Huston, S. J. (2009). Measuring Financial Literacy. *The Journal of Consumer Affairs*. https://doi.org/10.2139/ssrn.1945216

Kadoya, Y., & Khan, M. S. R. (2020). Financial Literacy in Japan: New Evidence Using Financial Knowledge, Behavior, and Attitude. *Sustainability*, *12*(9), 3683. https://doi.org/10.3390/su12093683

Kaiser, T., Lusardi, A., Menkhoff, L., & Urban, C. (2021). Financial education affects financial knowledge and downstream behaviors. *Journal of Financial Economics*, *145*(2), 255–272. https://doi.org/10.1016/j.jfineco.2021.09.022

Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics*, *155*(1). https://doi.org/10.1186/s41937-019-0027-5

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and retirement planning in the United States. *Journal of Pension Economics & Finance*, *10*(4), 509–525. https://doi.org/10.1017/s147474721100045x

Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and evidence. *Journal of Economic Literature*, *52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial Literacy among the Young. *Journal of Consumer Affairs*, *44*(2), 358–380. https://doi.org/10.1111/j.1745-6606.2010.01173.x

Mottola, G. (2015). The Financial Capability of Young Adults: A Generational View. *FINRA Investor Education Foundation's National Financial Capability Stud*. https://doi.org/10.13140/RG.2.1.3800.5281

Mountain, T. P., Kim, N., Serido, J., & Shim, S. (2021). Does Type of Financial Learning Matter for Young Adults' Objective Financial Knowledge and Financial Behaviors? A Longitudinal and Mediation Analysis. *Journal of Family and Economic Issues*, *42*(1), 113–132. https://doi.org/10.1007/s10834-020-09689-6

Nikolopoulou, K. (2023). What is recall bias? | Definition & Examples. *Scribbr*. https://www.scribbr.com/research-bias/recall-bias/

Noore, S. (2023, April 17). The Future of Financial Education - Bootcamp. *Medium*. https://bootcamp.uxdesign.cc/the-future-of-financial-education-1d2779a6d9f3

OECD INFE. (2011). Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial Literacy. *INFE*.

OECD. (2022). Toolkit for Measuring Financial Literacy and Financial Inclusion 2022. *OECD/INFE*. https://www.oecd.org/financial/education/2022-INFE-Toolkit-Measuring-Finlit-Financial-Inclusion.pdf

Pardo, S. B. (2023, May 11). ‘Finfluencers’: The most popular influencers in finance. *International Accounting Bulletin*. https://www.internationalaccountingbulletin.com/news/finfluencers-the-most-popular-influencers-in-finance/

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In *Elsevier eBooks* (pp. 123–205). https://doi.org/10.1016/s0065-2601(08)60214-2

Potrich, A. C. G., Vieira, K. M., & Mendes-Da-Silva, W. (2016). Development of a financial literacy model for university students. *Management Research Review*, *39*(3), 356–376. https://doi.org/10.1108/mrr-06-2014-0143

Principato, C. (2022). Here's Where the Youngest Generation of Investors is Getting Their Financial Advice. *Morning Consult*. https://morningconsult.com/2021/05/25/tiktok-is-flush-with-financial-advice-but-social-media-hasnt-replaced-professional-sources-for-guidance-yet/

Radey, T. (2015, May 27). Influencer Marketing: Why relevance is more important than vanity metrics. *Ready North*. https://www.readynorth.com/blog/influencer-marketing-why-relevance-is-more-important-than-vanity-metrics

Radianto, W. E. D., Kristama, B. Y., & Salim, I. R. (2021). Exploring the Relationship Between Locus of Control and Financial Behavior of Accounting Student from The Social Construction Theory Approach. *Academic Journal of Interdisciplinary Studies*, *10*(2), 118. https://doi.org/10.36941/ajis-2021-0043

Reswari, A. D., Sudarto, S., & Widyastuti, E. (2018). The Influence Of Financial Literacy Towards Financial Behavior. *Journal of Research in Management*, *1*(2). https://doi.org/10.32424/jorim.v1i2.28

Salim, A. S. S., & Pamungkas, A. S. P. (2022). The Influence of Financial Literacy, Parental Socialization, and Peer Influences on Saving Behavior. *Advances in Social Science, Education and Humanities Research*, *655*. https://doi.org/10.2991/aebmr.k.220501.085

She, L., Rasiah, R., Turner, J. J., Guptan, V., & Nia, H. S. (2021). Psychological beliefs and financial well-being among working adults: the mediating role of financial behaviour. *International Journal of Social Economics*, *49*(2), 190–209. https://doi.org/10.1108/ijse-07-2021-0389

Smith-May, M. S. M. (2023, May 31). *The impacts of social media on youth self-image | News*. https://news.llu.edu/. https://news.llu.edu/health-wellness/impacts-of-social-media-youth-self-image

Sortlist Data Hub. (2023, January 19). *Finance Influencers: Have a Positive Impact on 50% of People*. Data Hub. https://www.sortlist.com/datahub/reports/finance-influencers/?repeat=w3tc

Tóth, M., Lančarič, D., & Savov, R. (2015). IMPACT OF EDUCATION ON THE FINANCIAL LITERACY: a CASE OF SLOVAKIA. *DOAJ (DOAJ: Directory of Open Access Journals)*. https://doaj.org/article/5e414bb4af0b4f0d995896117b4e9220

UNICEF & Gallup, inc. (2021). Changing childhood in a changing world. *The Changing Childhood Project*.

Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, *101*(2), 449–472. https://doi.org/10.1016/j.jfineco.2011.03.006

Watson, S., & Barber, B. L. (2016). University Attendance Moderates the Link between Financial Norms and Healthy Financial Behavior for Australian Young Adults. *Journal of Family and Economic Issues*, *38*(2), 238–248. https://doi.org/10.1007/s10834-016-9505-4

Whiting, A., & Williams, D. R. (2013). Why people use social media: a uses and gratifications approach. *Qualitative Market Research: An International Journal*, *16*(4), 362–369. https://doi.org/10.1108/qmr-06-2013-0041

Yahaya, R., Zainol, Z., & Ismail, R. (2019). The Effect of Financial Knowledge and Financial Attitudes on Financial Behavior among University Students. *International Journal of Academic Research in Business & Social Sciences*, *9*(8). https://doi.org/10.6007/ijarbss/v9-i8/6205

Yang, M. (2023, February 28). If you're getting financial advice from TikTok influencers don't stop there. *NPR*. https://www.npr.org/2023/02/28/1155498676/if-youre-getting-financial-advice-from-tiktok-influencers-dont-stop-there

Yanto, H., Ismail, N., Kiswanto, K., Rahim, N. M., & Baroroh, N. (2021). The roles of peers and social media in building financial literacy among the millennial generation: A case of indonesian economics and business students. *Cogent Social Sciences*, *7*(1). https://doi.org/10.1080/23311886.2021.1947579

Yong, C., Yew, S., & Wee, C. K. (2018). Financial Knowledge, Attitude and Behaviour of Young Working Adults in Malaysia. *Institutions and Economies*, *10*(4). https://vmis.um.edu.my/index.php/ijie/article/view/13444

Young people's concerns during COVID-19: Results from risks that matter 2020. (2021). *OECD Policy Responses to Coronavirus (Covid-19)*. https://doi.org/10.1787/64b51763-en

Appendix

Appendix A: Descriptive statistics

Table 1
Descriptive Statistics

	***N* (%)**	***M***	***SD***
Gender			
Male	140 (44%)		
Female	177 (55.7%		
Other	1 (0.3%		
Age		21.94	2.89
Education level			
Primary education	2 (0.6%)		
High school	100 (31,4%)		
MBO	55 (17.3%)		
HBO Bachelor	88 (27.7%)		
HBO Master	6 (1.9%)		
University pre-master	12 (3.8%)		
University Bachelor	22 (6.9%)		
University master	33 (10.4%)		

Appendix B: measures used in the study

<u>Exposure to financial influencers</u>

Each item provides the following answer options: never (1), several times a year (2), about once a month (3), several times a month (4), about once a week (5), several times a week (6), about every day (7), several times a day (8)	
Q1	How often do you view content by financial influencers on social media?
Q2	How often do you actively search for content by financial influencers on social media?

<u>Financial knowledge</u>

Each right answer is worth 1 point.	Adapted from: OECD

			(2022)
Q1	Imagine that five brothers are given a gift of €1000 and have to share the money equally. The brothers have to wait for 1 year to get their share of the €1000 and inflation stays at 2%. In 1 years' time, will they be able to buy:	a. b. **c.**	More with their share of the money than they could today As much as today **Less than they could buy today**
Q2	You lend €25 to a friend one evening and he gives you €25 back the next day. How much interest has he paid on this loan?	€0	
Q3	Suppose you put €100 into a no-fee savings account with a guaranteed interest rate of 2% per year. You do not make any further payments into this account and you do not withdraw any money. How much would be in the account at the end of the first year, once the interest payment is made?	€102	
Q4	And how much would be in the account at the end of 5 years?	**a.** b. c. d.	**More than €110** Exactly €110 Less than €110 It is impossible to tell from the information given
Q5	Is the following statement true or false? An investment with a high return is likely to be high risk.	**a.** b.	**True** False
Q6	Is the following statement true or false? High inflation means that the cost of living is increasing rapidly.	**a.** b.	**True** False
Q7	Is the following statement true or false? It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares	**a.** b.	**True** False

<u>Financial attitude</u>

Each item provides the following answer options: completely disagree	Adapted from: OECD (2022)

(5), disagree (4), neutral (3), agree (2), completely agree (1)	
Q1	I find it more satisfying to spend money than to save it for the long term.
Q2	Money is there to be spent.

Financial behavior

	Positive financial behavior is worth 1 or more points to get a total financial behavior score.	Adapted from: OECD (2022)
Q1	Do you make day-to-day decisions about your own money?	Yes/no Yes = 1 point
Q2	Who is responsible for making day-to-day decisions about money in your household?	a. You make these decisions by yourself b. You make these decisions with someone else c. Someone else makes these decisions Option a or b = 1 point
Q3	Do you do any of the following for yourself or your household?	a. Make a plan to manage your income and expenses b. Keep a note of your spending c. Keep money for bills separate from day-to-day spending money d. Make a note of upcoming bills to make sure you don't miss them e. Use a banking app or money management

		tool to keep track of your outgoings f. Arrange automatic payments for regular outgoings Minimum of 2 options chosen = 1 point
Q4	In the past 12 months have you been [personally] saving money in any of the following ways, whether or not you still have the money? Please don't take into account any money paid into a pension, but think about all kinds of savings, such as building up a rainy-day fund or putting money aside for a special occasion.	a. Saving cash at home or in your wallet b. Paying money into a savings/deposit account c. Giving money to family to save on your behalf d. Saving in an informal savings club e. buying bonds or time deposits f. Investing in crypto-assets g. Investing in stocks and shares h. Saving or investing in some other way, other than a pension 1 point per chosen answer
Q7	I keep a close personal watch on my financial affairs	Completely agree (1), agree, neutral, disagree, completely disagree (0)
Q8	I set long-term financial goals and strive to achieve them	Completely agree (1), agree, neutral, disagree, completely disagree (0)
Q9	Before I buy something I carefully consider whether I can	Completely agree (1), agree,

	afford it	neutral, disagree, completely disagree (0)
Q10	I pay my bills on time	Completely agree (1), agree, neutral, disagree, completely disagree (0)

Perceived behavioral control

Each item provides the following answer options: completely disagree (1), disagree (2), neutral (3), agree (4), completely agree (5)		Adapted from: Ajzen (2006)
Q1	I am confident in my ability to make good financial decisions	
Q2	I am confident in my ability to stick to my financial goals	
Q3	I find it easy to make good financial decisions	
Q4	Making good financial decisions is completely within my control	
Q5	Whether I make good financial decisions is entirely up to me	

Subjective norms

Each item provides the following answer options: completely disagree (1), disagree (2), neutral (3), agree (4), completely agree (5)		Adapted from: Ajzen (2006)
Q1	I feel pressure from my family or friends to make certain financial decisions (e.g., investing, saving, buying)	
Q2	My financial decisions are influenced by the financial decisions of my peers and family	
Q3	People important to me want me to make good financial decisions	
Q4	It is expected of me that I make good financial decisions	

Appendix C: Translated measures

Exposure to financial influencers

Antwoordmogelijkheden: Nooit – enkele keren per jaar – ongeveer één keer per maand – meerdere keren per maand – ongeveer één keer per week – meerdere keren per week – ongeveer elke dag – meerdere keren per dag

Q1	Hoe vaak bekijkt u content van financial influencers op social media?
Q2	Hoe vaak zoekt u actief naar content van financial influencers op sociale media?

Financial knowledge

Q1	Stel dat vijf broers een geschenk van €1000 krijgen en het geld gelijk moeten verdelen. De broers moeten 1 jaar wachten om hun deel van de €1000 te krijgen en de inflatie blijft 2%. Over 1 jaar kunnen ze met het geld:		a. Meer kopen met hun deel van het geld dan ze vandaag zouden kunnen b. Even veel kopen als ze vandaag zouden kunnen **c. Minder kopen dan dat ze vandaag zouden kunnen**
Q2	U leent €25 uit aan een vriend en hij geeft de volgende dag €25 terug. Hoeveel rente heeft uw vriend betaald over deze lening?	€0	
Q3	Stel, u zet € 100 op een spaarrekening zonder kosten met een gegarandeerde rente van 2% per jaar. U doet geen verdere stortingen op deze rekening en u neemt geen geld op. Hoeveel zou er aan het eind van het eerste jaar, na de rentebetaling, op de rekening staan?	€102	
Q4	En hoeveel zou er op de spaarrekening staan als er 5 jaar voorbij zijn?		**a. Meer dan €110** b. Precies €110 c. Minder dan €110 d. Dat is niet te zeggen met de informatie die ik heb gekregen
Q5	Een investering met een hoog rendement is		**a. Waar**

	waarschijnlijk een hoog risico.	b. Niet waar
Q6	Hoge inflatie betekent dat de kosten van levensonderhoud snel stijgen.	**a. Waar** b. Niet waar
Q7	Het is meestal mogelijk het risico van beleggen op de aandelenmarkt te beperken door een breed scala aan aandelen te kopen.	**a. Waar** b. Niet waar

Financial attitude

Antwoordmogelijkheden: helemaal oneens, oneens, neutraal, eens, helemaal eens

Q1	Ik vind het prettiger om geld uit te geven dan om het te sparen voor de lange termijn.
Q2	Geld is er om uit te geven

Financial behavior

Q1	Maakt u dagelijkse keuzes over uw eigen geld	a. Ja b. Nee
Q2	Wie maakt de dagelijkse keuzes over geld in uw huishouden	a. Ik maak de keuzes zelf b. Ik maak de keuzes samen met iemand anders c. Iemand anders maakt de keuzes
Q3	Doet u een van de volgende dingen voor uzelf of voor uw huishouden?	a. Een plan maken om uw inkomsten en uitgaven te beheren b. Uw uitgaven noteren c. Geld voor rekeningen apart houden van dagelijkse uitgaven d. Aankomende rekeningen opschrijven zodat u ze niet mist

		e. Een bankieren-app of geld beheer tool gebruiken om uitgaven bij te houden f. Automatische betalingen instellen voor terugkerende uitgaven g. Geen van bovenstaande
Q4	Heeft u in de afgelopen 12 maanden [persoonlijk] geld gespaard op een van de volgende manieren, ongeacht of u het geld nog heeft of niet? Gelieve geen rekening te houden met geld gestort in een pensioen, maar denk aan allerlei vormen van sparen, zoals het opbouwen van een noodfonds of geld opzij zetten voor een speciale gelegenheid.	a. Cash geld thuis of in uw portemonnee sparen b. Geld storten op een spaarrekening c. Geld geven aan een familielid om namens u te sparen d. Sparen in een informele spaarclub e. Obligaties of termijndeposito's kopen f. Beleggen in crypto-activa g. Beleggen in aandelen h. Sparen of beleggen op een andere manier dan uw pensioen i. Geen van bovenstaande
Q7	Ik hou mijn financiele zaken goed in de gaten	Helemaal oneens, oneens, neutraal, eens, helemaal eens
Q8	Ik stel financiële lange termijn doelen en ik streef er naar om deze te behalen	Helemaal oneens, oneens, neutraal, eens, helemaal eens

Q9	Voordat ik iets koop, overweeg ik zorgvuldig of ik het kan betalen	Helemaal oneens, oneens, neutraal, eens, helemaal eens
Q10	Ik betaal mijn rekeningen op tijd	Helemaal oneens, oneens, neutraal, eens, helemaal eens

Perceived behavioral control

Antwoordmogelijkheden: helemaal oneens, oneens, neutraal, eens, helemaal eens

Q1	Ik heb vertrouwen in mijn vermogen om goede financiële beslissingen te nemen
Q2	Ik vind het makkelijk om goede financiële beslissingen te nemen
Q3	Ik heb er vertrouwen in dat ik me aan mijn financiële doelen kan houden.
Q4	Het nemen van goede financiële beslissingen ligt volledig binnen mijn controle
Q5	Of ik goede financiële beslissingen neem ligt helemaal aan mijzelf

Subjective norms

Antwoordmogelijkheden: helemaal oneens, oneens, neutraal, eens, helemaal eens

Q1	Ik voel druk van mijn familie of vrienden om bepaalde financiële beslissingen te nemen (bv. investeren, sparen, kopen)
Q2	Mijn financiële beslissingen worden beïnvloed door de financiële beslissingen van mijn leeftijdsgenoten en familie
Q3	Mensen die belangrijk voor mij zijn willen dat ik goede financiële beslissingen neem
Q4	Er wordt van mij verwacht dat ik goede financiële beslissingen neem

Appendix D: Demographic questions

Wat is uw geslacht?	- Man - Vrouw - Zeg ik liever niet - Anders, namelijk:
Wat is uw leeftijd in jaren?	
Wat is uw hoogst behaalde opleidingsniveau?	- Basisonderwijs

	- Middelbaaronderwijs - MBO HBO Bachelor - HBO Master - Universitaire pre-master - Universitaire Bachelor - Universitaire Master

Appendix E: Informed consent

Bedankt dat u wil meewerken aan dit onderzoek. Dit onderzoek maakt deel uit van de master scriptie voor de opleiding Communicatie- en Informatiewetenschappen aan Tilburg University. Het doel van dit onderzoek is om het effect van Financiële influencers op de financiële kennis en het financiële gedrag van jongvolwassenen in kaart te brengen. Het invullen van de vragenlijst duurt ongeveer 5 tot 10 minuten, en we willen u vragen om de vragenlijst zonder externe hulpmiddelen in te vullen. Voor deelname aan het onderzoek moet u tussen de 18 en 29 jaar oud zijn.

Alle verzamelde gegevens worden vertrouwelijk behandeld en opgeslagen. Dit betekent dat uw naam en andere persoonlijke gegevens niet kunnen worden gekoppeld aan andere gegevens uit de vragenlijst. De gegevens worden niet met anderen gedeeld. U kunt uzelf op elk moment terugtrekken uit het onderzoek.

P.S.: Deze enquête bevat credits om gratis reacties op enquêtes te krijgen bij SurveySwap.io en om punten te verzamelen voor Surveycircle.com.

Bij vragen, opmerkingen, of aanvullende informatie over het onderzoek kunt u contact opnemen met s.a.a.geenen@tilburguniversity.edu.

Door onderaan op 'Ja' te klikken, bevestigt u dat u bovenstaande informatie hebt gelezen en tussen de 18 en 29 jaar oud bent.

- Ja
- Nee