Well-being in Using TikTok amongst Young People in China

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Abstract
TikTok is a prevalent social media video application used in contemporary society, which has appealed great interest from the young people. This study examined the level of overall well-being in using TikTok amongst young people in China as guided by the PERMA theory of well-being. This study adopted a quantitative approach via questionnaire survey to collect data. A sample of 405 young people participated in the survey. Data analysis was performed based on both descriptive and inferential analysis. The results showed that the majority of young people reported a high level of comprehensive well-being in using TikTok. Specifically, the domains, which included positive emotion that contributed the highest towards the overall well-being, while the meaning domain contributed the lowest. Additionally, the findings revealed that young people with a Doctor of Philosophy (PhD) presented a lower level of well-being compared to other groups of education level. This study suggested that the operators of TikTok platform should perfect the functions and strengthen by vetting the quality of video contents on TikTok to increase the level of users' well-being. The results are also beneficial to the Chinese government, which could provide references to the government to implement strategies on youth development through the TikTok platform.
Keywords: TikTok, Well-being, PERMA Well-being Theory, Young People, China

Introduction
TikTok is considered as a social media video application by adopting video streaming as the transmission carrier. Users could get access to TikTok through digital devices, such as smart phones, tablets and many others (Meng & Leung, 2021; Wang, 2020). Since its launch in 2016, TikTok has developed rapidly and harvested a plenty of users. Specifically, the majority of TikTok users are young generation (Montag et al., 2021; Wang et al., 2019). According to the Sensor Tower Blog (2021), TikTok turned into the most downloaded non-game application on earth, exceeding 63 million installations in July 2021. Similarly, Statista (2021) reported that the monthly active users of TikTok had surpassed 732 million in July 2021. On the basis of

KANTAR (2018), almost all the TikTok users presented that TikTok could bring positive impact on their daily lives, which could impel the level of well-being.

Previous studies mainly focused on why individuals used TikTok and found that the users motives for adopting TikTok were to satisfy their psychological needs, including escaping, entertainment, making money, information seeking, pressure releasing and others, as guided by the Uses and Gratifications theory (Bossen & Kottasz, 2020; Meng & Leung, 2021; Montag et al., 2021). However, only limited studies had evaluated whether individuals' well-being could be prompted by using TikTok and what was the level of overall well-being in using TikTok amongst young people in China. Therefore, grounded on the perspective of PERMA well-being theory, this present study is aimed at examining the level of comprehensive well-being in using TikTok amongst young people in China to bridge the gap.

Theoretical Background
The PERMA well-being theory, also known as PERMA model, was created in 2011 by Dr. Martin Seligman. PERMA refers to five critical domains, namely positive emotion (P), engagement (E), positive relationships (R), meaning (M) and accomplishment (A) (Seligman, 2011). Seligman (2011) highlighted that the comprehensive well-being of individuals was encompassed by these five core elements. Furthermore, as elaborated by Seligman (2011), "PERMA well-being theory denies that the topic of positive psychology is a real thing: rather the topic is a construct – well-being – which in turn has several measurable elements, each a real thing, each contributing to well-being, but none defining well-being" (p. 20). This signified that well-being is a multi-dimensional concept, which comprises of five dimensions: positive emotion, engagement, positive relationships, meaning and accomplishment. Specifically, each component makes a crucial contribution to the comprehensive well-being of humans.

According to Jones et al (2014), positive emotion refers to all kinds of good feelings like happiness, joy, etc.; engagement means individuals could apply themselves completely to particular activities so as to lose the sense of time; positive relationships describe that building good social relationships could contribute the feeling of happiness and overall well-being; meaning refers to what the individuals have done is meaningful, which could boost a sense of fulfillment and advance the level of comprehensive well-being; and accomplishment delineates the sense of achievement by accomplishing the goals set in life, which could accelerate the feeling of well-being.

A certain proportion of literature had adopted the PERMA theory of well-being, as the theoretical basis to identify the level of well-being in using information and communication technology (ICT). For example, Kuang et al (2014) examined the level of happiness in using the Sina Weibo by analyzing around two billion microblogs posted by users based on the PERMA theory of well-being. Likewise, Jones et al (2014) measured users' well-being in playing videogames from the theoretical perspective of PERMA well-being theory. The results revealed that the positive features of videogames greatly promoted the users' level of well-being (i.e., all five domains of the PERMA model) (Jones et al., 2014). A recent report by Hollebeek and Belk (2021) found that there was a significant association between the social media-based brand engagement and PERMA well-being amongst consumers. The literature illustrated the PERMA model's rationality for learning the level of well-being in using ICT.

Furthermore, the researcher conducted a systematic literature review to assess previous literature, which adopted the PERMA theory of well-being to study the users' level of well-being in using TikTok. The approach of systematic literature review that the researcher employed was the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Page et al., 2021). Initially, the researcher determined four well-known databases, namely Web of Science, Scopus, Google Scholar and Dimensions. Thereafter, the researcher confirmed a list of keywords pertaining to TikTok or Douyin, well-being, and PERMA theory of well-being (see Table 1), as guided by the PRISMA method. Based on the searching rules of PRISMA (Table 1), only four articles were found after the duplicates were removed from the four selected databases.

Table 1

Keywords, Information Searching Strategy, and Results of a Systematic Literature Review

Database	Keywords	Results
Web of Science	TS=(("TikTok" OR "Douyin") AND ("well-being" OR "wellbeing" OR "PERMA" OR "PERMA theory" OR "PERMA model" OR "PERMA well*being") AND ("China"))	1. Journal article: Characterizing the Content Related to Oral Health Education on TikTok (Fraticelli et al., 2021).
Scopus	TITLE-ABS-KEY (("TikTok" OR "Douyin") AND ("well-being*" OR "wellbeing*" OR "PERMA well*being" OR "PERMA" OR "PERMA theory" OR "PERMA model") AND ("China"))	1. Journal article: Characterizing the Content Related to Oral Health Education on TikTok (Fraticelli et al., 2021).
Google Scholar	allintitle: "TikTok" OR "Douyin" "well-being" OR " wellbeing" OR "PERMA" OR "PERMA theory" OR "PERMA well-being"	1. Journal article: Don't put all social network sites in one basket: Facebook, Instagram, Twitter, TikTok, and their relations with well-being during the COVID-19 pandemic (Masciantonio et al., 2021). 2. Conference paper: The Correlation Between Narcissistic Tendency and Subjective Well Being with the Intensity of TikTok Social Media Use on Adolescents (Sri & Tjitjik, 2022). 3. Journal article: Promoting Mental Wellbeing: Young Adults' Experience on TikTok during the COVID-19 Pandemic Lockdown in Nigeria (Udenze & Uzochukwu, 2021).
Dimensions	("TikTok" OR "Douyin") AND ("well-being" OR "wellbeing") AND ("PERMA" OR "PERMA model" OR "PERMA theory" OR "PERMA theory of well-being")	No results were found

Nevertheless, all four retrieved articles did not adopt the PERMA well-being theory to be the theoretical guidelines. Particularly, Fraticelli et al (2021) mainly analyzed the characteristics of the video contents related to oral health education, which were spread on TiKTok. This research did not focus on the well-being in using TikTok. Moreover, Masciantonio et al (2021) examined the relationship between social media (i.e., Facebook, Instagram, Twitter, TikTok) usage and subjective well-being (i.e., life satisfaction, positive affect, negative affect), which was different with PERMA well-being. Similarly, Sri and Tjitjik (2022) also probed the relationship between TikTok usage and subjective well-being (i.e., life satisfaction, positive and negative affect) amongst adolescents in Indonesia. Furthermore, Udenze and Uzochukwu (2021) explored the phenomenon of using TikTok during the COVID-19 pandemic by adopting a phenomenological approach. This study primarily discovered how TikTok usage would influence mental well-being amongst young people, as guided by the Uses and Gratifications theory.

Therefore, there was an apparent theoretical gap in the previous research concerning the level of well-being in using TikTok, as guided by the PERMA theory of well-being amongst young people in China. Previous research tends to focus mainly on the relationship between TikTok usage and subjective well-being as well as mental well-being amongst users. As a result, the PERMA well-being theory would provide a stronger theoretical basis and new insights by embracing contemporary research in studying the level of well-being in using TikTok. To fill in the gap, this present study adopted the PERMA well-being theory to examine the level of comprehensive well-being in using TikTok amongst young people in China.

Methodology
A quantitative approach via cross-sectional survey was used in this study. The target population of this current study was the TikTok users in China, while the sampled population involved young people who were between 15 to 34-year-old who used TikTok. A multi-stage cluster sampling technique was performed to select the samples. Specifically, Xi'an City, China was selected as the research site, whereby five villages were randomly selected from each selected town in each selected district under each administrative zone as illustrated in Figure 1. Xi'an City was selected for it is one of the first batches of 5G-network trial cities, which provided good internet facilities for this study (Jiwei et al., 2019). To determine participants who achieved the inclusion criteria (i.e., TikTok users, aged 15–34), purposive sampling method was adopted to find eligible respondents before distributing the questionnaires. A total of 405 young people answered the questionnaires. The sample size was determined based on the benchmark of (Krejcie and Morgan, 1970).
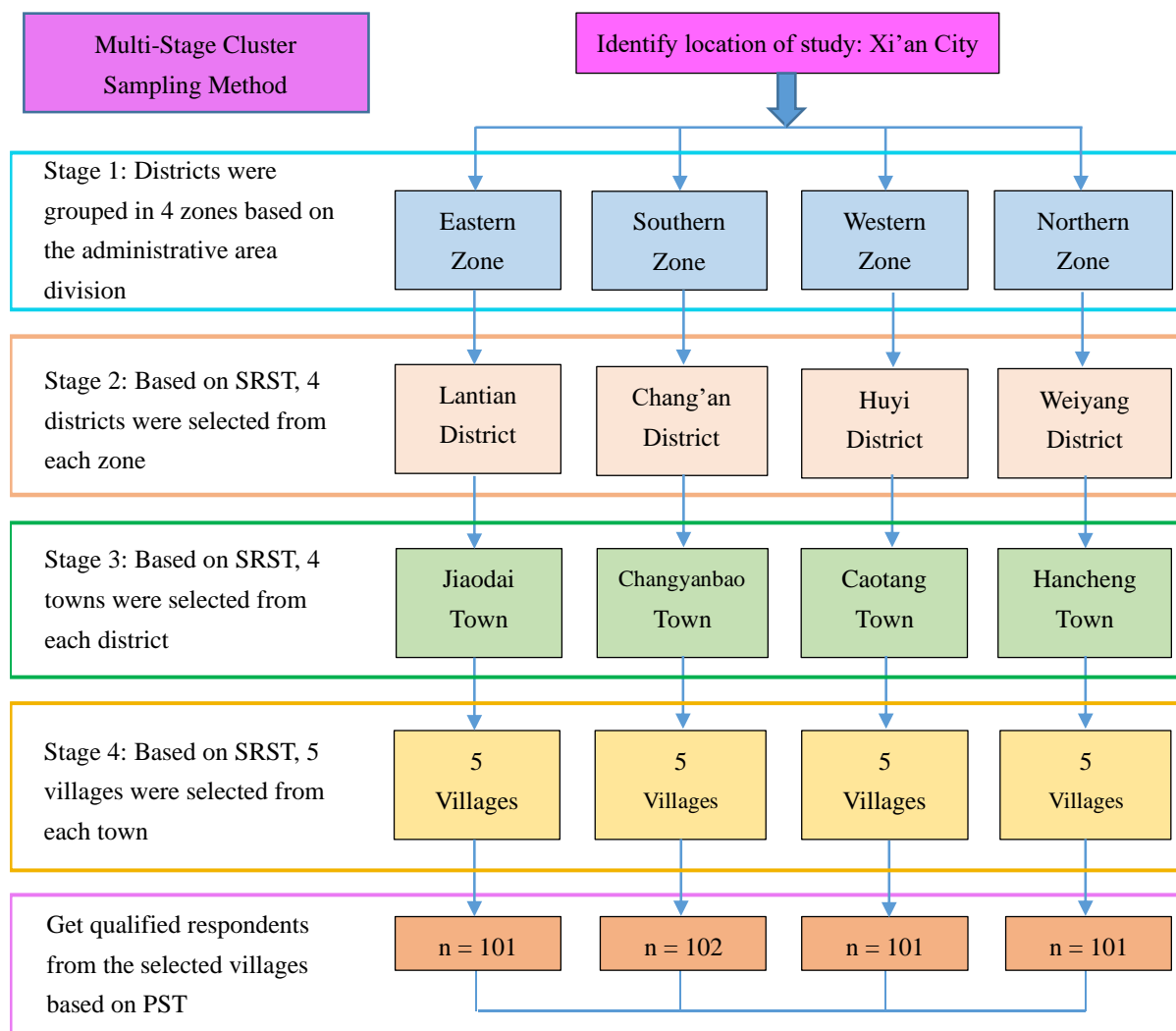
Figure 1: The Flow Diagram of Sampling Techniques
Note: SRST, simple random sampling technique; PST, purposive sampling technique.

The measurement scale of well-being was on the basis of the PERMA model of well-being (Seligman, 2011). The measurement items were adapted from previous studies (Kern et al., 2015; Umucu, 2020). Qualified participants were asked to respond according to a 5-point Likert scale that ranged from 1 (strongly disagree) to 3 (somewhat agree) and to 5 (strongly agree), with the higher scores representing greater level of well-being. Cronbach's alpha coefficient of the five domains of PERMA well-being, namely positive emotion, engagement, positive relationships, meaning and accomplishment were 0.84, 0.82, 0.74, 0.70, 0.71, respectively. All the values achieved a threshold value of 0.70, which indicated that the measurement scale of this current study is reliable and consistent (Nunnally, 1994).

Data analysis on demographic profiles of the respondents and level of well-being in using TikTok amongst young people was generated via descriptive analysis using the IBM Statistical Package for the Social Sciences (SPSS) software. Moreover, inferential analysis in terms of independent sample t-test and a one-way Analysis of Variance (ANOVA) were performed to compare the mean difference in level of well-being between different demographic groups amongst young people by using the IBM SPSS software. The significance level of all the analysis techniques was set at alpha = 0.05.

Results

The demographic characteristics of young people presented in the current study comprised of gender, age, education level, marital status, employment status and monthly income (Table 2). As shown in Table 2, 50.9% of the young people were males, while 49.1% were females. The age group included 36.8% of the young people were 15 to 21 years old; 33.8% were 22 to 28 years old; and 29.4% were 29 to 34 years old. The education level showed that 33.8% of the young people obtained a bachelor's degree; 30.1% attained a diploma; and 24.0% completed high school or below. However, only a few young people obtained a master's degree (10.6%) and Doctor of Philosophy (1.5%).

Moreover, as shown in Table 2, 67.9% of the young people were single, whereas 32.1% were married. Furthermore, with regard to employment status, almost half of the young people (45.9%) were full-time students, followed by full-time employment (33.8%), self-employed (14.6%) and part-time employment (5.7%). In terms of monthly income, only 5.2% of the young people had average monthly income of more than CNY 12,000. Moreover, 15.8% of the young people had monthly income of CNY 9,001 – CNY 12,000, followed by CNY 6,001 – CNY 9,000 (15.6%), CNY 3,001 – CNY 6,000 (14.3%) and below CNY 3,001 (3.2%). It was also noted that 45.9% of the young people had no monthly income, as they were full-time students.

Table 2

Demographic Characteristics of Young People in China (N = 405)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	206	50.9
	Female	199	49.1
Age	15-21	149	36.8
	22-28	137	33.8
	29-34	119	29.4
Education Level	High school or below	97	24.0
	Diploma	122	30.1
	Bachelor's degree	137	33.8
	Master's degree	43	10.6
	Doctor of Philosophy	6	1.5
Marital Status	Single	275	67.9
	Married	130	32.1
Employment Status	Part-time employment	23	5.7
	Full-time employment	137	33.8
	Self-employed	59	14.6
	Full-time student	186	45.9
Monthly Income	No income (full-time student)	186	45.9
	Below CNY 3,001	13	3.2
	CNY 3,001 – CNY 6,000	58	14.3
	CNY 6,001 – CNY 9,000	63	15.6
	CNY 9,001 – CNY 12,000	64	15.8
	More than CNY 12,000	21	5.2

Note: CNY = Chinese yuan.

Upon the level of well-being, in terms of the five domains under the umbrella of PERMA model, the data analysis results found that the level of well-being in terms of positive emotion was the highest amongst the five domains (Mean = 3.75, SD = 1.01), followed by accomplishment (Mean = 3.71, SD = 0.97), engagement (Mean = 3.70, SD = 1.00), meaning (Mean = 3.68, SD = 0.95) and positive relationships (Mean = 3.65, SD = 0.98), as depicted in Table 3.

Table 3
Level of Well-being in Terms of Five Domains under PERMA Amongst Young People in China (N = 405)

Items	Percentage (%)					Mean	SD
	1	2	3	4	5		
Positive Emotion (P)						**3.75**	**1.01**
I feel cheerful when using TikTok.	4.9	6.9	23.2	35.8	29.1	3.77	1.09
I feel excited when using TikTok.	4.2	8.6	24.7	35.3	27.2	3.73	1.08
Engagement (E)						**3.70**	**1.00**
When using TikTok, I lose track of how much time passed.	6.2	6.4	24.0	38.3	25.2	3.70	1.10
When using TikTok, I get completely absorbed in using it.	5.4	7.7	22.0	42.0	23.0	3.69	1.07
Positive Relationships (R)						**3.65**	**0.98**
There are people on TikTok that I really care about.	6.9	4.4	31.4	32.6	24.7	3.64	1.11
There are people who really care about me on TikTok.	6.4	6.2	26.2	38.0	23.2	3.65	1.10
Meaning (M)						**3.68**	**0.95**
I generally feel that what I do through TikTok is valuable and worthwhile.	6.9	4.0	31.4	31.6	26.2	3.66	1.12
What I do on TikTok is meaningful.	4.7	5.7	30.4	34.1	25.2	3.69	1.06
Accomplishment (A)						**3.71**	**0.97**
Most days, I feel a sense of accomplishment from what I do on TikTok.	5.4	5.7	31.1	28.4	29.4	3.70	1.11
I have been pleased about completing something that was difficult to do with the assistance of TikTok.	6.2	4.7	28.9	32.6	27.7	3.71	1.10

Note: 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Agree, 4 = Agree, 5 = Strongly Agree. SD = Standard Deviation.

According to Table 3, the results showed that 29.1% of the young people strongly agreed and 35.8% agreed that they felt cheerful when using TikTok (Mean = 3.77, SD = 1.09). Additionally, with regard to accomplishment, 27.7% of the young people strongly agreed that they were pleased on completing something that was difficult to do with the assistance of TikTok (Mean = 3.71, SD = 1.10). Moreover, as for engagement, 63.5% of the young people at least agreed (38.3% = agreed, 25.2% = strongly agreed) that they lost track of time when using TikTok (Mean = 3.70, SD = 1.10). With regard to meaning, 59.3% of the young people at least agreed (34.1% = agreed, 25.2% = strongly agreed) that what they did on TikTok were meaningful

(Mean = 3.69, SD = 1.06). However, with regard to the level of positive relationships, only 23.2% of the young people responded strong agreement to the statement on "there are people who really care about me on TikTok". The measurement items of all the five domains under the PERMA model of well-being are detailed in Table 3.

In respect to the level of overall PERMA well-being in using TikTok amongst young people in China, the data analysis results showed that the majority of young people reported a high level (i.e., 74.8%), while 14.8% presented a low level and 10.4% had a medium level of overall PERMA well-being, respectively, as shown in Table 4. The overall mean value was 3.70 (SD = 0.83), which fell under the high level (Table 4), indicating that the average level of overall PERMA well-being in using TikTok amongst young people was high. This finding suggested that Chinese young people could facilitate high level of overall PERMA well-being when using TikTok.

Table 4
Level of Overall PERMA Well-being Amongst Young People in China (N = 405)

Level of overall PERMA well-being	Frequency (n)	Percentage (%)
Low (1.00 – 2.33)	60	14.8
Medium (2.34 – 3.67)	42	10.4
High (3.68 – 5.00)	303	74.8
Mean = 3.70		
SD = 0.83		

Note: SD = standard deviation.

As provided in Table 5, ANOVA test results showed that there was a salient difference between education level and comprehensive PERMA well-being in using TikTok amongst young people in China (F = 3.069, p = 0.016). Specifically, young people with PhD reported the lowest level of comprehensive PERMA well-being amongst all the education levels (Table 5).

Table 5
Differences in Level of Overall PERMA Well-being between Demographic Groups (N = 405)

Demographic groups	Frequency (n)	Percentage (%)	Level of overall PERMA well-being			
			Mean	SD	t/F	P value
Gender						
Male	206	50.9	3.73	0.82	0.805	0.421
Female	199	49.1	3.66	0.85		
Age						
15-21	149	36.8	3.69	0.85		
22-28	137	33.8	3.72	0.81	0.149	0.862
29-34	119	29.4	3.67	0.84		
Education Level						
High school or below	97	24.0	3.69	0.83	3.069	**0.016***
Diploma	122	30.1	3.68	0.82		
Bachelor's degree	137	33.8	3.76	0.79		
Master's degree	43	10.6	3.70	0.86		
Doctor of Philosophy	6	1.5	2.55	1.09		
Marital Status						
Single	275	67.9	3.74	0.79	1.581	0.115
Married	130	32.1	3.60	0.91		
Employment Status						
Part-time employment	23	5.7	3.92	0.57	2.027	0.109
Full-time employment	137	33.8	3.56	0.94		
Self-employed	59	14.6	3.72	0.72		
Full-time student	186	45.9	3.76	0.81		
Monthly Income						
No income (full-time student)	186	45.9	3.76	0.81	0.706	0.620
Below CNY 3,001	13	3.2	3.80	0.71		
CNY 3,001 – CNY 6,000	58	14.3	3.69	0.92		
CNY 6,001 – CNY 9,000	63	15.6	3.69	0.83		
CNY 9,001 – CNY 12,000	64	15.8	3.56	0.85		
More than CNY 12,000	21	5.2	3.54	0.83		

Note: CNY = Chinese yuan. SD = Standard deviation.

Table 6 depicted that the young people level of PERMA well-being, who obtained a PhD (Mean = 2.5500) was lower than those with high school or below education level (Mean = 3.6918), diploma (Mean = 3.6844), bachelor's degree (Mean = 3.7555), and master's degree (Mean = 3.7023), pertaining to a Tukey HSD post hoc test. This result indicated that young people with a PhD could achieve lower level of well-being in using TikTok than young users with other education levels.

Table 6
Tukey HSD Post Hoc Test – Multiple Comparison of Mean Value between Education Level

Comparison group		Mean		Mean difference	Sig. value
Education Level					
Doctor of Philosophy	vs High school or below	2.5500	vs 3.6918	-1.14175*	p = 0.010
	vs Diploma		vs 3.6844	-1.13443*	p = 0.010
	vs Bachelor's degree		vs 3.7555	-1.20547*	p = 0.005
	vs Master's degree		vs 3.7023	-1.15233*	p = 0.013

Note: * $p < 0.05$.

Discussion and Implications

To begin with, this present study found that under the umbrella of comprehensive PERMA well-being, the highest level amongst the five domains was positive emotion, while the lowest level was positive relationships. The results indicated that young people were more likely to promote the level of well-being in terms of positive emotion. One of the possible reasons was that the young generation used TikTok mainly to satisfy their recreation needs (Bucknell Bossen & Kottasz, 2020), which could develop positive emotion for them. As the videos diffused on the TikTok platform are humorous, entertaining and exciting, and the themes of the videos are multifarious, including daily life documentary, cooking skills, animals and pets, professional knowledge, events in the society, singing and dancing and others (Ma et al., 2019), it is easy for the young people to trigger positive emotion. Another potential reason is that the videos which were watched by the users on the TikTok platform are always those the users are interested in due to the function of algorithms recommendation of TikTok. The function of the algorithms' recommendation will automatically present the videos to the users according to their favors and watching habits.

Positive relationships contributed the lowest towards the comprehensive PERMA well-being in using TikTok amongst the young people. This is because TikTok is different from traditional social media, and furthermore TikTok is not mainly for instant messaging. For example, some young people used TikTok mainly to watch the news or check on current social events by watching the videos and they seldom use the instant messaging function (Omar & Dequan, 2020). In addition, Omar and Dequan (2020) stated that some young people only used TikTok to watch others' videos without creating or posting their own videos on the platform, which could not help the young generation build positive interaction relationships on the TikTok platform. Moreover, a number of young people prefer to watch videos posted by the influencers or celebrities, who are actually strangers to the users in physical world (Meng & Leung, 2021). In other words, the influencers or celebrities do not have the interpersonal relationships with the young users in the real world. As a consequence, it is less likely to help the young users facilitate the level of well-being in terms of positive relationships.

The findings implicated that the operators and managers of TikTok platform should develop more interesting and meaningful features to stimulate young people's positive emotion in using the platform. Besides, TikTok should strengthen the standardization and management of the video content transmitted on the platform. This is to avoid negative and vulgar video contents, whereby the video transmitted on the platform could bring practical help to the

young users in their lives, such as acquiring knowledge, learning professional skills, understanding social hot spots, etc. Furthermore, it could also improve the level of young people's well-being in terms of meaning. Finally, it is critical for the TikTok platform to improve the platform functions on interpersonal relationship to help young users increase their well-being level in terms of positive relationships, as much as possible.

Secondly, this current study found that the majority of young people reported a high level of comprehensive PERMA well-being in using TikTok. The results suggested that TikTok is an appropriate avenue for the Chinese government to propose or implement strategies related to the development of the young generation. As young people are more tech-savvy, they prefer to explore more of the world online, especially on the digital social media like TikTok. Therefore, in order to reach the young generation, the government divisions of China should introduce certain things, announce public affairs, release important information, etc., via the TikTok platform. In terms of young people, they could probe into more of the cultural characters of different areas on the earth, excavate more knowledge, enrich their mental lives, which could help the youth to develop sustainable well-being in terms of positive emotion, engagement, positive relationships, meaning and accomplishment.

Finally, the results displayed that young people with higher education level had lower level of overall PERMA well-being in using TikTok than those with lower education level. This is probably because highly educated young people (PhD holders) have much busier jobs, such as doing scientific research, universe exploration and others, which consumed a lot of their energy and time that required them to concentrate in their work. As a result, they have less time to use social media. Moreover, compared to people with relatively lower education, people with higher education might obtain well-being in many ways, such as reading, conducting experiments, conducting field work, cooperate teamwork, etc., and thus achieving well-being through social media like TikTok is only one of them. Therefore, their level of comprehensive PERMA well-being is relatively lower than others who are less educated.

Consequently, it is imperative for TikTok operators to improve the quality of the video contents, especially the video themes. For instance, top management and executives of TikTok platform should take corresponding measures to increase censorship of the video contents spread on the platform. This is to propagate more scientific, theoretical and professional knowledge, etc., which are related to scientific research rather than a plethora of funny videos filled with vulgar tastes. The TikTok platform can also invite more experts and scholars to join the platform for online education and knowledge-sharing lectures, etc., which eventually can attract more highly educated users (e.g., young people with PhD).

Conclusion and Recommendations
This study investigated the level of well-being in using TikTok amongst young people in China using the PERMA well-being theory as the theoretical lens. It aims to advance knowledge about the level of comprehensive well-being in terms of positive emotion, engagement, positive relationships, meaning and accomplishment in using TikTok amongst the young generation in China. This study found that the level of positive emotion was the highest amongst the five domains, followed by accomplishment, engagement, meaning, and positive relationships. In terms of the level of overall PERMA well-being in using TikTok, the results elucidated that the majority of young people reported a high level. It is also worth noting that

young people with a PhD presented lower level of comprehensive PERMA well-being than those with other education levels.

As a consequence, the Chinese government should be aware of this phenomenon and try to find pragmatic ways to reach the young generation through TikTok platform. Meanwhile, operators of the TikTok platform should be aware that young people with PhD presented lower level of well-being and find creative approach to prompt the video quality and increase more useful functions to satisfy the needs of the young generation, particularly those with higher education. The operators of the TikTok platform should also pay more attention to improving its social functions to better assist young people in developing positive relationships, so as to enhance the level of overall PERMA well-being amongst young people in China.

Nonetheless, there are still some limitations in this present work, which would commend further investigation in future research for purpose of stating more sights. As the research was conducted focusing mainly on TikTok, the findings may not be potentially generalized to the whole industry of social media video applications in China. Future research could take all kinds of social media video applications in China like Kuaishou, Bilibili, Volcano Video, Haokan Video and TikTok into consideration. Additionally, this current study only focused on young people, aged between 15 to 34. Future studies could consider all user groups of TikTok. Finally, the research site of this study was only in Xi'an City, China. It would be more meaningful and interesting to involve other important cities of China. As China is too large with different cultures and customs in different areas, it would provide better understanding in the level of well-being in using TikTok amongst users by taking into account the whole of China.

References

Bossen, B. C., & Kottasz, R. (2020). Uses and gratifications sought by pre-adolescent and adolescent TikTok consumers. *Young Consumers*, *21*(4), 463-478. https://doi.org/10.1108/YC-07-2020-1186

Fraticelli, L., Smentek, C., Tardivo, D., Masson, J., Clément, C., Roy, S., Dussart, C., Bourgeois, D., & Carrouel, F. (2021). Characterizing the Content Related to Oral Health Education on TikTok. *International Journal of Environmental Research and Public Health*, *18*(24), Article 13260. https://doi.org/10.3390/ijerph182413260

Hollebeek, L. D., & Belk, R. (2021). Consumers' technology-facilitated brand engagement and wellbeing: Positivist TAM/PERMA- vs. Consumer Culture Theory perspectives. *International Journal of Research in Marketing*, *38*(2), 387-401. https://doi.org/10.1016/j.ijresmar.2021.03.001

Jiwei, S., Xuan, L., & Wenting, L. (2019). *The 5G era is really here! Three major operators announce 5G commercial packages*. China Economic Net. https://baijiahao.baidu.com/s?id=1648872451345204139&wfr=spider&for=pc

Jones, C., Scholes, L., Johnson, D., Katsikitis, M., & Carras, M. (2014). Gaming well: links between videogames and flourishing mental health. *Frontiers in Psychology*, *5*, Article 260. https://doi.org/10.3389/fpsyg.2014.00260

KANTAR. (2018). *2018 KANTAR China Social Media Impact Report*. https://posts.careerengine.us/p/5d01ed42d8bad52a0bba8f13?nav=post_mlt&p=5f56 0e6e30761c47dc0aa2abKern, M. L., Waters, L. E., Adler, A., & White, M. A. (2015). A

multidimensional approach to measuring well-being in students: Application of the PERMA framework. *The Journal of Positive Psychology*, 10(3), 262-271. https://doi.org/10.1080/17439760.2014.936962

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610. https://doi.org/10.1177/001316447003000308

Kuang, C., Liu, Z., Sun, M., Yu, F., & Ma, P. (2014, September 12-14). *Quantifying Chinese Happiness via Large-Scale Microblogging Data* [Paper presentation]. 2014 11th Web Information System and Application Conference, Tianjin, China. https://ieeexplore.ieee.org/document/7058017/authors#authors

Ma, L., Feng, J., Feng, Z., & Wang, L. (2019, July 13-15). *Research on User Loyalty of Short Video App Based on Perceived Value—Take Tik Tok as an Example* [Paper presentation]. 2019 16th International Conference on Service Systems and Service Management (ICSSSM), Shenzhen, China. https://ieeexplore.ieee.org/document/8887751

Masciantonio, A., Bourguignon, D., Bouchat, P., Balty, M., & Rimé, B. (2021). Don't put all social network sites in one basket: Facebook, Instagram, Twitter, TikTok, and their relations with well-being during the COVID-19 pandemic. *PloS one*, 16(3), Article e0248384. https://doi.org/10.1371/journal.pone.0248384

Meng, K. S., & Leung, L. (2021). Factors influencing TikTok engagement behaviors in China: An examination of gratifications sought, narcissism, and the Big Five personality traits. *Telecommunications Policy*, 45(7), 102172. https://doi.org/10.1016/j.telpol.2021.102172

Montag, C., Yang, H., & Elhai, J. D. (2021). On the Psychology of TikTok Use: A First Glimpse From Empirical Findings. *Frontiers in Public Health*, 9, Article 641673. https://doi.org/10.3389/fpubh.2021.641673

Nunnally, J. C. (1994). *Psychometric theory* (3rd ed.). Tata McGraw-hill education.

Omar, B., & Dequan, W. (2020). Watch, Share or Create: The Influence of Personality Traits and User Motivation on TikTok Mobile Video Usage. *International Journal Of Interactive Mobile Technologies (IJIM)*, 14(04), 121-137. https://doi.org/10.3991/ijim.v14i04.12429

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., Whiting, P., & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *PLOS Medicine*, 18(3), e1003583. https://doi.org/10.1371/journal.pmed.1003583

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.

Sensor Tower Blog. (2021). *Top Apps Worldwide for July 2021 by Downloads*. https://sensortower.com/blog/top-apps-worldwide-july-2021-by-downloads

Sri, R., & Tjitjik, H. (2022). The Correlation Between Narcissistic Tendency and Subjective Well Being with the Intensity of TikTok Social Media Use on Adolescents. *Advances in Social Science, Education and Humanities Research* Proceedings of the 3rd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2021), Jakarta, Indonesia.

Statista. (2021). *Most popular social networks worldwide as of April 2021, ranked by number of active users (in millions)*. https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/

Udenze, S., & Uzochukwu, C. E. (2021). Promoting Mental Wellbeing: Young Adults' Experience on TikTok during the COVID-19 Pandemic Lockdown in Nigeria. *Interações: Sociedade e as novas modernidades*(40), 9-28. https://doi.org/10.31211/interacoes.n40.2021.a1

Umucu, E. (2020). Examining the Structure of the PERMA Theory of Well-Being in Veterans With Mental Illnesses. *Rehabilitation Counseling Bulletin*, *64*(4), 244-247. https://doi.org/10.1177/0034355220957093

Wang, Y. (2020). Humor and camera view on mobile short-form video apps influence user experience and technology-adoption intent, an example of TikTok (DouYin). *Computers in human behavior*, *110*, 106373. https://doi.org/10.1016/j.chb.2020.106373

Wang, Y. H., Gu, T. J., & Wang, S. Y. (2019). *Causes and Characteristics of Short Video Platform Internet Community Taking the TikTok Short Video Application as an Example* [Paper presentation]. 2019 IEEE International Conference on Consumer Electronics, Taiwan, China. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080149836&doi=10.1109%2fICCE-TW46550.2019.8992021&partnerID=40&md5=5fafdbf44536ad93b2ac3a4a86365d5a