

## **THE IMPACT OF LATE-NIGHT SOCIAL MEDIA USAGE TOWARDS COGNITIVE ENGAGEMENT OF FEMALE ENTREPRENEURS IN INDONESIA**

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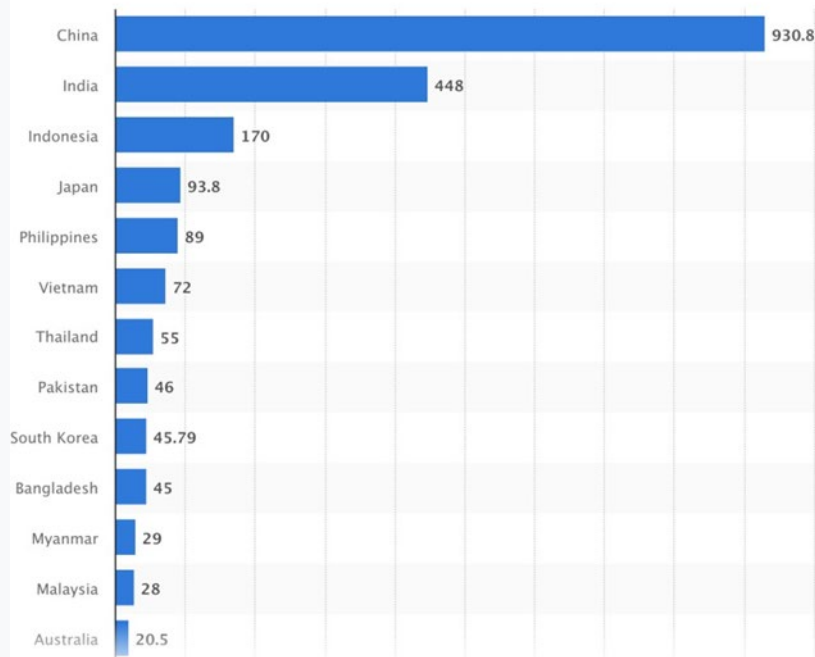
### **Abstract**

The trend of social media incremental usage has become increasingly visible in everyday life. Excessive usage of social media is a modern phenomenon that has several negative effects in the entrepreneurial realm, however it has received little attention in empirical study. Based on the stressor–strain–outcome model, this study intends to reveal that late-night social media usage might impact two psychological strains (technostress and life invasion) amongst female entrepreneurs and hence have an influence on their behavioural outcomes (cognitive engagement). The object of this research are female entrepreneurs in Indonesia from the small and medium sized enterprise sector (SMEs) that have used social media late at night. This study used a quantitative approach and non-probability purposive sampling as the sampling technique. There were 200 respondents obtained using an electronic questionnaire which was then processed using the PLS-SEM method using SmartPLS. The results indicated that late night social media usage significantly raises life invasion and technostress among female entrepreneurs. However, late night social media and the two psychological strains have positive impacts towards entrepreneurial cognitive engagement as opposed to negative. The results of this study are expected to provide new insights for female entrepreneurs about the benefits of social media usage to view social media usage as beneficial tool which brings advantages that could help their businesses remarkably. More toward older generation who have difficulties in utilizing social media in daily life regardless the businesses they have. In this digital era, it is important to keep up and learn more about social media to be able to follow the market movement and capture business's opportunities posted through social media.

**Keywords:** social media usage; life invasion; technostress; cognitive engagement; female entrepreneur

### **BACKGROUND**

Social media has essentially taken over regular life, especially after the COVID-19 pandemic. According to an article titled 'Revealing Social Media Phenomenon in Time of COVID-19 Pandemic for Boosting Start-Up Businesses through Digital Ecosystem', the studies indicate the social media security and usability during the COVID-19 pandemic crisis, like launching a start-up, work from-home, managing an online business inside the digital ecosystem and enhancing company procedures (Susanto, et al., 2021). Many individuals, particularly Indonesians, have been required to self-isolate and work from home for months due to the COVID-19 pandemic. This was the reason people likely to be dependent more and rely even more on the internet for amusement and information than previously. Social media platforms, for example, have now become the main acceptable tools of secure, broad interaction. This reliance has captivated the curiosity of both business practitioners and social scientists (Taufik, 2020). Excessive social media usage in Indonesia has been spurred by rising internet penetration and smartphone affordability, amongst many other aspects. As from January 2021, Indonesia had approximately 170 million active social media users, making it the third largest in Asia Pacific after China and India. Most Indonesians use social media to connect and engage with friends and family. Nevertheless, a latest trend indicates that a growing number of firms are using social media as a supplement to their marketing activities (Wolff, 2021). As shown in figure 1.1. below, the number of active social media users in the Asian Pacific;



**Figure 1. The number of active social media users in the Asian Pacific as of January 2021 by each country (in millions)**  
Source: Wolff (2021)

The tendency of excessive social media use has become increasingly visible in everyday life (Boyd, 2015). The growth of social media in today's digital era is significant since it allows individuals to connect and exchange information online. It is not surprising that the convenience of exchanging information and interacting via social media does have an influence on the increase of various online activities, particularly business operations (Simangunsong, 2020). Social media may help in operations including revenue, the brand awareness or development, networking process and recruitment. Moreover, social media also has made things simpler for individuals to establish businesses since it expands the worldwide market and makes advertising affordable (Susanto, et al., 2021). Other than social media changing the way society operates, it has influenced individuals in ways that even they can feel as well. While social media may provide individuals with a channel to express themselves, it can also be stressful and overwhelming (Wu, 2021).

This study will focus on a certain negative aspect of social media, which is late night usage. Researchers are currently focused on determining the influence of excessive and nighttime usage of social media and technical gadgets on individuals' well-being. Furthermore, Appleton et al. (2020) discovered that nocturnal usage of technology gadgets including phones related to job mistakes and automobile accidents. Additionally, a study of young adults in the United Kingdom found that around 20% of respondents regularly awakened at night to check social media messages, causing them to be more exhausted than their colleagues (Tandon, Kaur, Dhir, & Mantymaki, 2020). In relation of cognitive engagement, a persons' maladaptive smartphone usage and compulsive social media use might have detrimental repercussions in their everyday life, including such social media weariness, sleep disruptions and "fear of missing out,". In addition, FOMO has been discovered to arise as a unique workplace phenomenon, apart from its generic conception, which could also lead to work-related burnout among employees. Alonzo et al. (2019) found from a comprehensive review of research that people who are excessively active on social media have poor sleep quality, anxiety, and depression. Hence, social media can possibly affect one's cognitive engagement (Tandon, Kaur, Dhir, & Mantymaki, 2020).

Unfortunately, little research has been conducted to the detrimental impact of social media on entrepreneurs. Extensive utilization of technology does indeed impact a personal cost, although exposure to social networking platforms strains the person's relationships with family and friends. Excessive utilization of technology may also lead to work-technology conflict. The massive volume of material published on social media, especially images and content shared by friends, necessitates rapid responses, placing the user's professional commitments under stress. Such activity necessitates additional energy, time and catching up with the rapidly changing trends on social media sites, which often necessitates staying up at night. For that reason, the late-night use of social media could harm an entrepreneurs' being (Shahzad, et al., 2021). More, excessive social media usage can negatively impact entrepreneurial activities because it is task disrupting. Obsessive social media usage may reduce employees' job attention due to their proximity to the source of distraction (social media platform) in the form of software programs on tablets and mobile phones. Due to a lack of self-control, many are firmly linked to social media late at night and work the next morning (Vishwanath, 2014). As a result, they would have to put aside other vital obligations, affecting both their personal and professional lives. Individuals may suffer higher stress if they are unable to maintain the optimum level of social media use. Having constant mental cognitive measures that individuals think they need to accomplish on social media makes it more difficult to give their vital responsibilities as an entrepreneur any attention. According to Harmon and Mazmanian (2013), even on non-work times, checking emails on a smartphone is prone to producing friction between social and work life. For that reason, it could be suggested that outcome factors interact with the perceived stressors and psychological response (Shahzad, et al., 2021).

From the standpoint of entrepreneurship, the negative impact of social media and its associated outcomes is critical and urgent to explore. Other than that, the Stressor Strain Outcome (SSO) model will be used in this research, and it has already been used to analyse occupational stress occurrences (Lee, Lee, & Suh, 2016). However, in prior research, the use of the SSO model in entrepreneurship also was not fully investigated. Some academics are interested in quantifying the use of social media in the workplace. According to Stoney Brooks, he discovered that social media could lead to technostress and impair work performance (Brooks, 2015).

Based upon the Stressor Strain Outcome model or SSO model, this research proposes the late-night social media usage as the stressor that induces inner strains (technostress and life invasion) amongst female entrepreneurs in Indonesia, affecting their behavioural outcome (cognitive engagement). This following research contributes towards the current studies by focusing on the negative aspects of social media and extending knowledge on the adverse repercussions of information technology on entrepreneurial environments, particularly female entrepreneurs. Additionally, this study exposes how the stresses 10 impact the internal mechanisms of female entrepreneurial cognitive engagement, hence strengthening the SSO model's relevancy. Lastly, based on the findings and results of this study, academicians and practitioners could design interventions or techniques to reduce the damages of social media to female entrepreneurs.

The background explanation above leads to research questions that will be tested and analysed upon, with seven research questions as follows:

1. Does late-night social media usage negatively reduce female entrepreneurial cognitive engagement?
2. Does late-night social media positively raise life invasion?
3. Does late-night social media positively raise technostress?
4. Does life invasion negatively reduce female entrepreneurial cognitive engagement?
5. Does life invasion have a mediating role between the association of late-night social media usage and female entrepreneurial cognitive engagement?

6. Does technostress negatively reduce female entrepreneurial cognitive engagement?
7. Does technostress have a mediating role between the association of late-night social media usage and female entrepreneurial cognitive engagement?

The following points are considered as limitations of the study which are firstly, the data collected is only limited to female entrepreneurs in Indonesia, secondly this research is only limited to the cognitive engagement and recognizes which are limited to physical and emotional engagements, thirdly, this research only focused on the Stressor Strain Outcome framework and the mediator variables which are life intrusion and technostress, and lastly this research is focusing only on the indicator 'before sleep', which could have been specified deeper.

## **LITERATURE REVIEW**

### **Social media**

The term "social media" refers to Internet-based platforms that enable people to engage and choose self-present with both large and limited audiences that receive value from user-generated material and the sense of contact with others, either in real-time or asynchronously (Carr, 2015). It is claimed that identifying social media is difficult. Nevertheless, the notion of social media may be summarized as Internet apps that promote the creation and sharing of user-generated content, demand a certain amount of self-disclosure, and enable a certain degree of social engagement (Kaplan, 2010). Social media has been known to have a variety of types including social networks, media sharing networks, discussion forums, bookmarking, and content curation networks, consumer review networks, blogging and publishing networks, social shopping networks, and internet-based networks. The types of social media everyone is quite fond of are social networks and media sharing networks. Examples of social networks are Twitter, Facebook and LinkedIn. These sorts of social media have been used to connect with people and companies on the internet. They may assist your company with social awareness, customer service, branding, connection development, conversion, and lead generation. This sort of media encourages people and corporations to communicate online and share information and ideas to foster mutually beneficial partnerships (Kakkar, 2018).

### **Information and Communication Technologies (ICT)**

Information and Communication Technologies (ICT) is a wider phrase for Information Technology (IT), that defines as all communication technologies such as the internet, social media, mobile phones, laptops, videoconferencing, wireless systems, software, middleware, as well as other media services and applications that allows people to access, obtain, hold, transfer, and alter information in digital exterior (Sylvester, 2013). Humans' ability to handle data and information is limiting, even though the creation of new ICT is endless. ICTs will indeed be integrated into our lifestyles hence we'll have less opportunities to be rid of the technostress that ICTs generate (Shu, Tu, & Wang, 2011). Technostress seems to be a management issue that companies must handle inside a technology reliant workplace environment. The concept of technostress is heavily linked to psychological repercussions related with the usage of ICT, as well as unfavourable attitudes about the efficiency of the use (Hung, Chen, & Lin, 2014). Technostress is generally described as stress caused by the usage of information and communication technology and systems. From the other side, ICT poses risks towards human's psychological and physical well-being, as well as their performance at work. For example, ICT could push people to work quicker than they can handle or known as techno-overload. ICT could also intrude into individual's personal lives or known as life invasion or techno-invasion (Ayyagari, Grover, & Purvis, 2011)

### **Late-Night Social Media Usage**

According to Caplan and High (2006), their research defines "excessive" technological use as "the amount to which social media use surpasses the timeframe anticipated". The timeframe considered to be 'late night' may vary, which is why it is defined as the timeframe anticipated. According to Tom Skilling (2018), late at night is considered midnight to 6 a.m. Meanwhile, other researchers say 9 p.m. to 4 a.m. or 8 p.m. to 12 a.m. There is no exact time regarding late night that is reliable. Due to the obvious negative effects for the individual, the phrase "overuse of technology" seems to have a negative connotation (Shahzad, et al., 2021). The combination of user-generated material with social media features can help to develop and maintain social relationships, exchange of information, interaction, multifunctional, self-disclosure features, and amusement (Shi, Yu, Wang, Cheng, & Cao, 2020). Such social media elements, specifically, may expose people and entrepreneurs toward an excessive amount of information, constant communication, as well as social needs. Whenever the interest in social media outweighs entrepreneurs' capacity to control it, they may even get anxious. Such stress could exacerbate the psychological health of female entrepreneurs and reduce their cognitive involvement in their job environment (Shahzad, et al., 2021). Late-night social media use also leads to going to bed late, disrupted sleep, as well as other sleeping problems, which all add to psychological stress (Fu, Chen, & Zheng, 2020).

### **Life Invasion**

Life invasion is the negative viewpoint that increased social media usage serves an excessively essential part in everyday life and has infiltrated one's routine (Cao, Masood, Luqman, & Ali, 2018). The idea of life invasion because of social media arises when one's use of social media gets ingrained in one's lifestyle (Ayyagari, Grover, & Purvis, 2011). Therefore, the person is always attached to social media platforms, and the person's job activities and spare time are now all occupied by social media lasting hours each day via computer and smartphone usage (Vitoux, Mourah, & Kerob, 2009). Due to the escalating need for behavioural adaptations necessary to adjust to new social media use routines and new settings, users of social media feel life invasion (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008). Individuals could also experience greater stress if they are unable to sustain the appropriate degree of social media usage. Previous research has found that late-night social media use can lead to a variety of psychological and behavioural concerns, including stress and life invasion (Luqman, Cao, Ali, Masood, & Yu, 2017).

### **Technostress**

Technostress is defined to a person's psychological condition because of their inability to cope with present requirements because of their social media usage (Steelman & Soror, 2017). In other words, according to Craig Brod, an American psychotherapist that created the term 'technostress, referred to it as a modernized adaption disorder produced by a difficulty to adapt to new computing technology in a positive and healthy way (Salazar-Concha, 2021). Technostress comprises stressors which are "technology-induced stimuli, occurrences, or commands" (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008). The stressors created by technostress are referred to as "technostress creators," and they elicit individual reactions known as strain (Ayyagari, Grover, & Purvis, 2011). According to Ayyagari (2017), technostress is an occurrence connected with negative effects. Resulting from excessive use of technology, a person may suffer from one unique type of psychological strains known as technostress (Shi, Yu, Wang, Cheng, & Cao, 2020). Technostress produced from the use of social media could possibly be a positive aspect as such stress can be something beneficial and an advantage that could assist businesses be ahead. Seeing other competitors on the media helps induce motivation and helps keep up with trends. This adds more of a reason for the older



generation to learn more and catch on with using social media because it is critical and important. It will only lead to missing out on great opportunities or be held back because the world won't ever be stopping, and it will only get more advanced from here (Hollingsworth, 2021).

### **Entrepreneurial Cognitive Engagement**

Entrepreneurial cognitive engagement translates to "partaking in simple activities with deliberate and strategic application, making the cognitive commitment to learning, as well as attempting to engage in self-regulated learning and metacognitive" (Rich, Lepine, & Crawford, 2017). Entrepreneurial cognitive engagement stands as the dependent variable in this research. Meanwhile, work engagement is defined as an individual's simultaneous employment and articulation of self-preference in work performance which encourage ties to work and to everyone else, personalized participation, as well as full productivity (Kahn, 2017). Nonetheless, everyone has a finite quantity of cognitive resources (Egan, 2008). According to Kahn's (2017) research, workers possess limited "cognitive resources" at the workplace, such as spending energy in thinking and concentrating on the task. With just an influx of massive amounts of data, lies the risk of overloading the brain's relatively restricted cognitive capacity. This quantity of excessive information which a person must absorb because of late-night social media use is extremely likely to exhaust cognitive resources, resulting in confusion and distress (Zhang, Zhao, Lu, & Yang, 2016). Males and females are also motivated differently to become entrepreneurs. Women believe the most important preparation is specialized training, meanwhile men seek for potential buyers. Females and males also don't plan their business launches in a similar approach. All factors prove how different both genders engage and behave in managing a business (Schwab, 2021). In reason of all that, the cognitive involvement of female entrepreneurs is an essential behaviour effect of social media use that may be negatively impacted with high levels of life invasion and technostress (Shahzad, et al., 2021).

### **Relationship between Variables**

#### **Late-Night Social Media Usage and Entrepreneurial Cognitive Engagement**

An excessive amount of social media use could have a negative impact on the workplace generally because it creates task disruptions. Due to the proximity to the source of distraction (social media platform) in the shape of software applications on tablets and mobile phones, obsessive social media usage might lower employees' job concentration. Individuals are strongly attached to social media late in the night and work the following morning given the lack of self-control (Vishwanath, 2014). This would result in them having to put other important duties aside, therefore impacting their personal life and work life. Other than that, individuals might experience increased stress if they're unable to sustain the appropriate degree of social media use. With continuous mental activity of cognitive measures that people use to think about stuff they hope to accomplish on social media makes it challenging for any of them to pay adequate attention to vital duties required of a female entrepreneur (Shahzad, et al., 2021).

Based on the explanation above, the first proposed hypothesis is as follows:

H1a: Late night social media usage negatively reduces female entrepreneurial cognitive engagement.

H1b: Late night social media usage positively raises life invasion.

H1c: Late night social media usage positively raises technostress.

### Life Invasion and Entrepreneurial Cognitive Engagement

A person is always engaged with social media platforms, and thus the person's free time and job activities are mostly hijacked by social media for hours day after day via computer and smartphone use (Vitoux, Mourah, & Kerob, 2009). Life invasion has indeed been examined in the field of educational achievement because of its detrimental implications. Nevertheless, in the realm of entrepreneurship, life invasion was hardly explored. As a result, this study suggests that life invasion has a detrimental impact on the cognitive engagement of female entrepreneurs at work when utilizing social media late in the night (Shahzad, et al., 2021).

Based on the explanation above, the second proposed hypothesis is as follows:

H2a: Life invasion negatively reduces female entrepreneurial cognitive engagement.

H2b: Life invasion has a mediating role between the association of late-night social media usage and female entrepreneurial cognitive engagement.

### Technostress and Entrepreneurial Cognitive Engagement

Coping with technostress necessitates extra effort from business owners since they develop a certain habit of utilizing social media throughout time and, in some cases, overnight. It also has the potential to move time and cognitive measures away from learning as well as cognitive engagement with everyday duties required for business achievement. Furthermore, female 31 entrepreneurs struggling with technostress are much more prone to having an inability to engage appropriately to their job tasks since they are unable to keep cognitive balance between work and technology usage (Shahzad, et al., 2021).

Based on the explanation above, the third proposed hypothesis is as follows:

H3a: Technostress negatively reduces female entrepreneurial cognitive engagement.

H3b: Technostress has a mediating role between the association of late-night social media usage and female entrepreneurial cognitive engagement.

Below is the theoretical framework to illustrate the stress process in entrepreneurial cognitive based on the Stressor Strain Outcome model.

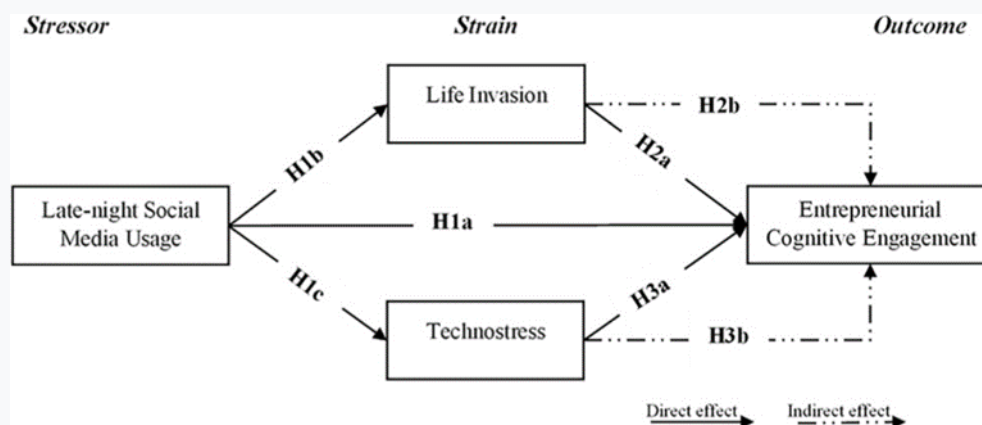


Figure 2. Conceptual Framework

### METHODOLOGY

This research is explanatory research, which is also considered a type of causal research, because it seeks to describe the causes and effects of a certain issue and the associative research because it aims to determine the connection or impact between variables as associative hypothesis describes a relationship or connection between two variables, the independent variable, and the dependent variable (Rahman A., 2016). The unit of analysis used in this research is individuals. Every individual's information and data were obtained through an

online survey questionnaire. The individuals in this research are female entrepreneurs that have used social media late at night as the goal of this research is to find the impact of late-night social media usage towards female entrepreneurs in Indonesia. The population for this research is female entrepreneurs in Indonesia from the small and medium sized enterprise sectors (SMEs) with the sample size for this research is 200 female entrepreneurs in Indonesia from the small and medium sized enterprise sector (SMEs) that have used social media late at night. The type of sampling used in this research is the purposive sampling or also known as the judgement sampling in non-probability technique.

The primary data is gathered through an online survey questionnaire that is formed in Google Forms. The online survey questionnaire is spread to each of the respondents through a shared link that gives them access to answer the questions. PLS SEM data analysis approach may be utilized for small sample sizes including multiple constructs and many items. The PLS-SEM analyses the association between variables and can detect problems in the distributed questionnaire (Hair, Hult, Ringle, & Sarstedt, 2019).

## **FINDING AND DISCUSSION**

### **Profile of respondents**

The sample size for this research is 200 female entrepreneurs in Indonesia from the small and medium sized enterprise sector (SMEs) that have used social media late at night. The respondents were grouped based on their gender, age range, education, and others. Tabel 4.1 and 4.2 show the age range, education, and others of the respondents

**Table 1. Age of respondents**

	<b>Frequency</b>	<b>Percentage</b>
<b>18-24 years</b>	157	78.5%
<b>25-34 years</b>	35	17.5%
<b>35-44 years</b>	5	2.5%
<b>45 years and above</b>	3	1.5%
<b>Total</b>	200	100%

Source: Data processed (2022)

Based on the results, most of the respondents were aged 18- 24 years old with a total number of 157 respondents or 78.5% from the total of the respondents. The second highest being 25-34 years old from 35 respondents or 17.5% from the total of the respondents.

**Table 2. Education of Respondents**

	<b>Frequency</b>	<b>Percentage</b>
<b>Undergraduate</b>	144	72%
<b>Graduate</b>	48	24%
<b>Postgraduate</b>	2	1%
<b>Other professional education</b>	6	3%
<b>Total</b>	200	100%

Source: Data processed (2022)



The results of the respondents' education show that most of respondents are undergraduates with a total number of 144 respondents or 72% from the total respondents. The second highest being graduates with a total number of 48 respondents or 24% from the total respondents.

**Table 3. Type of business I**

	<b>Frequency</b>	<b>Percentage</b>
<b>Fashion</b>	97	48.5%
<b>Food and Beverage</b>	51	25.5%
<b>Beauty Services</b>	44	22%

Source: Data processed (2022)

The respondents were also asked about what type of business they are currently running. Based on the results, majority of the respondents owned fashion businesses, including clothing, shoes, make up, jewelry and others. Other than that, the respondents would also state that they are in the food and beverage business such as desserts, pastries, catering, hampers and so on. Moreover, some of the respondents would be in the beauty service industry such as microblading, eyelash extensions, skincare, and nail art. Lastly, the remaining were either in their family business or other types of businesses.

**Table 4. Type of Business II**

	<b>Frequency</b>	<b>Percentage</b>
<b>Online business (uses social media)</b>	192	96%
<b>Offline business(does not use social media)</b>	8	4%
<b>Total</b>	200	100%

Source: Data processed (2022)

Additionally, all respondents were also asked whether their business uses social media. From the results, 192 respondents stated that they use social media in managing their business.

**Table 5. Length of business Experience**

	<b>Frequency</b>	<b>Percentage</b>
<b>1-3 years</b>	140	70%
<b>4-6 years</b>	57	28.5%
<b>7-10 years</b>	2	1%
<b>10+ years</b>	1	0.5%
<b>Total</b>	200	100%

Source: Data processed (2022)

The respondents were also categorized based on their experience in doing business or being an entrepreneur. The results below show that the majority had 1-3 years of experience with a total of 140 respondents or 70% from the total respondents. Following is 4-6 years of experience with a total of 57 respondents or 28.5% from the total respondents.

## Outer Loading

### *Convergent Validity Test Result*

Table 6 below show the results of Convergent Validity Test results.

**Table 6. Convergent Validity Test Result**

Variable	AVE	Category (>0.5)
Entrepreneurial Cognitive Engagement (ECE)	0.711	Valid
Life Invasion (LI)	0.698	Valid
Late Night Social Media Usage (SMU)	0.739	Valid
Technostress (TS)	0.603	Valid

Source: Data processed (2022)

Based on the results of the AVE, each variable's AVE value is above 0.5 which indicates that all variables can be declared to have convergent validity.

### *Discriminant Validity Test Result*

Table 7 below show the results of Discriminant Validity Test results, which based on the values of the discriminant validity test results below, the diagonal value is greater than the correlation coefficient of each variable, indicating that it has strong discriminating efficacy.

**Table 7. Discriminant Validity Test Result**

	<b>ECE</b>	<b>LI</b>	<b>SMU</b>	<b>TS</b>
<b>ECE</b>	<b>0.843</b>			
<b>LI</b>	0.632	<b>0.835</b>		
<b>SMU</b>	0.649	0.743	<b>0.860</b>	
<b>TS</b>	0.710	0.771	0.742	<b>0.777</b>

Source: Data processed (2022)

### *Reliability Test Results*

Table 8 below show the calculated Cronbach's alpha values range from 0.780 to 0.898 thus confirming the construct reliability. Whereas the composite reliability values range between 0.858 to 0.925. All variables are above 0.7 which reveals that all variables are reliable.

**Table 8. Reliability Test Results**

	Cronbach's Alpha	Composite Reliability	Category (>0.7)
ECE	0.898	0.925	Reliable
LI	0.788	0.874	Reliable
SMU	0.824	0.894	Reliable
TS	0.780	0.858	Reliable

Source: Data processed (2022)

### Structural Model Evaluation (Inner Model)

Following the reliability and validation of the data, the following step is analyzing the data using a structural model to test the relationships between variables used in this study. The coefficient of determination, t-statistics, and multicollinearity test will be used in the structural model tests.

#### *Coefficient of Determination (R<sup>2</sup>)*

The results of the coefficient of determination (R<sup>2</sup>) in this research are as follows:

**Table 9. Coefficient of Determination Test Results**

Variable	R <sup>2</sup>
ECE	0.541
LI	0.552
TS	0.550

Source: Data processed (2022)

The coefficient of determination of variable Y is influenced by variable X (SMU, LI and TS). The value of R<sup>2</sup> in entrepreneurial cognitive engagement is 0.541 which indicates that the ECE variable is influenced by the X variable (SMU, LI and TS) by 54.1% and the balance of 45.9% were influenced by other variables which were not studied here. Whereas the value of R<sup>2</sup> in life invasion is 0.552 which shows that variable LI is influenced by the X variable (SMU and TS) by 55.2% the balance of 44.8% were influenced by other variables which were not studied here. Lastly, the value of R<sup>2</sup> in technostress is 0.550 which implies that variable TS is influenced by the X variable (SMU and LI) by 55% and the balance of 45% were influenced by other variables which were not studied here. For this reason, all variables are categorized to have moderate relations because they all range within 0.50.

#### *T-Statistics*

This research used the bootstrap method to measure the significance level of path analysis. The results of the t- statistics in this research are as shown in table 4.10 below. Based on the results above, there are 5 variables that has a t-statistic of above 1.96 which are SMU → ECE in the

amount of 2.589, SMU → LI in the amount of 17.030, SMU → TS in the amount of 15.213, TS → ECE in the amount of 4.009 and SMU → TS → ECE in the amount of 3.793. This demonstrates that the two variables have a significant influence on one another. Meanwhile, for other variables with values less than 1.96, the two variables had no significant effect.

**Table 10. T-Statistic Test Results**

	<b>T-statistic</b>	<b>P-value</b>
1. SMU → ECE	2.589	0.005
2. SMU → LI	17.030	0.000
3. SMU → TS	15.213	0.000
4. LI → ECE	1.134	0.129
5. SMU → LI → ECE	1.144	0.127
6. TS → ECE	4.009	0.000
7. SMU → TS → ECE	3.793	0.000

Source: Data processed (2022)

### **Hypothesis Testing**

This research proposed seven hypotheses and below are the results of this research's hypothesis testing:

**Table 11. Path Coefficient**

	<b>Original Sample</b>	<b>T-Statistic</b>	<b>P Values</b>	<b>Hypothesis Result</b>	<b>Conclusion</b>
SMU → ECE	0.229	2.589	0.005	Has a positive and significant influence	H0: Accepted H1a: Rejected
SMU → LI	0.743	17.030	0.000	Has a positive and significant influence	H0: Rejected H1b: Accepted
SMU → TS	0.742	15.213	0.000	Has a positive and significant influence	H0: Rejected H1c: Accepted
LI → ECE	0.112	1.134	0.129	Has a positive but not significant influence	H0: Accepted H2a: Rejected
SMU → LI → ECE	0.083	1.144	0.127	Has a positive but not significant	H0: Accepted H2b: Rejected

				influence	
TS → ECE	0.453	4.009	0.000	Has a positive and significant influence	H0: Accepted H3a: Rejected
SMU → TS → ECE	0.336	3.793	0.000	Has a positive and significant influence	H0: Accepted H3b: Rejected

Source: Data processed (2022)

## Discussion

### *Late Night Social Media Usage and Entrepreneurial Cognitive Engagement*

According to Susanto, et al (2021), social media has become a phenomenon in this COVID-19 era, and they reveal all its positive impacts, especially in terms of boosting start-up businesses through the digital ecosystem. Their research findings reveal the usability and security of social media during the COVID-19 pandemic crisis, including work- from-home, launching a startup, managing an online business, and enhancing company procedures. The numerous platforms of social media have given many uses for businesses in this pandemic and eventually making it easier for individuals to manage their business (Susanto, et al., 2021). Their results show that the use of social media has significantly benefited businesses. Like that finding, the result of this research has also shown that social media usage is positively related to entrepreneurial cognitive engagement. This proves that late night social media usage does in fact positively raise life invasion and technostress, this is likely to be reason why H1b and H1c is accepted in the study. However, the results reveal that late night social media does have an impact on female entrepreneurial cognitive engagement but not to the point that it is overwhelming or negative, rather it has a positive influence. An influence that is positive means that the impact recognizes the qualities, strengths and how it is beneficial in some form (Keller, 2022). In this case, late night social media usage is beneficial and helpful towards female entrepreneurial cognitive engagement hence H1a is rejected.

### *Life Invasion and Entrepreneurial Cognitive Engagement*

According to Sharma and Sudhesh (2018), over the last few years, social media usage has skyrocketed. Since more individuals engage with one another over the internet, it becomes increasingly important to strike a balance between virtual and real life. The business world necessitates a balance between work and personal responsibilities. Employees frequently struggle to balance several duties in their life, both within and outside of work (N.T, 2018). The results of their research indicate that there is a negative and significant influence between social media and work life, whereas in this research's results prove otherwise. The results from table 4.11 show that there is a positive influence between life invasion and female entrepreneurial cognitive engagement however that relationship is not significant. For this reason, these two hypotheses are rejected implying that life invasion can reduce entrepreneurial cognitive engagement. Similarly, life invasion can have a mediating role between the association of late-night social media usage and entrepreneurial cognitive engagement however not statistically significant. Social media could invade one's life however not fully impact their entrepreneurial cognitive engagement. For instance, an individual could have to be in touch with social media every day however not to the point it affects their mind when working. It is possible that social media is something normal to these respondents, nothing that is difficult to grasp. Especially knowing that they use it every day, whether that be for business or personal life. Being involved in social media means keeping up with the latest trends, which is rather critical for businesses nowadays because one would have to be competent and creative to run



a successful business (Tarver, 2021). Particularly, seeing from the types of businesses results that show all these female entrepreneurs are mostly in the fashion business, beauty industry or food and beverages which require to keep up with this tech savvy world that creates fast trends. Proving even more on why social media has become normal and something important. Based on Sharma and Sudhesh's article (2018), employees frequently struggle to balance several obligations in their life, both in and out of work especially now with technology in the picture (N.T, 2018). In contrast with their findings, this research's result instead shows that social media is rather needed and possibly normal to the respondents because they use it every day whether that be for work life or personal life. Also, unlike Sharma and Sudhesh's findings (2018), this research's results show that there is a positive influence between life invasion and entrepreneurial cognitive engagement however not statistically significant.

#### *Technostress and Entrepreneurial Cognitive Engagement*

According to Okolo (2018), technostress has been stated to affect the performances of employees, job satisfaction, multitasking and more. The article discussed the negative relationship between technostress and employee engagement in Nigeria. The results show otherwise and in fact state that there is a positive relationship between technostress and employee engagement which is contrary to the detrimental correlation it proposes. The results of their research indicate that technostress does not diminish employee involvement, but a modest degree of stress could rather function as a motivator, whereas high stress could be detrimental (Okolo, 2018). Similarly, with this research's results in Table 4.11, the path coefficient results show that there is a positive and significant influence on the relationship between technostress and entrepreneurial cognitive engagement. This proves that technostress does in fact significantly influence entrepreneurial cognitive engagement however not to the point that it is negative or overwhelming, it rather has a positive influence. The results also show that technostress does have a mediating role on the association between late night social media usage and entrepreneurial cognitive engagement however not negatively. Hence, H3a and H3b are rejected.

Most of the respondents are considered as Gen Z and undergraduates who are knowingly used to social media usage and do not have any difficulty adapting to technology in a positive and healthy way, are familiar with social media usage because it is part of their lives and most importantly their business. Seeing other businesses operate a certain way through social media might motivate or make an individual more competitive in trying to be better. For this reason, it is possible they do believe that social media can cause some sort of stress, however not to the point it has negatively impacted their cognitive engagement when working. Such stress rather acts as a motivator (Okolo, 2018).

## **CONCLUSION**

Based on the results of the data analysis that has been done, two hypotheses were accepted and five were rejected. The following are the results concluded of this research;

1. H1a: Late night social media usage negatively reduces female entrepreneurial cognitive engagement, is rejected.
2. H1b: Late night social media usage positively raises life invasion, is accepted.
3. H1c: Late night social media usage positively raises technostress, is accepted.
4. H2a: Life invasion negatively reduces female entrepreneurial cognitive engagement, is rejected.
5. H2b: Life invasion has a mediating role between the association of late- night social media usage and female entrepreneurial cognitive engagement, is rejected.
6. H3a: Technostress negatively reduces female entrepreneurial cognitive engagement, is rejected.

7. H3b: Technostress has a mediating role between the association of late- night social media usage and female entrepreneurial cognitive engagement, is rejected.

### Research Limitation and Recommendation

There are several limitations found in this study, namely as follows:

1. This research focused solely on the entrepreneurial cognitive engagement of females in Indonesia, specifically in SME sectors and that have used social media. The female entrepreneurs are also from various industries, which is why it cannot be generalized to one industry, and this is likely the reason why the respondents behave differently with one another.
2. This research is only limited to the cognitive engagement and recognizes that there are emotional and physical engagements.
3. This research only focused on the Stressor Strain Outcome framework and the mediator variables which are life invasion and technostress.
4. This research only focused on the indicator 'before sleep', which could have been specified deeper.

Understanding the above limitations, this study suggests several recommendations for future research as follow:

1. Further research can generalize to just one industry because the respondents can all behave similarly or have characteristics that are similar.
2. This research solely looked at female entrepreneurs' cognitive engagement, which is an important aspect of overall work engagement. Prospective academics could examine an entrepreneur's emotional and psychological engagement by expanding the framework to yield more generalizable results. Such emotional and physical activities include task interruption, cognitive emotions, and fatigue that future academics could evaluate to confirm this concept even more in the field of entrepreneurship.
3. Future research can use other existing mediator variables and explore beyond technostress and life invasion.
4. Future research can specify the indicator 'before sleep' further and focus on a specific time range.

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