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Perceiving the self as authentic on social media precedes fewer mental health symptoms: A longitudinal approach☆,☆☆

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ABSTRACT

People who perceive themselves as authentic experience fewer mental health symptoms (e.g., depression). With social media, people now have great control over whether they express themselves authentically. Prior research has observed links between perceived authenticity on social media and mental health but did not test this relationship in reference to how authentic people perceive themselves offline. Here we show through a pre-registered longitudinal study of American college students (N_{T1} = 197) that perceived authenticity on social media precedes fewer mental health symptoms two months later (N_{T2} = 105). Only perceptions of authenticity on social media (not offline) predicted some aspects of later mental health (i.e., stress symptoms) independently of perceived authenticity in the other context. Perceived authenticity preceded fewer mental health symptoms more so for those who construed themselves as connected to and dependent on others (rather than psychologically independent) for perceptions of social media but not offline authenticity. The findings suggest that the outcomes of authenticity on social media for young people may deviate from outcomes of authenticity in the offline world.

1. Introduction

One in every eight people in the world suffers from mental health-related issues (World Health Organization, 2022). Following dual-factor models (e.g., Keyes, 2005), mental health has positive (e.g., subjective well-being) and negative (e.g., symptoms of depression, anxiety, and stress) dimensions, which are interrelated but distinct (Antaramian, Huebner, Hills, & Valois, 2010; Keyes, Shmotkin, & Ryff, 2002; World Health Organization, 2001). Recent research described a decrease in the positive mental health dimension and an increase in the negative dimension in the past years (e.g., Brailovskaia & Margraf, 2023). Mental health problems restrict a person's quality of life and cause high economic burdens and substantial financial costs to the community (Arango et al., 2018). Against this background, it is critical to identify the factors and mechanisms that impact a person's mental health. This knowledge can help develop strategies for its protection.

Some research proposes intensive use of social media such as TikTok, Instagram, and Twitter as a focal reason for mental health-related issues (e.g., Sun, 2022). Social media are "Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others" (Carr & Hayes, 2015, p. 50). Emerging research shows a complex landscape of how social media use relates to mental health (e.g., Boer, Stevens, Finkenauer, de Looze, & van den Eijnden, 2021; Braghieri, Levy, & Makarin, 2022; Brailovskaia & Margraf, 2020), often showing conflicting findings (Orben et al., 2020; Valkenburg, 2022). Notably, the same types of use may lead to positive outcomes for one person but negative for another (Brailovskaia & Margraf, 2022; Valkenburg, Meier, & Beyens, 2022). Following calls to identify factors

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that explain the relationship between social media use and mental health (e.g., Brand et al., 2019), the present research proposes *authenticity*.

1.1. Literature review

1.1.1. Authenticity

To know oneself and act in ways consistent with this "true self" has been a moral imperative throughout much of human history (Harter, 2002; Wood, Linley, Maltby, Baliousis, & Joseph, 2008). Existential philosophers emphasized that being authentic meant transcending the values of mass culture or society: The authentic person owns all their thoughts, feelings, and experiences and personally determines how to act accordingly, even if such behavior is contrary to what others expect—e.g., avoiding the "animal herd morality" in Nietzsche (1997) or external psychological pressures to become a certain type of person, as depicted in Sartre's novels (Golomb, 1995).

Person-centered views of authenticity later emerged (Barrett-Lennard, 1998; Rogers, 1959, 1961; Schmid, 2005) and psychologists sought to measure authenticity empirically (Wood et al., 2008). Authenticity can be defined as *perceiving* one's behavior as authored by oneself or internally caused (Ryan, Deci, & Grolnick, 1995; Wild, 1965). In this tradition, authenticity has three components: Self-alienation, authentic living, and accepting external influence (Wood et al., 2008). *Self-alienation* concerns the inevitable mismatch between a person's awareness and actual experiences. Not knowing the self or feeling out of touch is indicative of self-alienation. *Authentic living* concerns the perceived congruence between a person's conscious awareness and behavior. Authentic living involves perceiving one's behavior and expression as consistent with one's values and beliefs. *Accepting external influence* refers to the extent one conforms to their social environment, which in turn impacts degrees of self-alienation and authentic living. Those who perceive themselves as authentic are less likely to feel self-alienated or accept external influence and perceive themselves as living authentically.

A central application of psychological theory on authenticity is the link between self-perceived authenticity and mental health. People who internalize their various social roles tend to perceive themselves as consistent across contexts and develop a healthy sense of self (e.g., Gergen, 1971; Leary, 2003; Rogers, 1959)—suggesting that higher authenticity is beneficial for mental health (Donahue, Robins, Roberts, & John, 1993; Korchin, 1976). Following dual-factor models of mental health (Keyes, 2005), self-perceived authenticity across contexts should be linked to positive and fewer negative mental health outcomes. Indeed, clinically orientated researchers have also noted links between poor mental health and a lack of a coherent identity (Gleaves, 1996).

1.1.2. Authenticity, mental health, and social media

Social contexts in daily life involve unique roles and identities that may represent the authentic or inauthentic self (Brewer & Chen, 2007; Cooley, 1902; James, 1890; McConnell, 2011; Mead, 1934; Turner & Onorato, 1999). With the advent of social media, people now have even greater control over whether they express themselves authentically or not (Bayer, Triệu, & Ellison, 2020). However, the potential role of authenticity on social media for mental health has received little attention. Perceiving the self as authentic is a central component of a healthy, well-adjusted self in multiple perspectives in clinical and counseling psychology (e.g., Horney, 1951; May, 1981; Rogers, 1961; Winnicott, 1965; Yalom, 1980). Perceived authenticity on social media may therefore be key to untangling links between social media use and mental health.

Some studies have shown links between perceiving the self as authentic on social media and mental health. In cross-sectional studies, people who perceive themselves as authentic on social media tend to report greater life satisfaction, lower depression, etc. (Grieve & Watkinson, 2016; Mun & Kim, 2021). Two studies offer insight into the temporal nature of this relationship. One study found that authenticity on social media and subjective well-being positively predicted each other over the course of six months (Reinecke & Trepte, 2014). The study operationalized authenticity on social media through a version of the Integrated Self-Discrepancy Index (Hardin & Lakin, 2009) where participants indicate how much self-generated traits of their online profiles match who they are (without a particular context specified). Subjective well-being was operationalized by life satisfaction and positive and negative affect (Reinecke & Trepte, 2014). A more recent study found that authenticity conceptualized as the similarity between self-reported personality and computer-estimated personality based on Facebook traces (e.g., likes) predicted greater life satisfaction (Bailey, Matz, Youyou, & Iyengar, 2020). Further, in the study's follow-up, being asked to act more authentically on social media (consistent with one's personality) causally increased mood and positive affect (as opposed to being asked to act in more self-idealized ways on social media) two weeks later.

Taken together, the available findings suggest evidence for a positive link between authenticity on social media and mental health. Specifically, the higher one's authenticity on social media, the higher the mental health level. However, several research gaps remain. First, the focus has been measuring authenticity as the degree of similarity between who a person is on social media and who they are generally. This focus is understandable: Authenticity can be conceptualized in terms of cross-situational consistency or degrees of similarity between perceived selves (e.g., Gan & Chen, 2017; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997)—the idea being that those with more coherent selves will behave more similarly across situations. However, this conceptualization overlooks the multi-faceted nature of authenticity as the presence of authentic living and the absence of self-alienation and accepting external influence (see Wood et al., 2008). Second, none of the available longitudinal studies focused explicitly on the main representants of the negative dimension of mental health such as symptoms of depression, anxiety, and stress (see Margraf, Zhang, Lavallee, & Schneider, 2020) so far. These gaps limit the conclusion of the link between overall authenticity on social media and overall mental health.

Third, it is unknown whether authenticity on social media relates to mental health independently from authenticity offline. Prior research has shown that aspects of the self (e.g., personality) are similar but not the same on social media as they are offline (Blumer & Döring, 2012; Bunker, Saysavanh, & Kwan, 2021; Bunker & Kwan, 2021, 2023a). Even slight variations in reports (e.g., adding the context onto item context) can change the way people respond to measures of self-perception, reflecting the unique perceptions people have of their roles and identities within a particular context (Robie, Risavy, Holtrop, & Born, 2017; Schulze et al., 2021, 2023). Finally, there is a lack of longitudinal research that focuses on social media in general (i.e., beyond a specific platform). To determine the role of authenticity on social media independently of offline authenticity, it is important to consider the general context of social media. Indeed, if one wishes to specify a specific social media platform to compare to offline contexts, this would be an imbalanced comparison (e.g., a specific social media platform versus *all* offline contexts). It is also unclear which offline situations and social media platforms are comparable. This is not to criticize examining authenticity on specific social media platforms. Examining authenticity between offline and social media as general contexts will serve as a foundation for future research to investigate specific social media platforms against specific offline situations.

1.2. The present study

The present study aims to close the described research gaps. We investigate the temporal and directional nature of the association between perceptions of authenticity on social media and mental health (e.g., whether perceived authenticity precedes mental health or vice versa, and whether these links are positive or negative). Here, we consider

Table 1
Descriptives and correlations between perceived authenticity and mental health.

	M	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
$Authenticity_{SM}$																
1. T1	4.92	1.02	–													
2. T2	5.03	1.03	.676													
$Authenticity_{Off}$																
3. T1	5.22	1.00	.730	.534	–											
4. T2	5.08	1.07	.527	.773	.613											
Depression																
5. T1	12.78	5.09	−.288	−.193	−.422	−.245	–									
6. T2	12.77	4.90	−.304	−.354	−.333	−.532	.644									
Anxiety																
7. T1	11.96	4.21	−.264	−.213	−.388	−.284	.755	.515	–							
8. T2	11.90	4.50	−.301	−.452	−.299	−.559	.446	.743	.601							
Stress																
9. T1	14.06	4.60	−.338	−.328	−.373	−.324	.744	.502	.781	.522	–					
10. T2	13.95	4.90	−.396	−.507	−.272	−.535	.476	.712	.600	.808	.659					
Negative Mental Health																
11. T1	12.96	4.27	−.329	−.271	−.436	−.314	.918	.625	.915	.575	.917	.638	–			
12. T2	12.87	4.36	−.366	−.478	−.330	−.592	.574	.898	.625	.925	.615	.920	.671			
Positive Mental health																
13. T1	18.15	5.66	.264	.212	.444	.258	−.592	−.449	−.488	−.285	−.494	−.312	−.576	−.383	–	
14. T2	18.41	5.15	.324	.251	.397	.352	−.425	−.430	−.319	−.318	−.395	−.370	−.429	−.410	.670	–

Note. N = 193–194 (T1 sample size), 104–105 (T2 sample size); $_{SM}$ = Social Media; $_{Off}$ = Offline; all correlations were significant at $p < .05$ except perceived authenticity on social media (T2) with depression (T1).

authenticity through all three components (authentic living, self-alienation, accepting external influence; Wood et al., 2008) to reflect the various ways a person may perceive their social media self as authentic or not. We additionally examined whether the relationships between perceived authenticity on social media and mental health hold independently from perceived authenticity of the offline self. Moreover, we use a longitudinal design with a 2-month follow-up, and we focus on social media in general. Furthermore, we operationalize the positive dimension of mental health by positive mental health (PMH), which comprises emotional, social, and psychological well-being (Lukat, Margraf, Lutz, van der Veld, & Becker, 2016), and the negative dimension of mental health by symptoms of depression, anxiety, and stress as recommended by previous research (see, for example, Margraf et al., 2020).

1.2.1. Research question 1 and hypotheses 1 and 2

Considering available research on authenticity and mental health (e.g., Bailey et al., 2020; Grieve & Watkinson, 2016; Mun & Kim, 2021; Reinecke & Trepte, 2014), one might expect a person who perceives their social media self as authentic to experience positive (fewer negative) mental health outcomes. This possibility would suggest that social media is akin to other social contexts of daily life—a person who integrates them into their general self-concept will culminate in a happy, adjusted sense of self. However, given the control social media allows over self-presentation, another possibility is that people who experience psychological maladjustment may seek social media as a place where they feel they can truly be themselves. Indeed, people use social media to escape from negative emotions or liberate themselves from offline constraints (Behm-Morawitz, 2013; Brailovskaia, Schillack, & Margraf, 2020; Bunker et al., 2021). Although most people seem to express themselves authentically on social media (Bayer et al., 2020), social media is rife with false profiles and expressions of the self that deviate from offline life (Wright, White, & Obst, 2018). Thus, a second hypothesis is that those who experience high levels of negative (and low levels of positive) mental health outcomes may seek out social media as a space where they can truly be themselves. In other words, perceptions of authenticity on social media may be negatively linked to mental health. Those considerations result in our first research question and two hypotheses:

What is the temporal and directional nature of perceived authenticity on social media and mental health? (Research Question 1)

Perceived authenticity on social media will be positively (Hypothesis 1) versus negatively (Hypothesis 2) linked to mental health.

1.2.2. Exploratory research question 2

Prior research observed links between authenticity and mental health primarily in individualistic cultures (see Sutton, 2020 for a meta-analysis). In individualistic cultures, individuals whose

Table 2
Relationships between perceived authenticity on social media and mental health over two months.

Model information		Predictor coefficient estimates				
Predictor at T1	Predicted variable at T2	B (*SE*)	95% CI	B	*t*	*p*
Set 1: Perceived authenticity on social media (T1) predicting mental health (T2)						
Authenticity on social media	Depression	−.628 (.350)	[-1.323, .066]	−.169	−1.794	.076
	Anxiety	−.548 (.334)	[-1.223, .013]	−.153	−1.610	.111
	Stress	**−.835 (.350)**	**[-1.530, -.006]**	**−.231**	**−2.383**	**.019**
	Negative Mental Health	**−.617 (.308)**	**[-1.228, -.006]**	**−.193**	**−2.003**	**.048**
	Positive Mental Health	.612 (.362)	[-.106, 1.330]	−.161	1.689	.094
Set 2: Mental health (T1) predicting perceived authenticity on social media (T2)						
Depression	Authenticity on social media	−.002 (.015)	[-.032, .027]	−.003	−.146	.884
Anxiety		−.002 (.020)	[-.043, .038]	−.003	−.116	.908
Stress		−.019 (.018)	[-.055, .017]	−.025	−1.062	.291
Negative Mental Health		−.010 (.020)	[-.049, .030]	−.012	−.484	.629
Positive Mental Health		.002 (.015)	[-.027, .032]	.003	.166	.869

Note. N = 104–105; all models show relationship controlling for the predicted variable at Week 1; bolded values are significant at $p < .05$.

characteristics match the cultural imperative (e.g., construe the self as independent of context) will experience the most benefits (Caldwell--Harris & Aycicegi, 2006; Diener, Lucas, & Oishi, 2018; Fulmer et al., 2010; Gebauer et al., 2020; Triandis, 2001). One might accordingly expect links between self-perceptions of authenticity and positive mental health to be stronger for those who perceive themselves as independent from others and social context. However, these links remain to be tested when perceptions of authenticity specify social media or offline contexts, which may not show the same relationships as one might expect based on findings before the advent of social media technologies. Therefore, we additionally explored whether individual differences in these self-construal dimensions (e.g., whether the self is perceived as separate from versus connected to others, reliant versus dependent on others, consistent versus variable across contexts; Vignoles et al., 2016) moderated the relationship between perceived authenticity (on social media and offline) and mental health:

Does independent self-construal moderate the temporal link between perceived authenticity (on social media and offline) and mental health? (Research Question 2)

1.2.3. Sample rationale

We investigated the research questions and hypotheses in a longitudinal sample of American college students. A college student sample offers three advantages for the present study. First, college students are heavy users of social media (Auxier & Anderson, 2021; Chaffey, 2022). If college students' perceptions of authenticity on social media and offline inform their mental health, such findings will serve as a foundation for future work to test in other populations that use social media more lightly. Second, college students are relatively homogenous in terms of education level, age, and social media use (Bodford, Bunker, & Kwan, 2021; Kim, 2019; Peterson, 2001)—minimizing potential confounds in terms of sociocultural factors. Third, college students consist mostly of young adults—a demographic group that has received considerable attention in terms of the links between social media and mental health (Braghieri et al., 2020; Twenge, Spitzberg, & Campbell, 2019). The Surgeon General of the United States even issued a health advisory cautioning against the unregulated use of social media by young people (Murthy, 2023). Assessing the relationship between authenticity on social media and mental health thus serves to examine an issue of public importance. Our findings could contribute to the understanding of mechanisms underlying the potential impact of social media use on mental health. This knowledge can be used by mental health programs to protect and improve mental health, and in the clinical setting to support the therapeutic process.

1.2.4. Openness and transparency

Our report follows Transparency and Openness Promotion guidelines (Nosek et al., 2015) and Journal Article Reporting Standards for quantitative research in psychology (Appelbaum et al., 2018). Data, analysis code, and research materials are available at https://osf.io/aqwhr/?view_only=a2193594dc3e40758e68e686fa1865a4. Data were analyzed using R, version 4.2.0 (R Core Team, 2023). The present study is the first report of a larger preregistered project on social media use, personality, and mental health across the United States, Poland, and Germany (https://osf.io/v5mgc/?view_only=2f0611edca45404eaef19a56ce0b6d00). However, the analyses reported here are original and have not been previously published. Thus far, only data on the United States have been collected. The present study focuses on data from the United States to initially test our preregistered hypotheses for Research Question 1 and explore Research Question 2. The findings in the present research will serve as the foundation to test potential cultural differences in the larger project, which are beyond the scope of the present paper. The IRB board at Arizona State University approved the studies.

2. Method

2.1. Participants

Participants (N = 197) were college students from a large southwestern American university recruited through an introductory psychology course. The average age was 19.21 years (SD = 2.25; range = 18–36) and 34.7% were men, 64.8% were women, and 0.5% were nonbinary. The requirements of the study were being 18 and an active social media user. Participants reported how much time they spent on their mobile phones—where social media use primarily takes place (Chaffey, 2022). Participants reported this time estimate by examining their screen time logs on their phones, which show greater accuracy than self-reports (Parry et al., 2021). Participants averaged almost 6 h a day on their mobile phones (M = 343.3; SD = 136.6), suggesting a digitally immersed sample. Participants received course credit for their participation. If an individual recruited for the study did not meet the study requirements, they were offered an alternative assignment for credit.

2.2. Design

The study had a longitudinal design with measures completed twice via online Qualtrics surveys during February through April 2023.[1] After an initial survey (week 1; "T1"), participants were invited to complete the follow-up two months later (week 8; "T2"). Participants reported a subject-generated identification code (Yurek, Vasey, & Sullivan Havens, 2008) which we used to link responses across time points. Out of the initial 197 participants, 105 completed both surveys and identification codes that matched both reports. Power analysis showed that the sample sizes could detect small to moderate correlations (T1 r = 0.197; T2 r = 0.266) and moderate effect sizes in multiple regression with 1 or 2 predictors over the two months (f^2[1] predictor = .076; f^2[2] predictors = .095) with 0.80 power. .

2.3. Measures[2]

2.3.1. Authenticity

Participants completed adapted versions of the *Authenticity Scale* (Wood et al., 2008) which captures different aspects of authenticity: authentic living (e.g., "I always stand by what I believe in"), external influence (e.g., "Other people influence me greatly"), and self-alienation (e.g., "I feel alienated from myself"). Participants responded on a 7-point Likert-type scale (1 = *Strongly disagree*; 7 = *Strongly agree*). Higher scores indicate perceiving the self as more authentic (i.e., higher on authentic living and lower on external influence and self-alienation). We modified the 12 items in the scale to specify offline and social media contexts using the frame-of-reference approach (Robie et al., 2017; Schulze et al., 2021). This approach involves specifying the context of item content (e.g., "*On social media,* I always stand by what I believe in"). An advantage of this approach is that it does not conflate authenticity and similarity between selves. For example, a person may perceive their social media self to be entirely different from their offline self or general self (self without a specified context) while still believing their social media self to be authentic. In other words, they envision their social media self to be authentic to who they really are (i.e., the true self; Schlegel, Hicks, Arndt, & King, 2009) even though it is different from their other selves. Reliabilities were high across both social media and offline versions of the scale and

[1] As noted in the larger project's preregistration (https://osf.io/v5mgc/?view_only=2f0611edca45404eaef19a56ce0b6d00), there were four waves of data collection (weeks 1,2,3, and 8). The present research focuses only on weeks 1 and 8 as the measures of interest were included only at these points.

[2] A full list of measures is available at https://osf.io/aqwhr/?view_only=a2193594dc3e40758e68e686fa1865a4. Below, we report on the measures of relevance to the aims of the present research

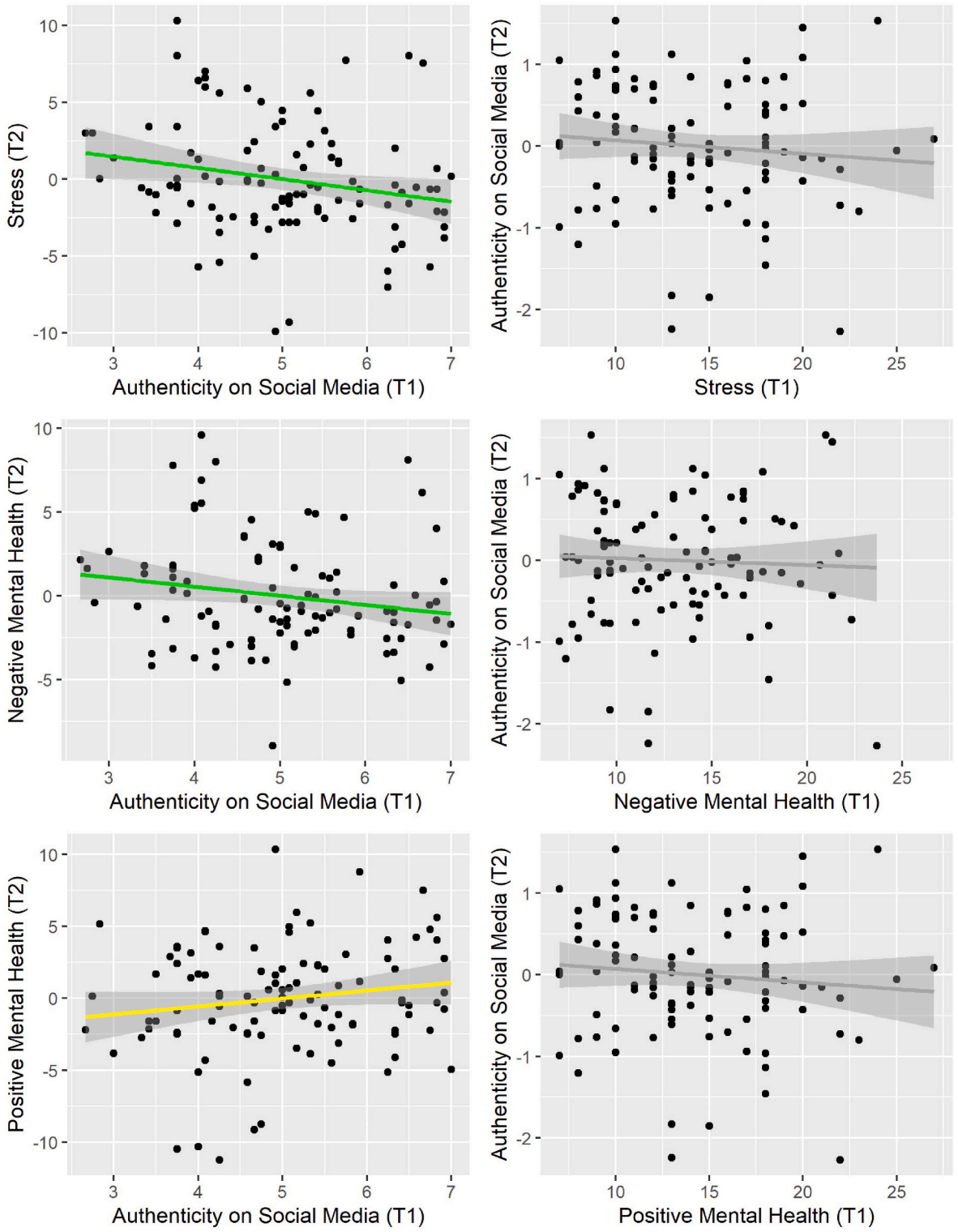

Fig. 1. Relationships between perceived authenticity on social media and mental health over two months. *Note.* $N = 104–105$; all models show relationship controlling for the variable on y-axis at T1 (i.e., predicting residual of variable at T2 after T1); green line indicates $p < .05$; yellow line indicates $p < .10$; grey line indicates $p > .10$.

different time points: social media at T1 ($\alpha = 0.881$); social media at T2 ($\alpha = 0.899$); offline at T1 ($\alpha = 0.979$); offline at T2 ($\alpha = 0.902$).

2.3.2. Mental health

Participants completed two measures of mental health: *The Depression, Anxiety, and Stress Scale 21* (DASS-21; Antony, Bieling, Cox, Enns, & Swinson, 1998; Lovibond & Lovibond, 1995) and the *Positive Mental Health Scale* (PMH-Scale; Lukat et al., 2016; Velten, Brailovskaia, & Margraf, 2021). The DASS-21 assesses how often three aspects of negative mental health occurred during the past week by seven items per subscale: Depression symptoms (e.g., "I felt that I had nothing to look forward to"; $\alpha_{T1/T2} = 0.897/.909$), anxiety symptoms (e.g., "I felt scared

Table 3
Multiple regression estimates for perceived authenticity on social media versus offline predicting mental health over two months.

Model Information			Predictor coefficient estimates				
Predictor at T1	Predicted variable at T2	Fit	B (*SE*)	95% CI	β	*t*	*p*
Intercept	Depression	$R^2_{adj} = .417$	**8.902 (2.584)**	**[3.775, 14.028]**	**2.377**	**3.444**	**<.001**
Authenticity(SM)		$F(3, 101) = 25.75$	−.538 (.538)	[-1.604, .529]	−.035	−1.000	.320
Authenticity(Off)			−.132 (.592)	[-1.307, 1.043]	−.144	−.223	.824
Intercept	Anxiety	$R^2_{adj} = .358$	**7.062 (2.638)**	**[1.829, 12.294]**	**1.958**	**2.677**	**.009**
Authenticity(SM)		$F(3, 101) = 20.33$	−.511 (.519)	[-1.540, .518]	−.015	−.985	.327
Authenticity(Off)			−.054 (.564)	[-1.172, 1.065]	−.014	−.095	.925
Intercept	Stress	$R^2_{adj} = .455$	**7.863 (2.664)**	**[2.576, 13.149]**	**2.172**	**2.950**	**.004**
Authenticity(SM)		$F(3, 101) = 29.91$	**−1.251 (.531)**	**[-2.305, -.197]**	**−.346**	**−2.355**	**.020**
Authenticity(Off)			.580 (.557)	[-.524, 1.685]	.160	1.042	.300
Intercept	Negative Mental Health	$R^2_{adj} = .457$	**6.901 (2.444)**	**[2.052, 11.750]**	**2.148**	**2.823**	**.006**
Authenticity(SM)		$F(3, 101) = 30.14$	−.758 (.463)	[-1.677, .161]	.064	1.636	.105
Authenticity(Off)			.205 (.502)	[-.790, 1.200]	−.236	.409	.683
Intercept	Positive Mental Health	$R^2_{adj} = .451$	4.085 (2.057)	[.004, 8.166]	1.070	1.986	.050
Authenticity(SM)		$F(3, 101) = 29.48$	.319 (.548)	[-.768, 1.406]	.115	.582	.562
Authenticity(Off)			.439 (.616)	[-.783, 1.661]	.084	.712	.478

$N = 104–105$; all models show relationship controlling for the predicted variable at Week 1; SM = social media, offline = offline. Overall models all significant at $p < .001$; bolded coefficient values are significant at $p < .05$.

without any good reason"; $\alpha_{T1/T2} = 0.799/.848$), and stress symptoms (e.g., "I found it hard to wind down"; $\alpha_{T1/T2} = 0.839/883$). Participants responded to items on a 4-point Likert-type scale (0 = *Did not apply to me at all*; 3 = *Applied to me very much or most of the time*), which were summed to indicate the total of each aspect of negative mental health. As a comparison to positive mental health, we also computed aggregate negative mental health by taking the average across the items ($\alpha_{T1/T2} = 0.937/.948$). The PMH-Scale contains 9 items (e.g., "I enjoy my life"; $\alpha_{T1/T2=}0.904/.896$), which participants indicate their agreement with on a 4-point Likert-type scale (0 = *Disagree*; 3 = *Agree*). Higher sum scores indicate higher levels of positive mental health.

2.3.3. Self-construal

Participants completed the 26-item version of the *Self-construal Scale* (Vignoles et., 2016), which captures seven dimensions of psychological independence versus interdependence. The scale was included at both time points, but the analyses reported in the present research focus on self-construal dimensions at T1. Each dimension was assessed with 4–6 items: Difference versus similarity (e.g., "You like being different from other people"; $\alpha = 0.680$); Self-reliance versus dependence on others (e.g., "You prefer to rely completely on yourself rather than depend on others"; $\alpha = 0.724$); Self-expression versus harmony (e.g., "You prefer to say what you are thinking, even if it is inappropriate for the situation"; $\alpha = 0.574$); Self-containment versus connection to others (e.g., "If someone in your family is sad, you feel the sadness as if it were your own"; $\alpha = 501$); Self-direction versus receptiveness to influence (e.g., "You prefer to do what you want without letting your family influence you"; $\alpha = 0.374$); Self-interest versus commitment to others (e.g., "You value personal achievements more than good relations with the people close to you"; $\alpha = 0.577$); Consistency versus variability (e.g., You behave in the same way even when you are with different groups of people"; $\alpha = 0.858$). Participants responded to each item on a 9-point Likert-type scale (1 = *Not at all*; 9 = *Exactly*). We note that the difference versus similarity, reliance versus dependence on others, and consistency versus variability dimension subscales showed higher reliability than the other four dimensions.

2.4. Analytic plan

To examine the temporal and directional relationship between perceived authenticity and mental health (Research Question 1), we used linear regression models—the predominant approach to examining relationships in two-wave behavioral research (Cohen, Cohen, West, & Aiken, 2003). We tested the temporal and directional nature of the relationships between perceived authenticity on social media and mental health using 15 multiple regression models (descriptives and zero-order correlations for authenticity and mental health variables are listed in Table 1). First, we tested whether perceived authenticity on social media at T1 predicted the indicators of mental health (symptoms of depression, anxiety, stress, overall negative mental health; positive mental health) at T2. Second, we tested whether the mental health indicators at T1 predicted authenticity on social media at T2. Third, we tested whether the relationships between perceived authenticity on social media and downstream mental health held while controlling for perceived authenticity offline. In all analysis sets, we controlled for the dependent variable at T1 (e.g., tested whether perceived authenticity at T1 predicted depression at T2 controlling for depression at T1). If there were significant relationships between perceived authenticity and mental health, we then planned to explore whether self-construal moderated these relationships (Research Question 2). Sample sizes for analyses equaled the number of participants with complete cases for the relevant variables.

We further considered potential confounds in our results—namely differences between samples who completed T1 only versus those who completed both T1 and T2 and between genders. First, we tested and found no significant differences in the study variables between those who completed both timepoints and those who only completed time 1 (see Table A1 in Appendix A). There were a higher proportion of women at T2 (74%) than at T1 (54%; $x^2 = 9.14$, $p = .010$). Prior research suggests that gender differences may appear in social media use and measures of the self (e.g., Bunker et al., 2021). We tested whether there were gender differences in the main variables at the start of the present research (See Table A2 in Appendix A). There was only one significant difference were stress at T1 higher in women ($M = 14.65$, SD = 4.64) than men ($M = 12.96$, $SD = 4.41$; $t = 2.49$, $p = .014$). Nevertheless, we considered that gender may influence the results. We examined whether significant effects held with gender included as a control variable. In these analyses, we included only participants who identified as either women or men.

3. Results

3.1. RQ1: what is the temporal and directional nature of perceived authenticity on social media and mental health?

Perceived authenticity on social media predicted downstream mental health in terms of stress and overall negative mental health

Table 4
Correlations between independent self-construals and relationships with perceived authenticity and mental health.

Independent self-construal dimension	*M*	*SD*	1.	2.	3.	4.	5.	6.	7.	$Auth_{SM}$	$Auth_{Off}$	Stress		NMH		PMH	
												T1	T2	T1	T2	T1	T2
1. Difference	6.04	1.34	–							**.501**	**.448**	**−.154**	**−.205**	**−.181**	−.167	**.210**	**.299**
2. Reliance	6.07	1.61	**.180**	–						**.229**	**.280**	.017	.063	.026	.077	−.009	.002
3. Consistency	5.09	1.73	**.306**	.087	–					**.367**	**.379**	**−.272**	−.173	**−.249**	−.124	**.343**	.117
4. Expression	4.89	1.45	**.284**	.134	**.278**	–				**.218**	**.301**	−.074	.035	−.050	.041	.138	.143
5. Containment	3.87	1.49	−.006	.079	−.103	−.109	–			−.092	−.134	.009	−.070	.090	−.028	**−.162**	−.016
6. Direction	5.08	1.63	**.226**	**.376**	.123	.099	**.337**	–		.133	.062	.049	−.023	.079	.053	−.120	−.076
7. Interest	4.45	1.56	.062	.106	−.034	**.189**	**.204**	.018	–	**−.220**	−.014	.076	**.286**	.068	**.251**	−.025	**−.180**

Note. $N = 194$ (T1 sample size), 105 (T2 sample size); bolded values are significant at $p < .05$; Auth = perceived authenticity at T1; $_{SM}$ = social media; $_{Off}$ = offline; NMH = negative mental health; PMH = positive mental health.

(Table 2, Set 1).[3] These relationships (β) were small but significant. These relationships remained significant and the relationship between perceived authenticity and depression became significant (*ps* < .05) after gender was included as a control variable in the model. However, the reverse relationships (mental health predicting downstream authenticity) showed mental health to be a null predictor of downstream perceived authenticity on social media (Table 2, Set 2). Visuals of these relationships are shown in Fig. 1. Together, they suggest that perceived authenticity on social media may have a positive effect on mental health (supporting the hypothesis based on traditional theories of authenticity). However, mental health may be unlikely to influence perceptions of authenticity on social media.

Before we examined whether perceived authenticity on social media predicted mental health independently of perceived authenticity offline, we checked for multicollinearity. Variance inflation factors were less than 2.64, suggesting that multicollinearity was not present, following guidelines by Hair, Ringle, and Sarstedt (2011) that variance inflation factors greater than 5 suggest multicollinearity. With both social media and offline perceived authenticity as predictors, only perceived authenticity on social media remained a significant predictor of mental health in terms of stress (Table 3). This relationship was moderate in size, and it remained significant after controlling for gender ($p = .023$). None of the relationships between perceived authenticity offline remained significant. Taken together, these findings suggest that perceived authenticity may have a more robust link to mental health when the context is on social media relative to offline life—particularly in terms of stress symptoms.[4]

3.2. *RQ2: do the temporal links between perceived authenticity and mental health depend on self-construal?*

We examined whether independent self-construal moderated the relationship between perceived authenticity (on social media and offline) and the mental health outcomes predicted in the RQ1 analyses (stress and negative mental health). Although perceived authenticity did not predict positive mental health in the RQ1 analyses, we included it in the RQ2 analyses to examine mental health beyond the negative dimension. We first checked whether independent self-construal dimensions were related to perceived authenticity and mental health via bivariate correlations. Independence in terms of difference and consistency showed the most robust relationships to perceived authenticity on social media and offline and mental health (see Table 4). These relationships suggest that more independent self-construals (especially the tendency to see the self as different from others and more consistent across situations) are positively related to authenticity on social media and offline and to mental health.

We next tested whether the independent self-construal dimensions moderated the relationship between perceived authenticity on social media and mental health using a series of multiple regression models. Variance inflation factors were less than 1.55, suggesting that multicollinearity was not present. We first examined the interaction between perceived authenticity and self-construal on mental health at T1. Second, we examined these interactions on mental health at T2. Findings showed that, with some exceptions, independence in terms of difference (defining the self as different as opposed to similar to others), reliance (relying on the self rather than being dependent on others), and

[3] We explored whether there was an interaction between mobile phone use and social media authenticity on downstream mental health. None of the interaction effects were significant, suggesting that the positive benefits of authenticity on social media may not apply to those who are more digitally immersed.

[4] We also explored whether there were interaction effects between offline and social media authenticity (T1) on mental health (T2). None of the interactions were significant (*ps* > .118).

Table 5
Interaction effects between self-construal dimensions with perceived authenticity on social media on mental health.

Model information			Predictor coeffient estimates				
Predictor	Predicted variable	Fit	B (*SE*)	95% CI	β	*t*	*p*
Intercept	Stress (T1)	$R^2_{adj} = .130$	35.962 (6.019)	[24.089, 47.834]	8.386	5.975	<.001
$Authenticity_{SM}$		$F(3,190) = 10.59$, $p < .001$	−4.569 (1.245)	[-7.025, −2.113]	−1.065	−3.670	<.001
Difference			−2.390 (1.015)	[-4.391, −.388]	−.557	−2.455	.020
$Authenticity_{SM}$ *Difference			**.498 (.198)**	**[.107, .888]**	**.116**	**2.511**	**.013**
Intercept	Stress (T1)	$R^2_{adj} = .161$	39.031 (5.768)	[27.653, 50.410]	9.267	6.767	<.001
$Authenticity_{SM}$		$F(3,190) = 13.30$, $p < .001$	−5.379 (1.153)	[-7.652, −3.106]	−1.277	−4.667	<.001
Reliance			−2.821 (.940)	[-4.675, −.967]	−.670	−3.001	.003
$Authenticity_{SM}$ *Reliance			**.620 (.183)**	**[.258, .981]**	**.147**	**3.377**	**.001**
Intercept	Stress (T1)	$R^2_{adj} = .141$	30.164 (4.460)	[21.367, 38.960]	7.081	6.764	<.001
$Authenticity_{SM}$		$F(3,190) = 11.57$, $p < .001$	−2.689 (.857)	[-4.379, −.998]	−.631	−3.138	.002
Consistency			−1.985 (.861)	[-3.683, −.286]	−.466	−2.305	.022
$Authenticity_{SM}$ *Consistency			.285 (.156)	[-.023, .592]	.067	1.824	.070
Intercept	Negative mental health (T1)	$R^2_{adj} = .143$	37.437 (5.551)	[26.489, 48.386]	9.467	6.745	<.001
$Authenticity_{SM}$		$F(3,190) = 11.71$, $p < .001$	−4.938 (1.148)	[-7.202, −2.673]	−1.249	−4.301	<.001
Difference			−3.027 (.936)	[-4.873, −1.182]	−.766	−3.235	.001
$Authenticity_{SM}$ *Difference			**.598 (.183)**	**[.238, .959]**	**.151**	**3.275**	**.001**
Intercept	Negative mental health (T1)	$R^2_{adj} = .160$	36.622 (5.362)	[26.044, 47.199]	9.353	6.829	<.001
$Authenticity_{SM}$		$F(3,190) = 13.22$, $p < .001$	−5.113 (1.071)	[-7.226, −2.999]	−1.306	−4.772	<.001
Reliance			−2.728 (.874)	[-4.451, −1.004]	−.697	−2.122	.002
$Authenticity_{SM}$ *Reliance			**.600 (.171)**	**[.264, .937]**	**.153**	**3.520**	**.001**
Intercept	Negative mental health (T1)	$R^2_{adj} = .124$	26.527 (4.184)	[18.273, 34.781]	6.637	6.340	<.001
$Authenticity_{SM}$		$F(3,190) = 10.12$, $p < .001$	−2.285 (.0804)	[-3.871, −.699]	−.572	−2.842	.005
Consistency			−1.573 (.808)	[-3.166, .021]	−.393	−1.946	.053
$Authenticity_{SM}$ *Consistency			.224 (.146)	[-.065, .513]	.056	1.530	.128
Intercept	Positive mental health (T1)	$R^2_{adj} = .074$	−1.276 (7.648)	[-16.262, 13.809]	−.234	−.167	.868
$Authenticity_{SM}$		$F(3,190) = 6.147$, $p = .001$	3.434 (1.582)	[.313, 6.554]	.630	2.171	.031
Difference			2.290 (1.289)	[-.253, 4.833]	.420	1.776	.077
$Authenticity_{SM}$ *Difference			−.374 (.252)	[-.871, .122]	−.069	−1.488	.139
Intercept	Positive mental health (T1)	$R^2_{adj} = .083$	−3.276 (7.428)	[-17.928, 11.377]	−.604	−.441	.660
$Authenticity_{SM}$		$F(3,190) = 6.788$, $p < .001$	4.630 (1.484)	[1.703, 7.558]	.854	3.120	.002
Reliance			2.285 (1.211)	[-.103, 4.673]	.421	1.887	.061
$Authenticity_{SM}$ *Reliance			**−.507 (.236)**	**[-.973, -.041]**	**−.094**	**−2.147**	**.033**
Intercept	Positive mental health (T1)	$R^2_{adj} = .141$	−.414 (5.493)	[11.248, 10.421]	−.079	−.075	.940
$Authenticity_{SM}$		$F(3,190) = 11.60$, $p < .001$	2.676 (1.056)	[.594, 4.758]	.510	2.536	.012
Consistency			2.825 (1.061)	[.733, 4.917]	.538	2.664	.008
$Authenticity_{SM}$ *Consistency			−.352 (.092)	[-.731, .027]	−.067	−1.832	.069
Intercept	Stress (T2)	$R^2_{adj} = .157$	35.011 (7.666)	[19.803, 50.218]	7.781	4.567	<.001
$Authenticity_{SM}$		$F(3,101) = 7.477$, $p < .001$	−4.472 (1.585)	[-7.615, −1.328]	−.994	−2.822	.006
Difference			−2.020 (1.349)	[-4.695, .656]	−.449	−1.497	.137
$Authenticity_{SM}$ *Difference			.437 (.256)	[-.072, .945]	.097	1.070	.091
Intercept	Stress (T2)	$R^2_{adj} = .176$	32.845 (8.042)	[16.891, 48.798]	7.382	4.084	<.001
$Authenticity_{SM}$		$F(3,101) = 8.407$, $p < .001$	−4.402 (1.629)	[-7.633, −1.171]	−.989	−2.702	.008
Reliance			−1.514 (1.303)	[-4.098, 1.070]	−.340	−1.162	.248
$Authenticity_{SM}$ *Reliance			.402 (.258)	[-.110, .914]	.090	1.557	.123
Intercept	Stress (T2)	$R^2_{adj} = .182$	36.737 (5.952)	[24.929, 48.544]	8.284	6.172	<.001
$Authenticity_{SM}$		$F(3,101) = 8.686$, $p < .001$	−4.368 (1.135)	[-6.621, −2.116]	−.985	−3.847	<.001
Consistency			−2.835 (1.173)	[5.162, −.507]	−.639	−2.416	.017
$Authenticity_{SM}$ *Consistency			**.516 (.209)**	**[.103, .930]**	**.116**	**2.475**	**.015**
Intercept	Negative mental health (T2)	$R^2_{adj} = .131$	29.366 (6.924)	[15.631, 43.101]	7.226	4.241	<.001
$Authenticity_{SM}$		$F(3,101) = 6.226$, $p < .001$	−3.651 (1.431)	[-6.490, −.812]	−.898	−2.551	.012
Difference			−1.447 (1.218)	[-3.862, .799]	−.356	−1.188	.238
$Authenticity_{SM}$ *Difference			.340 (.231)	[-.119, .799]	.084	1.469	.145
Intercept	Negative mental health (T2)	$R^2_{adj} = .169$	32.293 (7.182)	[18.047, 46.540]	8.128	4.497	<.001
$Authenticity_{SM}$		$F(3,101) = 8.063$, $p < .001$	−4.481 (1.455)	[-7.366, −1.595]	−1.128	−3.081	.003
Reliance			−1.875 (1.163)	[-4.182, .433]	−.472	−1.612	.110
$Authenticity_{SM}$ *Reliance			**.469 (.230)**	**[.011, .926]**	**.118**	**2.034**	**.045**
Intercept	Negative mental health (T2)	$R^2_{adj} = .153$	31.505 (5.385)	[20.822, 42.188]	7.852	5.850	<.001
$Authenticity_{SM}$		$F(3,101) = 7.256$, $p < .001$	−3.686 (1.027)	[-5.724, −1.648]	−.919	−3.588	.001
Consistency			−2.239 (1.062)	[-4.345, −.133]	−.558	−2.109	.037
$Authenticity_{SM}$ *Consistency			**.428 (.189)**	**[.054, .803]**	**.107**	**2.269**	**.025**
Intercept	Positive mental health (T2)	$R^2_{adj} = .096$	8.981 (8.343)	[-7.569, 25.532]	1.834	1.077	.284
$Authenticity_{SM}$		$F(3,101) = 4.696$, $p = .004$	1.119 (1.725)	[-2.302, 4.540]	.228	.649	.518
Difference			.673 (1.468)	[-2.239, 3.584]	.137	.458	.648
$Authenticity_{SM}$ *Difference			−.007 (.279)	[-.560, .546]	−.001	−.026	.979
Intercept	Positive mental health (T2)	$R^2_{adj} = .103$	−.608 (8.817)	[-18.098, 16.881]	−.125	−.069	.945
$Authenticity_{SM}$		$F(3,101) = 4.993$, $p = .003$	4.152 (1.786)	[.610, 7.694]	.851	2.325	.022
Reliance			1.806 (1.428)	[-1.026, 4.639]	.370	1.265	.209
$Authenticity_{SM}$ *Reliance			−.415 (.283)	[-.976, .146]	−.085	−1.466	.146
Intercept	Positive mental health (T2)	$R^2_{adj} = .091$	3.797 (6.593)	[-9.282, 16.876]	.773	.576	.566
$Authenticity_{SM}$		$F(3,101) = 4.455$, $p = .006$	2.911 (1.258)	[.416, 5.405]	.593	2.314	.023
Consistency			1.361 (1.300)	[-1.217, 3.939]	.277	1.047	.298
$Authenticity_{SM}$ *Consistency			−.263 (.231)	[-.722, .195]	−.054	−1.139	.257

Note. $N = 193$ (T1 sample size), 104 (T2 sample size); bolded interaction effects are significant at $p < .05$.

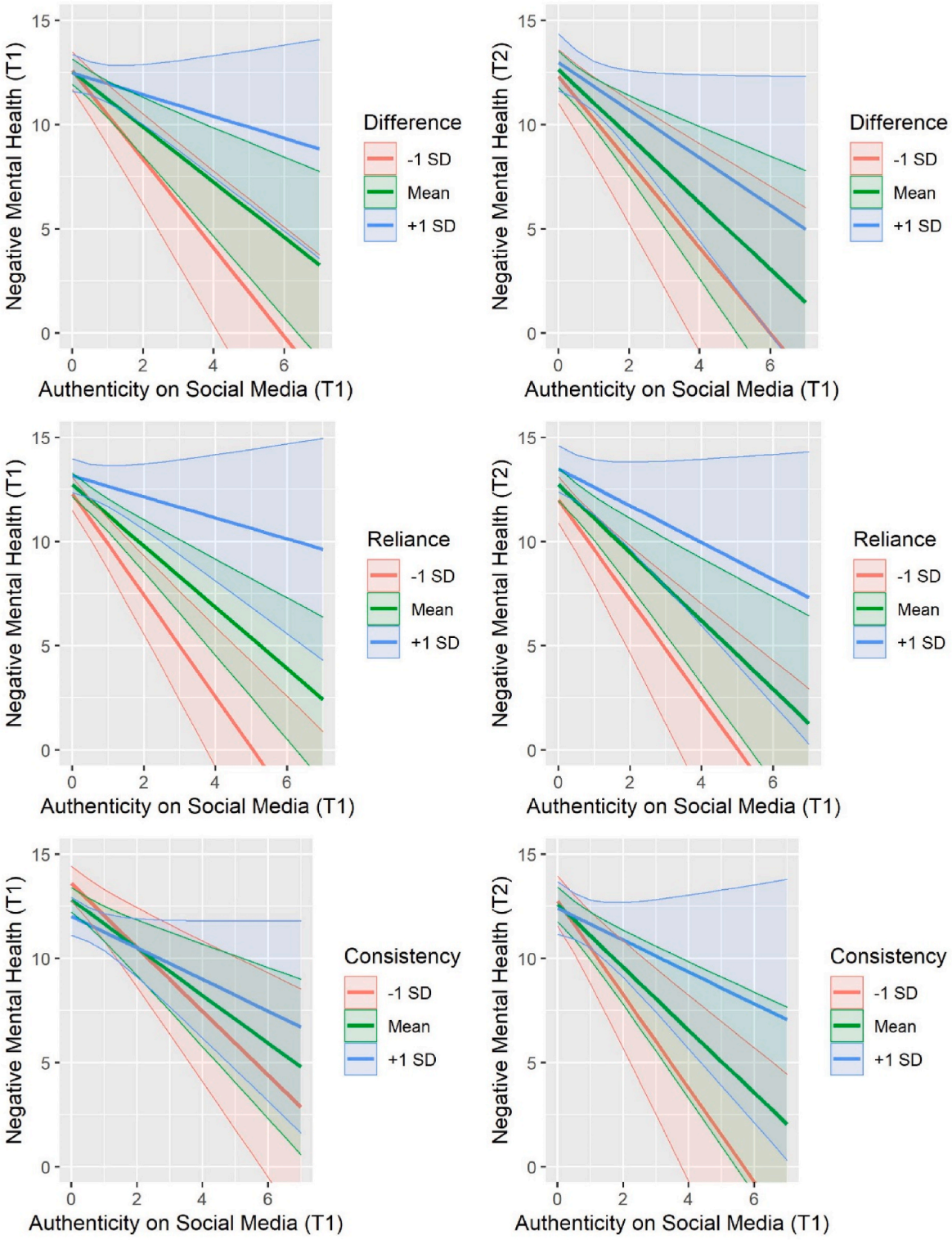

Fig. 2. Interactions between perceived authenticity on social media and independence on negative mental health. *Note.* $N = 193$ (T1 sample size), 104 (T2 sample size); the first column shows models for predicting negative mental health at T1; the second column shows models for predicting negative mental health at T2; Difference = viewing oneself as different versus similar to others; Reliance = preference to be self-reliant versus dependent on others; Consistency = viewing oneself as consistent versus variable across situations.

consistency (perceiving the self as consistent rather than variable across contexts) interacted with perceived authenticity on social media to predict mental health (see Table 5). These relationships remained after controlling for gender.

However, none of the other four dimensions of independent self-construal showed significant interactions with perceived authenticity on social media to predict mental health. This may be due to low reliability for the subscales assessing these four dimensions relative to difference, reliance, and consistency. To address this possibility, we examined whether reliability could improve for these four dimensions

by dropping items. By dropping one item, the reliabilities of self-interest and self-containment improved to $\alpha = 0.732$ and 0.573 respectively. We reexamined the interactions between perceived authenticity and these two dimensions on mental health and found the interactions to remain insignificant, suggesting that low reliability may not completely explain the lack of interaction effects.

The interactions shown in Table 5 were relatively more robust in predicting mental health at T1 compared to T2. The most robust interactions (i.e., those on negative mental health), depicted in Fig. 2, suggest that perceived authenticity on social media may have a stronger relationship with negative mental health for those with less independent self-construals. Indeed, all the confidence intervals of the simple slopes for authenticity predicting negative mental health at either time point for those high on the independence dimensions contained zero (except negative mental health at T2 for those high on difference; 95% CI [−2.29, −0.001]). Perceiving oneself as authentic on social media may mitigate negative mental health symptoms more so for those who view themselves as more connected to and reliant upon others, and more variable across contexts.

We further tested whether perceived authenticity offline interacted with the independent self-construal dimensions to predict these same indicators of mental health. Variance inflation factors were less than 1.35, suggesting that multicollinearity was not present. The only independent self-construal dimension to interact with offline perceived authenticity was consistency (all interactions predicting mental health were significant at $p < .05$ except the interaction predicting positive mental health at T2 was insignificant; B(SE) = −0.381(0.259), $t = -1.473$, $p = .144$), and self-expression when predicting positive mental health at T1 (B(SE) = −0.747(0.230), $t = -3.241$, $p = .001$). These relationships remained after controlling for gender. Taken together with the findings for perceived authenticity on social media, some aspects of having an independent versus interdependent self-construal may particularly apply to social media—namely the tendencies to view oneself as separate from others and not reliant on them.

4. Discussion

4.1. Summary of findings

The present longitudinal research tested the temporal and directional nature of self-perceived authenticity on social media and offline and mental health in a sample of mostly young adult college students. Foremost, we found that initial self-perceptions of authenticity on social media predicted lower levels of negative mental health two months later. This finding is consistent with the hypothesis we derived from theories suggesting positive links between authenticity and mental health (Gergen, 1971; Leary, 2003; Rogers, 1959). Previous research has shown links between authenticity on social media and mental health (Bailey et al., 2020; Grieve & Watkinson, 2016; Mun & Kim, 2021; Reinecke & Trepte, 2014) but did not test whether perceptions of authenticity on social media predict mental health independently from perceived authenticity of the offline self. We found that in analyses with perceptions of authenticity on social media and offline, only perceived authenticity on social media remained a significant predictor of later mental health (in terms of stress). Together, these findings suggest that young adults who perceive their social media self as authentic may help them mitigate some negative mental health symptoms. Perceptions of authenticity on social media may be more important than perceived authenticity offline in terms of mental health for young adults. For these individuals, social media may be a focal context in which the positive benefits of authenticity take place—maybe even more so than social contexts in physical life.

Notably, initial mental health did not predict later perceptions of authenticity on social media. Prior research suggests that people, especially young adults, may use social media to escape from negative emotions (Brailovskaia et al., 2020; Bunker et al., 2021). The hypothesis here is that authenticity on social media may be negatively related to mental health, as maladjusted individuals may seek out social media as a place where they can truly be themselves. The findings in the present study do not support this hypothesis. However, only some maladjusted individuals may use social media effectively to express themselves in authentic ways. People can use social media as a coping strategy to address negative mental health symptoms (see Wolfers & Utz, 2022), but social media use may be just one kind of available coping strategy. Alternatively, seeking an authentic self on social media when a person has lower negative mental health may be an ineffective strategy. A question for future research is who is likely to use social media as a coping strategy relative to other options (e.g., exercise or social support) and the differential effects of these strategies on mental health.

A further contribution of the present study is the observed interactions between independent self-construal in terms of difference (defining the self as different as opposed to similar to others), reliance (relying on the self rather than being dependent on others), and consistency (perceiving the self as consistent rather than variable across contexts) with perceived authenticity on social media on mental health. Perceived authenticity offline only showed such interactions with consistency. Perceiving oneself as authentic on social media may mitigate negative mental health more so for those who view themselves as more connected to and reliant upon others, and more variable across contexts. These findings contrast with expectations that links between authenticity and positive mental health should be strongest for those who match their greater cultural imperative (Caldwell-Harris & Aycicegi, 2006; Diener et al., 2018; Fulmer et al., 2010; Gebauer et al., 2020; Triandis, 2001)—in the case of the present study of American college students: Those with higher independent self-construals. People may use social media for maladaptive (e.g., waste time, negative social comparison; Yoon, Kleinman, Mertz, & Brannick, 2019) or adaptive reasons (e.g., connect with others; Cheng, Wang, Sigerson, & Chau, 2019; Kwan & Bodford, 2015; Teske, 2002). Those who view themselves as interdependent with others may be able to use social media adaptively and view themselves authentically there. Indeed, many aspects of maladaptive social media use are not unlike socially undesirable expressions of individualism and independent self-construals—e.g., narcissism, lower levels of empathy, envy, and impulsiveness (Cai, Kwan, & Sedikides, 2012; Duan, Wei, & Wang, 2008; Konrath, Bushman, & Grove, 2009; Smith & Kim, 2007; Zhang & Shrum, 2009). Whether people experience adaptive or maladaptive outcomes of social media may not only vary by how they use it but the match between their characteristics and the norms and values of the social media communities they partake in (e.g., the match between self-construal and ways to behave adaptively on social media).

4.2. Implications

The present findings have implications for theory and practice. We first consider the implications for theories of authenticity. Links between authenticity and mental health have traditionally focused on authenticity in the physical world (Gergen, 1971; Leary, 2003; Rogers, 1959)—considering how authentic people perceive themselves with friends, family, and other social contexts and roles in their daily life predict their mental health. Our findings suggested a more robust link between perceived authenticity and mental health on social media versus offline in college students who comprised mostly of young adults. Future research may identify why perceptions of authenticity in the offline world may not matter as much as perceptions of authenticity on social media in young adults. Young adults use social media heavily and sometimes spend even more time socializing online than offline (Twenge et al., 2019). Social media may be more than just spaces where young people create and consume content; these digital spaces may matter for what young adults consider to be their true, authentic selves.

The present research also has practical implications regarding social media use and mental health. There has been considerable debate

regarding the links between social media use and mental health, particularly in young adults; reviews of this literature have shown inconclusive results (Orben, 2020; Valkenburg et al., 2022). The present research suggests that perceived authenticity may be a useful construct to predict and treat mental health symptoms in young adults. This approach draws on prior theory (Gergen, 1971; Leary, 2003; Rogers, 1959) to address mental health problems in young people that may be linked to social media use. Given the findings in the present research, future research incorporating this approach may wish to consider how authenticity on social media may be different from the offline world. Reviews of social media literature suggest, for example, that although digital technologies can offer users flexibility in self-presentation, many people may not be able to employ them effectively or may be constrained by other features of digital environments (Talaifar & Lowery, 2023). Future research may wish to investigate how and when social media users effectively develop authentic perceptions of the self on social media versus how and when they do not.

4.3. Limitations and future directions

We note several limitations and future directions of the present study. First, the present study was conducted with participants from an individualistic cultural environment, delivered from one American university, limiting the results' generalizability to other populations. Future research may test relationships between perceived authenticity on social media and offline and mental health in less individualistic cultural environments—which have shown different relationships between social media use and self-perception than cultural environments high in individualism (e.g., Bunker & Kwan, 2023b). A question here is whether differences in the links between perceived authenticity and mental health dependent on the context (e.g., offline versus on social media) are more pronounced in some cultural environments.

There are other limitations with the present sample. Only 53.3% of participants completed both T1 and T2. This rate is within typical attrition rates between 30 and 70% in longitudinal studies (Gustavson, von Soest, Karevold, & Røysamb, 2012), and there were few differences in the study variables between participants who only completed the T1 survey versus those who completed both time points. However, the smaller sample size at T2 limited the ability of the present study to detect small effects. Future research may wish to replicate the findings with a larger sample size or longer periods of time. The gender imbalance in the present sample also limits the representativeness of the findings to the general population. Future research should replicate them in a more balanced sample. We also measured mental health in a non-clinical sample and found self-perceived authenticity on social media to be a predictor of stress and overall negative mental health. Self-perceived authenticity on social media could predict other aspects of mental health such as depression and anxiety when examining people who had previously been diagnosed with an affective disorder. Future research may investigate self-perceptions of authenticity in mental health in clinical samples.

Finally, the present study focused on *self*-perceptions of authenticity. A primary influence of authenticity on a person's mental health concerns their subjective reality (Rivera et al., 2019; Wood et al., 2008). However, the relationships between perceived authenticity on social media and mental health observed within the present research were small by conventional standards. Future research may investigate how important perceived authenticity on social media is relative to other factors. One such factor may be how authentic people are perceived by *others*. How authentic people are perceived *by others* also has social consequences (e.g., likability, trust; Kernis & Goldman, 2005; Liu & Perrewe, 2006; Wang & Hsieh, 2013), especially since these judgments are hard to make (Bailey & Levy, 2022). Future research may wish to test whether the perceived authenticity of others varies between offline and social media contexts in terms of the consequences of these perceptions and whether they are accurate.

In conclusion, the findings in the present research suggest that perceiving the self as authentic on social media precedes fewer mental health symptoms but not the reverse among college students. Moreover, how authentic they perceived themselves offline did not predict later mental health independently of how authentic they perceived themselves on social media. These findings highlight the importance of self-perception on social media for mental health in young adults and to understand how these perceptions differ from how young people view themselves offline.

CRediT authorship contribution statement

Cameron J. Bunker: Conceptualization, Data curation, Formal analysis, Methodology, Writing - original draft, Writing - review & editing. **Julia M. Balcerowska:** Conceptualization, Methodology, Writing - review & editing. **Lena-Marie Precht:** Conceptualization, Writing - review & editing. **Jürgen Margraf:** Conceptualization, Funding acquisition. **Julia Brailovskaia:** Conceptualization, Funding acquisition, Methodology, Writing - review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data and analysis code are available at https://osf.io/aqwhr/?view_only=a2193594dc3e40758e68e686fa1865a4.

Appendix A

Table A1
Descriptives for Study Variables for Participants who only completed T1 versus those who completed both T1 and T2

Variables	T1 only n = 85–89		T1 and T2 n = 99–105		t	p
	M	SD	M	SD		
Age	19.33	2.06	19.12	2.41	.65	.514
Phone Time	326.47	139.47	357.82	133.05	−1.55	.122
Authenticity on social media	4.96	.95	5.02	1.08	−.47	.638
Authenticity offline	5.21	.99	5.22	1.01	−.08	.932
Depression	12.60	4.90	12.94	5.26	−.48	.645
Anxiety	12.16	4.61	11.79	3.86	.59	.553
Stress	13.70	4.72	14.36	4.49	−1.00	.318
Negative mental health	12.86	4.52	13.03	4.07	−.28	.780
Positive mental health	18.48	5.96	17.87	5.41	.75	.455

Note. All variables are at Time 1.

Table A2
Descriptives for Study Variables between Women and Men

Variables	Time	Women n_{T1} = 118–125 n_{T2} = 76-77		Men n_{T1} = 65–67 n_{T2} = 27		*t*	*p*
		M	SD	M	SD		
Age	T1	19.13	1.99	19.37	2.69	−.66	.513
Phone Time	T1	352.92	140.34	327.11	129.64	1.25	.213
Authenticity on social media	T1	5.06	1.04	4.89	.99	1.12	.266
	T2	5.04	1.06	5.02	.97	.07	.947
Authenticity offline	T1	5.24	1.04	5.21	.92	.20	.839
	T2	5.09	1.14	5.05	.86	.19	.848
Depression	T1	12.96	5.31	12.34	4.60	.84	.404
	T2	12.78	5.15	12.81	4.30	−.04	.972
Anxiety	T1	12.34	4.27	11.20	4.10	−1.81	.072
	T2	12.08	4.84	11.15	3.24	−1.12	.268
Stress	T1	14.65	4.64	12.96	4.41	2.49	.014
	T2	14.09	5.12	13.56	4.38	.52	.604
Negative mental health	T1	13.32	4.35	12.22	4.10	1.72	.087
	T2	12.98	4.67	12.51	3.46	.56	.578
Negative mental health	T1	17.93	6.01	18.85	4.75	−1.17	.245
	T2	18.55	5.40	18.15	4.50	.37	.710

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