New media literacy, self-acceptance, and psychological flexibility in enhancing Gen Z wellbeing

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ABSTRACT

Despite the growing interest in psychological wellbeing among Generation Z (born 1997-2012), there is a gap in understanding how new media literacy, unconditional self-acceptance, and psychological flexibility interact to influence psychological wellbeing, particularly in the context of the digital age. The proliferation of digital technologies has reshaped the way Generation Z interacts with the world, influencing various aspects of their mental health and psychological wellbeing. This study was conducted to explore whether new media literacy moderate the mediation effect of unconditional self-acceptance on the relationship between psychological flexibility and psychological wellbeing. A total of 240 university students from Malaysia aged 18-25 were recruited using purposive sampling method. Results showed that psychological flexibility directly and significantly enhances psychological wellbeing regardless of an individual's level of new media literacy. Furthermore, the contribution of psychological flexibility on psychological wellbeing is significant through unconditional self-acceptance among individuals with low and moderate levels of new media literacy. This study reveals that new media literacy enhances the effectiveness of psychological flexibility in promoting psychological well-being among Generation Z, suggesting that new media literacy is crucial for resilience and well-being in the digital age, particularly during identity development.

Alfabetización en nuevos medios, autoaceptación y flexibilidad psicológica en la mejora del bienestar de la Generación Z

RESUMEN

A pesar del creciente interés en el bienestar psicológico de la Generación Z (nacidos entre 1997 y 2012), existe una brecha en la comprensión de cómo interactúan la alfabetización en nuevos medios, la autoaceptación incondicional y la flexibilidad psicológica para influir en el bienestar psicológico, especialmente en el contexto de la era digital. La proliferación de tecnologías digitales ha transformado la forma en que la Generación Z interactúa con el mundo, influyendo en varios aspectos de su salud mental y bienestar psicológico. Este estudio se realizó para explorar si la alfabetización en nuevos medios modera el efecto mediador de la autoaceptación incondicional en la relación entre la flexibilidad psicológica y el bienestar psicológico. Se reclutaron un total de 240 estudiantes universitarios de Malasia, de 18 a 25 años, mediante un método de muestreo intencional. Los resultados mostraron que la flexibilidad psicológica mejora directa y significativamente el bienestar psicológico, independientemente del nivel de alfabetización en nuevos medios de los individuos. Además, la contribución de la flexibilidad psicológica en el bienestar psicológico es significativa a través de la autoaceptación incondicional entre individuos con niveles bajos y moderados de alfabetización en nuevos medios. Este estudio revela que la alfabetización en nuevos medios mejora la efectividad de la flexibilidad psicológica en la promoción del bienestar psicológico entre la Generación Z, lo que sugiere que la alfabetización en nuevos medios es crucial para la resiliencia y el bienestar en la era digital, especialmente durante el desarrollo de la identidad.

The proliferation of digital technologies has reshaped the way Generation Z interacts with the world, influencing various aspects of their mental health and psychological well-being (Kullolli & Trebicka, 2023). This cohort (born 1997-2012) has grown up with unprecedented access to digital technologies, which profoundly shape their daily lives and mental health (Ameen et al., 2023). This generation, born into a world saturated with digital media, navigates a unique landscape where online interactions and digital content play pivotal roles in their daily lives (Dutko, 220). With the Internet, social media, and other digital platforms being integral to their lives, the ability to critically evaluate and engage with digital content is crucial. However, many individuals in this generation struggle with these skills, leading to significant impacts on their mental health and wellbeing (Setko et al., 2019).

New media literacy, unconditional self-acceptance, and psychological flexibility have emerged as significant factors in enhancing mental health among young individuals (Bahramian et al., 2018). Inadequate media literacy can leave Gen Z vulnerable to misinformation and digital manipulation, such as fake news and deepfakes (Pérez-Escoda et al., 2021). Moreover, the constant exposure to idealized portrayals of success and beauty on social media can lead to negative self-perceptions (Kumar, 2023).

To address these demands, the current study draws on a theoretical framework that integrates the Psychological Flexibility Model, Media Literacy Theory, and Unconditional Self-Acceptance. The Psychological Flexibility Model by Hayes et al. (2006) emphasizes adaptability, perspective-shifting, and balanced engagement with life through processes such as acceptance and mindfulness, equipping individuals to navigate stressors and remain resilient. Complementing this, Media Literacy Theory by Potter (2004) focuses on the development of critical thinking across media domains, highlighting the role of cognitive skills and personal agency in interpreting and interacting with digital content. Finally, Unconditional Self-Acceptance by Ellis (2005) underscores the importance of embracing one's intrinsic worth, independent of external validation, which is a vital trait in the highly visible and comparison-driven world of digital media. Together, these theoretical perspectives provide a foundational framework for this study, linking psychological flexibility, new media literacy, and unconditional self-acceptance as critical factors in enhancing digital resilience for Generation Z.

Generation Z (Gen Z)

Generation Z, commonly referred to as Gen Z, includes individuals born approximately between the mid-1990s and the early 2010s. This generation has grown up in a digital age, surrounded by social media and new forms of communication, making them distinct from previous generations in terms of media consumption and behavior (Dimock, 2019). It is crucial to focus on Gen Z in research related to new media literacy, self-acceptance, and psychological flexibility because they are the first generation to experience the profound impact of digi-

tal technologies on their formative years. Understanding how these factors influence their well-being can provide insights into improving mental health outcomes and fostering resilience in an era defined by rapid technological change and information overload (Halat et al., 2023). Addressing these areas is vital for promoting healthier relationships with media and enhancing psychological well-being in a generation that navigates unique social and psychological challenges.

Psychological wellbeing

Psychological well-being (PWB) is a multidimensional concept that encompasses positive psychological functioning, including aspects such as autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance, contributing to an individual's emotional and psychological health, life satisfaction, and ability to manage stress and achieve personal goals (Ryff, 1989; 2014). PWB extends beyond the absence of mental illness, incorporating attributes like resilience, optimism, and life satisfaction (Ryff & Keyes, 1995). Furthermore, inadequate PWB is linked to several detrimental effects such as increased vulnerability to mental health issues like anxiety and depression, reduced coping capacity during adversities, and lower overall productivity and performance at work (Russo & Terraneo, 2020). Thus, maintaining a high level of PWB is essential not only for personal satisfaction and growth but also for contributing effectively to society and leading a healthier life.

Psychological flexibility and psychological wellbeing

Studies have attempted to pinpoint the psychosocial factors of PWB, and some of them have come with the conclusion that the way individuals receive, perceive, and interpret social feedback holds critical roles in developing one's PWB (Tan et al., 2021). For instance, it was reported that the way one conceptualizes, evaluates, and accepts themselves is a protective factor against psychological problems (Russo & Terraneo, 2020). One of the interesting factors of PWB is psychological flexibility (PF), it refers to the ability to pursue valued life aims despite the presence of distress. This concept is crucial as it links an individual's capacity to handle life's challenges with their broader mental health and well-being, suggesting that those who are psychologically flexible are better able to maintain balance and satisfaction in their lives, even during difficult times (Kashdan et al., 2020).

PF allows individuals to adaptively manage both positive and negative emotional states, leading to increased PWB (Kashdan et al., 2020). This adaptability is crucial as it helps individuals to remain balanced and composed even in the face of emotional upheavals, contributing to better mental health outcomes. PF also contributes to maintaining and enhancing social relationship quality by enabling individuals to better manage the emotional demands of relationships, which in turn positively impacts their well-being (Twiselton et al., 2020). By being flexible, people can communicate more effectively, show empa-

thy, and handle conflicts constructively, leading to stronger and more satisfying relationships.

Moreover, the capacity to pursue valued life aims despite distress, which is considered a core aspect of PF, has been linked with positive emotional regulation and goal achievement, further emphasizing its pivotal role in fostering PWB (Kashdan et al. 2020). Recent studies illustrate this by showing that personal values such as openness to change, which foster PF, are predictive of higher levels of unconditional self-acceptance. This self-acceptance, in turn, plays a mediating role in enhancing PWB by allowing individuals to maintain a positive self-view despite external challenges or internal (Kvitsiani et al. 2019).

Unconditional self-acceptance as mediator

Unconditional self-acceptance (USA) is defined as accepting oneself without any conditions, embracing all aspects, including flaws and shortcomings, regardless of external approval or personal performance (Chamberlain & Haaga, 2001). PF plays a crucial role in enhancing this self-acceptance by allowing individuals to manage negative social feedback without experiencing detrimental emotional responses. PF helps individuals maintain a balanced perspective when faced with criticism, which in turn supports their USA by preventing negative emotional impacts from external opinions. This capacity to remain steadfast in self-acceptance despite fluctuating external feedback suggests that USA can mediate the relationship between PF and PWB, enabling individuals to maintain a positive self-concept in challenging situations (Go & Lee, 2023). Moreover, while PF directly predicts positive PWB (Klein et al., 2022), it can also indirectly enhance PWB through USA by fostering greater emotional resilience and mental health.

The protective role of PF against negative emotions from social feedback is essential in strengthening USA, which subsequently contributes to higher PWB. However, with the advent of the digital age, the nature of social feedback has shifted. Interactions that were once predominantly in-person have now increasingly moved to online platforms, altering the way individuals communicate and perceive feedback (Basiron et al., 2019). This shift underscores the importance of understanding how digital interactions influence USA and PWB, as online feedback now plays a significant role in shaping self-perception and emotional well-being. Thus, PF not only directly improves well-being by helping individuals navigate distress but also enhances well-being by reinforcing USA, creating a strong foundation for enduring mental health (Go & Lee, 2023). PWB is significantly influenced by PF, USA, and NML. PF, the ability to adapt to changing emotional and situational demands, predicts better mental health outcomes and supports a more meaningful life (Lucas & Moore, 2020). USA, which fosters a positive attitude toward oneself regardless of circumstances, enhances emotional resilience and reduces vulnerability to psychological distress (Kvitsiani et al., 2019). NML, critical in the digital age, helps individuals manage stress and misinformation from new media environments, making it a key factor in maintaining PWB (Belinskaya & Shaekhov, 2023). USA also mediates the

relationship between PF and PWB, suggesting that individuals with high PF and USA are better equipped to handle life's challenges, leading to enhanced well-being (Pyszkowska & Rönnlund, 2021). These interconnected constructs collectively contribute to overall PWB.

Understanding the roles of NML, USA, and PF in enhancing PWB among Gen Z is essential for developing targeted interventions and support strategies. Given the pervasive influence of digital media and the unique pressures faced by this generation, promoting these competencies can significantly improve their mental health and overall wellbeing. By understanding how these factors interact and contribute to PWB, we can develop more effective strategies to support the mental health of this digitally immersed generation.

New media literacy and their moderating roles

New media literacy (NML) refers to the skills and abilities required to access, analyze, evaluate, and create messages across various forms of new media, such as social media, blogs, and online forums (Borah & Lorenzano, 2023). As new media pervade every aspect of life, from personal interaction to public discourse, adequate levels of NML are crucial for effectively navigating digital landscape. Recent studies underline the significance of NML in promoting mental health by enhancing one's ability to manage the vast amounts of health-related information online. Individuals with high NML are less likely to experience anxiety related to COVID-19 due to their competence in assessing the credibility of online health information (Hung et al., 2021). Accordingly, it was also suggested that adequate NML correlates with improved mental health literacy, reducing susceptibility to mental health disorders among adolescents (Dwi Santoso & Sestri Musdalifah, 2019).

NML might interact with PF in predicting PWB. It equips individuals with the critical thinking skills necessary to navigate the complexity of digital information, reducing the likelihood of emotional distress caused by misinformation or media overload (Klein et al., 2022). This interaction with PF facilitates adaptability in the face of psychological stress, could enhance an individual's PWB by allowing for more effective management of the challenges and confusions posed by digital media environments.

Furthermore, interaction between NML and PF might also have different contribution to the levels of USA. High levels of NML enable individuals to critically evaluate and filter the online social feedback, which is often a source of psychological distress. According to Gogus et al. (2023), individuals with higher levels of NML are better equipped to navigate and process digital content, which reduces the negative emotional impact of online interactions. NML might also interact with USA in predicting PWB by enabling individuals to critically assess and filter the vast amounts of information and social feedback they encounter online. By doing so, NML helps to prevent the internalization of negative self-perceptions that can arise from toxic digital interactions. When properly combined with USA, which involves a resilient and accepting self-view, this

critical capacity contributes to greater overall PWB. The interplay between NML and USA ensures that individuals maintain their mental health and emotional stability even when faced with the challenges of the digital information age (Pyszkowska & Rönnlund, 2021).

The integration of the Psychological Flexibility Model (PFM) and Media Literacy Theory, with the addition of NML and USA, provides an important framework for understanding how Generation Z can navigate the psychological demands of the digital age. The Psychological Flexibility Model (Hayes et al., 2006) emphasizes adaptability, perspective-shifting, and balanced life engagement through core processes like acceptance and mindfulness, equipping individuals to manage stress and stay resilient. In contrast, Potter's (2004) Media Literacy Theory focuses on developing critical thinking across media domains, underscoring the importance of a personal locus and cognitive skills for interpreting and interacting with digital content. Lin et al. (2013) extends this by framing NML as a complex skill set that combines cognitive, social, and emotional capacities to engage analytically and creatively with digital media.

In this context, the combined influence of NML, USA, and PF is crucial in fostering resilience and positive mental health outcomes. Adequate media literacy skills help mitigate the risks associated with digital distortions and unrealistic portrayals on social platforms, while PF and USA equip individuals to maintain a strong sense of self in the face of societal pressures (Kumar, 2023). Ultimately, by cultivating media literacy, PF, and USA, Generation Z can better manage the complexities of the digital landscape, fostering resilience and well-being in a world where digital interactions shape both personal development and mental health.

The present study

In the context of the digital age, the growing importance of media literacy has been recognized, but only few studies have explored how NML may influence the psychological factors that contribute to well-being. While existing research has examined aspects such as PF and self-acceptance (Hayes et al., 2006; Neff, 2011), the potential moderating role of NML in this relationship has remained largely unexplored. No studies have specifically examined whether NML moderates the mediation of USA in the contribution of PF to PWB.

This study aims to investigate 1) whether USA mediate the relationship between PF and PWB; 2) whether NML will moderate the mediated relationship between PF and PWB, through USA (moderated mediation model, see Figure 1). Based on previous literature review, USA will mediate the relationship between PF and PWB (hypothesis 1). People who are more psychologically flexible are more likely to have higher USA because they are better at accepting their thoughts and feelings without self-criticism. Higher USA, in turn, leads to greater PWB, as people who accept themselves are less prone to stress, anxiety, or feelings of inadequacy, thus enhancing their mental well-being. NML will moderate the relationship between PF and PWB, through USA (hypothesis 2).

Methods

Participants

A total of 240 participants were recruited. After data cleaning, a total of 233 participants included in the final sample, a significant majority identified as female, constituting 79.8% of the sample. No participants who were unable to read and write were excluded from the study. Ethnic diversity was also evident within the sample, with the largest proportion identifying as Malay (44.2%), followed by Chinese (13.3%), Indian (25.8%), and individuals from other ethnic backgrounds (12.4%). The average age of participants was calculated to be 21 years old, reflecting the youthful composition of the Generation Z cohort under study. The ethical clearance was obtained from the ethic review board (ERB) of the faculty of Psychology and Social Sciences, University of Cyberjaya, Malaysia, with clearance serial number UOC/FPSS/2024(4). However, seven participants were excluded from the analysis as they did not fall within the specified age range of 18-25 years old. Consequently, data from 233 participants were included in the final analysis.

Purposive sampling method was employed for participant selection in this research, specifically targeting university stu-

Figure 1

The proposed Moderated Mediation Model
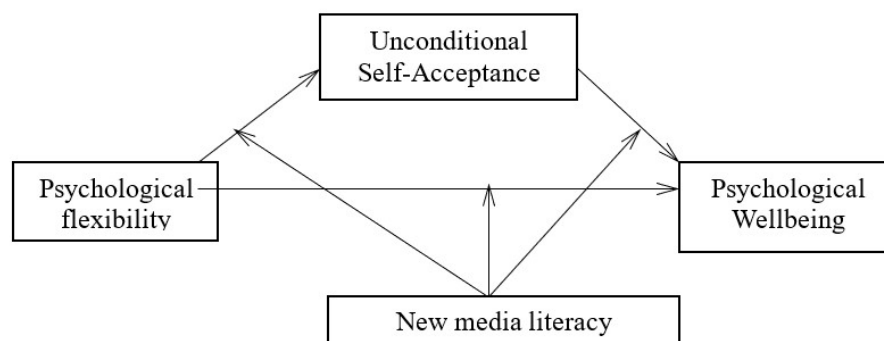
dents aged between 18 and 25 years, which falls within the Generation Z demographic range. Purposive sampling involves deliberately selecting participants who meet specific criteria relevant to the research objectives. University students within this age range were chosen as they represent a significant portion of the Generation Z population and are easily accessible through academic institutions.

Procedure

Before initiating the research, approval was secured from the Ethics Review Board (ERB) of the Faculty of Psychology and Social Sciences, University of Cyberjaya, Malaysia. The study was promoted across various social media platforms, including Facebook, Twitter, Instagram, WhatsApp, and LinkedIn, utilizing the investigator's accounts. A link to the online survey was provided alongside these promotions. Participants who met the study criteria voluntarily accessed the provided link, which directed them to a Google form containing the survey. Prior to completing the questionnaires, participants provided consent by clicking the "I agree" option, ensuring protection of their rights and privacy. The survey, consisting of demographic inquiries and Sections B (NMLS), C(AAQ-II), D(PWBS), and E(USAQ), required approximately 15 minutes to finish. Upon completion, participants were thanked and encouraged to share the study link with eligible individuals. Finally, the investigator proceeded to analyze the collected data.

Measures

The *New Media Literacy Scale* (NMLS)(Ashley et al., 2013) comprises 35 items divided into four sub-scales, each assessing different aspects of media literacy. Participants rated their agreement with each item on a 5-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. Prior to the main study, a pilot test involving 20 participants was conducted to ensure the clarity of the questions and the internal consistency of the scale. Although the Cronbach's alpha coefficients observed in the current study were slightly lower than those reported in prior research by Koc and Barut (2016), they remained above .7, indicating satisfactory reliability.

The AAQ-II questionnaire, a 7-item adaptation of the original AAQ-I questionnaire developed by Hayes, was devised by Bond et al. (2011) to assess PF, diversity, acceptance, experiential avoidance, and psychological non-flexibility. Elevated scores on the AAQ-II are indicative of greater psychological inflexibility. The initial version of the questionnaire exhibited acceptable reliability, validity, and construct validity in psychometric evaluations. The original version of the questionnaire demonstrated satisfactory reliability, validity, and construct validity in psychometric analysis. The mean alpha coefficient was .84 (.78 to .88), and test-retest reliability was .81 and .79 over a 3-12-month interval, with good discriminant validity.

The *Psychological Wellbeing Scale* (PWBS), developed by Ryff and Keyes (1995), was crafted to evaluate the psychological wellbeing of college students. It comprises 18 items, each rated on a 6-point scale ranging from 1 = *Strongly disagree* to 6 = *Strongly agree*. The total PWBS scores span from 18 to 108, with higher scores indicating superior psychological wellbeing. Previous research reported strong reliability for the PWBS, with Cronbach alpha values ranging from .87 to .93. However, in our study, the Cronbach's alpha for the PWBS was .71 (Ryff & Keyes, 1995).

The original USAQ comprised 20 statements designed to capture elements of USA philosophy and practice as outlined in REBT theory. Nine items were worded such as higher score represent higher USA, while 11 items were reversed scored because they were worded such that lower score represented greater USA. Respondents rated each statement on a scale ranging from 1 = *Almost always untrue* to 7 = *Almost always true*. The version used in this study remained consistent with the original USAQ, except for modifications made to three items due to negative item-remainder correlations observed in Chamberlain and Haaga's (2001) study. The internal consistency of the revised USAQ was found to be high (alpha .86).

Statistical analysis

Data were analyze by using IBM SPSS Statistics version 27 (IBM Corp). Descriptive analyses were performed to explore the study variables. First, Model 4 was used to test whether the association between PF (independent variable) and levels of PWB (dependent variable) was mediated by USA (mediating variable). Next, statistical analysis was conducted by using Bootstrap method with 5,000 resampling at 95% confidence interval with PROCESS Macro for SPSS, set at Model 59 to test our moderated mediation hypothesis. This analysis allows researchers to highlight the significant nature of the interaction between variables in contributing to a dependent variable. Our aim was to explore whether NML is better able to leverage their PF to improve well-being, with USA serving as a key mediating factor in this process.

Model 59 examines whether NML influences the indirect effect of PF on PWB through USA. Specifically, it assesses how NML may impact the relationships between PF and USA (Path a) and between USA and PWB (Path b). To ensure reliability, researchers applied a bootstrap method with a 95% confidence interval based on 5,000 samples, determining significance if intervals excluded zero, thereby offering robust support for the study's hypotheses.

Results

The mean score of PWB was 80.11 (*SD* = 13.15); mean score of NML was 133.86 (*SD* = 20.72), mean score of PF was 29.98 (*SD* = 9.8), mean score of USA was 78.29 (*SD* = 11.12). The following Table 1 summarize the descriptive data.

Testing for mediation

In hypothesis 1, this study proposed that USA would mediate the link between PF and PWB. To test this hypothesis,

PROCESS macro (Model 4) in SPSS was conducted. As Table 1 illustrates, PF significantly predicted PWB, β = -0.58, *p* < .001. PF was positively linked with USA, β = 0.54, *p* < .001, and USA was positively related to the extent of PWB, β = 0.32, *p* = 0.001.

The indirect effect of PF on the extent of PWB via USA was 0.17 (SE = 0.09, 95% CI = [-0.28, -0.72]). Empirical 95% CI did not include zero, indicating that PF exerted a significant indirect effect on PWB through USA. Since the direct effect is significance, this indicated USA partially mediated the links between PF and PWB.

To test the hypothesis 2, moderated mediation analysis was conducted. As Table 2 illustrates, PF was not significantly associated with USA (β = 0.37, *p* = .2). This indicating that although one might have critical skills in navigating oneself among digital informational content and psychologically flexible, they would be able to accept themselves unconditionally. In addition, USA significantly predicted PWB, β = 1.06, *p* = .04. However, PF does not have significant direct contribution to PWB as there is a zero value between the ULCI and LLCI of its model. NML also shows no significant contribution to PWB for the same reason. Furthermore, neither of the interaction between PF and NML, nor the interaction between USA and NML (Int_1 and Int_2) shows any significant contribution to PWB as both of their *p* values are greater than .05. Thus, it is conclusive that in any condition of NML, there is no significant direct effect of PF or USA on PWB.

Table 3 suggested that the direct contribution of PF was significant at every level of NML (low, moderate, high). This suggested that different levels of the moderator do not change the significance of the predictor in contributing to the outcome variable; indicating that NML did not moderate the aforementioned direct effect. This can be interpreted that individuals with lower psychological flexibility would likely to develop lower PWB, no matter how literate they are in navigating themselves in the realm of digital information contents.

Table 4 suggested that the USA mediates the contribution of PF to the PWB among individuals with lower and moderate levels of NML. However, at the high level of NML, the indirect effect of PF to PWB through USA was not significant. It can be interpreted that unlike those with low and moderate NML, individuals who are highly capable of critically analyze media information will accept themselves unconditionally regardless of their PF, in turn, this would positively affect their psychological wellbeing.

Table 1

Mediation between psychological flexibility and psychological wellbeing

Predictors	Unconditional self-acceptance (USA)		Psychological wellbeing (PWB)	
	β	*t*	β	*t*
Psychological flexibility (PF)	-.54**	-8.25	-.33*	-3.29
Unconditional self-acceptance (USA)			.32*	3.62
R²	.22**		.17**	
F	68.04		22.82	

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

Table 2

Moderated mediation effect on psychological flexibility and psychological wellbeing

Predictors	Unconditional self-acceptance (USA)		Psychological wellbeing (PWB)	
	β	*t*	β	*t*
Psychological flexibility (PF)	-5.3	-1.27	-.31	-.55
New media literacy (NML)	.03	.32	.61	1.72
PF x NML	-0.0001	-.5	-0.0006	-.16
Unconditional self-acceptance (USA)			1.06*	1.98
USA x NML			-.005	-1.44
R²	.23		13.05**	
F	22.74**		.23	

Table 3

Conditional direct effects of PF on PWB

Level of NML	Effect	SE	*t*	*p*	LLCI	ULCI
114 (low)	-.38**	.14	-2.67	.0075	-.66	-.1
135 (moderate)	-.39**	.1	-3.95	< .001	-.59	-.2
155 (high)	-.42**	.11	-3.53	.001	-.63	-.18

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

Table 4

Conditional indirect effects of PF on PWB

Pathway	Level of moderator (NML)	Effect	BootSE	BootLLCI	BootULCI
PF -> USA -> PWB	114 (low)	-.23*	.07	-.39	-.11
	135 (moderate)	-.17*	.05	-.28	-.07
	155 (high)	-.11	.06	-.23	.02

Note. *Significant (there is no zero value between upper and lower limit confidence interval).

Discussion

The current findings help bridge a research gap by clarifying how USA mediates the relationship between PF and PWB, while also revealing the moderating role of NML in this mediation process. This an area that has been underexplored in the digital age.

This study found that PF significantly influences PWB through the partial mediation of USA, indicating that self-acceptance enhances PF's positive impact on well-being. These findings align with previous research, such as Cordaro et al. (2024) and Lu et al. (2022), which highlight USA as a key factor in promoting resilience and mental health. By fostering USA, individuals are better positioned to leverage their psychological flexibility, managing stress, and adapting to life's challenges more effectively. This suggests that interventions aiming to improve PWB may benefit from combining strategies that enhance both PF and USA, such as incorporating mindfulness and self-compassion practices, to yield stronger mental health outcomes.

In addition, this finding indicate that USA mediates the relationship between PF and PWB among individuals with lower and moderate levels of NML. This suggests that for individuals with limited digital literacy skills, self-acceptance strengthens the positive impact of PF on well-being, providing a buffer against the challenges of digital engagement. Prior research underscores the role of self-acceptance in mental health, showing it fosters resilience and well-being even when digital literacy skills are less developed (Livingstone, 2022; Taddi et al., 2024). These findings emphasize USA as a foundational element in managing psychological challenges for individuals with limited digital competencies.

The moderating role of NML further illustrates the interaction between digital literacy and psychological factors, highlighting that USA is especially beneficial for those with lower media literacy skills. While digital literacy has been shown to mitigate some mental health challenges associated with online content (Tracy et al., 2022), our study suggests that self-acceptance serves an equally critical role for individuals with lower NML. This insight underscores the value of incorporating USA-focused strategies in mental health interventions, particularly for populations vulnerable to digital misinformation and social pressures. Additionally, our findings suggest that it would be beneficial to compare these effects across diverse sociocultural and digital environments, as variations may emerge in how NML moderates the PF and PWB relationship.

By incorporating NML into the framework of PWB, this study fills an important gap in the literature, especially relevant in today's digitally connected world where social feedback – amplified by the pandemic– has become increasingly integral (Yue et al., 2023). Higher NML allows individuals to critically evaluate online content, buffering against negative psychological impacts and enhancing the benefits of PF. These findings call for a re-evaluation of existing PWB models to include digital competencies as essential components, reflecting the evolving nature of social interactions and information consumption. Our study validates the established benefits of PF on PWB while introducing NML as a crucial moderating factor, offering a more comprehensive and relevant approach to promoting mental health in the digital age.

However, there are several limitations to this study. One significant limitation is the sampling method. Purposive sampling is limited by potential selection bias, as participants are chosen for specific characteristics, reducing the sample's representativeness of the broader population. This approach limits generalizability and statistical inference, as the results may reflect only the perspectives of the selected group rather than a diverse range of viewpoints. Another limitation is the cross-sectional nature of the study, which prevents the establishment of causal relationships between the variables. Longitudinal studies would be beneficial to explore how PF, USA, and NML interact over time and how these factors influence long-term PWB. Additionally, the reliance on self-report measures may introduce biases such as social desirability or inaccurate self-perception, potentially skewing the results. Incorporating behavioral assessments or third-party evaluations could strengthen the findings.

Future research should aim to address these limitations by using different sampling method, more diverse samples that include individuals from different age groups, cultural backgrounds, and educational settings to enhance the external validity of the results. Longitudinal studies and mixed-method approaches should be considered to gain a deeper understanding of the causal relationships between PF, USA, NML, and PWB, as well as to reduce bias from self-report measures. These steps would provide a more comprehensive view of how digital literacy and psychological factors interact in various populations.

Implications

Our findings emphasize the complexity of PWB as a multifaceted construct shaped not only by individual traits such as PF and USA, but also by digital competencies, particularly NML.

The significant moderating role of NML suggests that individuals with lower NML, who may struggle to critically navigate digital social feedback, are more vulnerable to experiencing PWB challenges. This is particularly relevant for adolescents and young adults, whose developmental stages are marked by heightened engagement with digital environments and online social interaction. The ability to critically assess and manage online content directly affects how PF translates into well-being, revealing that NML enhances the capacity to maintain PWB in the face of digital stressors.

Practically, our study highlights the importance of integrating NML training into mental health interventions, especially for younger populations. This integration would equip adolescents and emerging adults with the tools to critically process digital content, thereby strengthening their resilience and psychological well-being. Ultimately, our research contributes to a deeper understanding of how digital literacy intersects with psychological factors, offering insights into the development of more effective interventions tailored to the needs of Generation Z.

Conclusions

A critical gap exists in understanding how NML moderates the mediation of USA between PF and PWB, particularly in the digital experiences of Generation Z. While PF and USA are recognized for enhancing well-being by helping individuals manage emotional and situational challenges, our findings indicate that NML significantly strengthens this relationship. Drawing from the Psychological Flexibility Model (Hayes et al., 2006) and Media Literacy Theory (Potter, 2004), our analysis reveals that individuals with higher NML are better able to use PF skills to support well-being, highlighting the critical role of digital literacy in fostering psychological resilience. These results extend the Acceptance and Commitment Therapy (ACT) model by illustrating that NML is not only a tool for digital navigation but also a fundamental asset for mental health in the digital age. As adolescents and young adults are particularly influenced by online feedback, equipping them with higher NML can improve their ability to apply PF effectively, supporting well-being and identity development during this formative stage.

Author contributions

Conceptualization: M.B.A., K.D.P., L.J.H.
Methodology: L.J.H.
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Investigation: M.B.A., K.D.P., L.J.H.
Writing – original draft: L.J.H.
Writing – review & editing: L.J.H.
Supervision: M.B.A., K.D.P.

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Declaration of interests

The authors declare that there is no conflict of interest.

Data availability statement

Research data are not shared.

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