

## Shopping to Release Stress? Understanding The Role of Coping Stress and Gender on Online Shopping Behavior in College Students During the COVID-19 Pandemic

Wahyu Rahardjo<sup>1</sup>, Kenes Pranandari\*<sup>1</sup>, Dona Eka Putri<sup>1</sup>, Nurul Qomariyah<sup>1</sup>,  
Quroyzhin Kartika Rini<sup>1</sup>, Inge Andriani<sup>1</sup>

<sup>1</sup>Faculty of Psychology, Universitas Gunadarma, Depok, Indonesia

### ARTICLE INFO

#### Article History

Submitted :  
October 1<sup>st</sup>, 2022  
Final Revised:  
February 4<sup>th</sup>, 2023  
Accepted:  
February 4<sup>th</sup>, 2023

#### Keywords:

College students  
Coping stress  
Online shopping behavior  
Pandemic



This is an open access article under the  
[CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license

Copyright © 2022 by Author, Published  
by Universitas Negeri Surabaya

### ABSTRACT

*In the context of a pandemic, many people are still trying to fulfill their various needs by buying them online. However, the phenomenon of online shopping behavior in a pandemic is no longer a behavior to meet primary needs but is also thought to be carried out as a form of coping strategy to reduce perceived stress. The purpose of this study is to empirically measure to what extent coping stress can affect online shopping behavior by college students during a pandemic. This study uses the online shopping behavior scale owned by Haidery et al. (2020) and coping stress scale from Martinez-Lopez et al. (2016). This study involved 453 college students from grade 1 to grade 4 who lives in Jakarta Greater area. The main data analysis technique in this research is Anacova. The results showed that by considering gender, coping with stress significantly affected online shopping behavior in college students during the pandemic. Another finding in this research also reveals that female students tend to display online shopping behavior and use shopping as coping stress compared to male students.*

Correspondence about this article can be addressed to Kenes Pranandari via e-mail: [kenespranandari05@gmail.com](mailto:kenespranandari05@gmail.com)

The COVID-19 pandemic has changed many aspects of human life, including consumption and shopping patterns. Shopping behavior is increasingly focused and shifts to digital and many economic demands are then fulfilled online (Al-Hattami, 2021). This has also been supported by the fact that many online shopping applications have been installed by many people on their smartphones, including in Indonesia (Listianingrum, Jayanti, & Afendi, 2021; Wanars et al., 2022).

This pandemic brings pressure, stress, and various psychological problems at the personal and community levels (Kaligis,

Indraswari, & Ismail, 2020). This pressure is also felt by college students regarding lecture activities and daily life (Yang, Chen, & Chen, 2021). At this point, coping with stress is needed to deal with the pressures of this pandemic.

Coping stress is defined as all cognitive and behavioral efforts made to master, reduce, or tolerate demands or pressures (Folkman & Lazarus, 1980). This classic literature belonging to Folkman and Lazarus (1980) also distinguishes stress coping into two, namely problem-focused and emotion-focused coping. In this research, the stress coping in question is emotion-focused

coping. Emotion-focused coping, in which an attempt is made to regulate emotional distress, sometimes by changing the meaning of a stressful situation cognitively without changing the situation (Folkman & Lazarus, 1985). Through this coping, individuals can feel better psychologically even though the source of the problem has not been solved. Coping is usually done for problems that are beyond the control of the individual to solve and is mostly done by women (Folkman & Lazarus, 1985; Howerton & van Gundy, 2009; Moret-Tatay, Beneyto-Arrajo, Laborde-Dois, Martinez- Rubio, & Senent-Capuz, 2016).

Martinez-Lopez et al. (2016) mentions three things that are often done by individuals in coping with stress that focus more on emotional aspects, namely escape, relaxation, and hang out. In the context of consumer behavior, escape is described as buying behavior carried out to escape from reality where individuals can forget the anxiety, they feel about something (Babin, Darden, & Griffin, 1994; Martinez-Lopez et al., 2016). This occurs because escape motivation is based on the individual's need to free himself from the awareness of meaningful thoughts and uncomfortable feelings triggered by unfulfilled life demands (Heatherton & Baumeister, 1991).

Meanwhile, relaxation in the context of consumer behavior is buying behavior to provide a sense of relaxation, releasing negative moods (Kim & Hong, 2011; Martinez-Lopez et al., 2016). As for hanging out as coping with stress in the context of consumer behavior, it is buying behavior that is done to fill spare time and have fun (Seo & Green, 2008; Martinez-Lopez et al., 2016).

Students have a lot of pressure in their lives related to the COVID-19 pandemic that occurred. The change in the way learning becomes online is a source of pressure (Clabaugh, Duque, & Fields, 2021; Lim et al., 2022). On the other hand, shopping has long been found to be a coping mechanism for stress (Hama, 2001; Zhao, Wang, Xue, Li, & Feng, 2016), and so has online shopping (Martinez-Lopez, Pla-Garcia, Gazquez-Abad, & Rodriguez-Ardura, 2016).

Basically, online shopping behavior is buying behavior through the internet (Haidery, Kamran, Syed, & Risvi, 2020; Liang & Lai, 2002). The hallmark of online shopping behavior is that buyers browse information about the goods they need on the internet and buy them through online shops or online retailers (Harahap & Amanah, 2018; Svatosova, 2020). The online purchase transaction process is the same as conventional shopping, except that the stages are carried out via the internet (Javadi, Dolatabadi, Nourbakhsh, Poursaedi, & Asadollahi, 2012).

Two factors that are said to be very crucial in online shopping behavior are connectivity and especially convenience (Gautam, 2018; Haidery et al., 2020). This convenience is important because it is considered to play a role in stress relief, especially for female consumers when shopping online (Asih & Pratomo, 2018). Thus, as a form of strategy to reduce stress during a pandemic, online shopping behavior is considered an effective effort by students. However, gender here plays an important role. This happens because the stress coping in this research is emotion-focused, and shopping behavior is also an activity that is mostly done by women than men (Akhlaq & Ahmed, 2016; Craciun, 2013; Hasan, 2010).

Another interesting thing is that age has been found to be related to online shopping behavior (Hernandez, Jimenez, & Martin, 2011; Source, Perotti, & Widrick, 2005). This is important to put forward considering that there are differences in needs based on age groups and age specifications in the college student group in meeting personal needs or daily lectures.

This research is considered important because previous research related to online shopping behavior during the COVID-19 pandemic in the psychological theme focused on negative variables such as depression (Di Crosta et al., 2021), or related to positive perceptions and attitudes of using technology (Alhaimer, 2021; Polas, Tabash, Jahanshashi, & Ahamed, 2022; Sumi & Ahmed, 2022), or trust issues (Ben Hassen, El Bilali, & Allahyari, 2022). This research

tries to fill the gap left by previous research, namely psychological factors from the positive side, for example the perspective that the pressure and stress caused by the pandemic can place online shopping behavior as a coping with stress.

Based on the explanations and theoretical arguments that have been described previously, the purpose of this study was to measure empirically the effect of coping stress on online shopping behavior in students. Gender is considered as a control variable in understanding the extent to which coping stress affects online shopping behavior. Meanwhile, age is also included to be correlated with other variables.

## Method

The approach in this study is a quantitative approach to empirically measure the influence of coping stress on online shopping behavior in students. Gender is considered as a control variable in understanding the extent to which coping stress affects online shopping behavior.

### *Sample*

The participants of this study were 453 students consisting of 361 female students and 92 male students. Most participants were taken from the Greater Jakarta area and several other cities. The mean age of the participants was 19.98 years (SD = 1.32).

Gender is known through filling in self-identity. The calculation is done by treating gender in a dummy manner by giving a score of 1 for women and 0 for men.

Age is known by filling in personal identity. Participants write down their age in numbers to be able to process it further statistically.

### *Data Collection*

In this study, online shopping behavior was measured by scale from Haidery et al. (2020). This scale consists of 8 items with an example item being "I shop online as I do not have to leave home for

shopping". The response category on this scale is strongly disagree to strongly disagree with a score range of 1-5. The reliability of this scale is = 0.842.

Coping stress in this study was measured by the Martinez-Lopez et al. (2016) which has three aspects, namely, escape, relaxation, and hanging out. This scale consists of 10 items with an example item being "Online shopping is great for my mood". The response category for this scale is very unsuitable to very suitable with a score range of 1-5. The reliability of this scale is = 0.903.

### *Data Analysis*

The statistical technique in this study involves correlation for the first level to see the relationship between online shopping behavior, coping stress and each dimension of coping stress. Then a covariance analysis was carried out to see whether there was an effect of coping stress on online shopping behavior by considering gender.

## Result

Based on the results in Table 1, online shopping behavior is correlated with coping stress, as well as with aspects of coping with stress such as escape, relaxation and hang out. Meanwhile, age only correlated positively with online shopping behavior.

Table 2 shows that the effect of coping with stress on online shopping behavior by considering gender as a control variable is  $R^2 = 0.251$  ( $p < .01$ ). However, when viewed partially, only coping stress has an influence on online shopping behavior, while gender does not.

On the other hand, there are significant differences in all psychological variables involved based on gender. Female students tend to do more online shopping behavior during the COVID-19 pandemic, and do more stress coping such as escape, relaxation, and hang out than male students. More complete information is shown in Table 3

Table 1. Correlation matrix between variables

	Age	OSB	Coping Stress	Escape	Relaxation	Hang Out
Age						
OSB	0.093*					
Coping Stress	.000	0.271**				
Escape	-0.024	0.940*	0.724**			
Relaxation	-0.010	0.311**	0.959**	0.556**		
Hang out	0.056	0.177**	0.800**	0.485**	0.556**	
Mean	19.98	33.39	32.28	5.98	0.485**	6.30
SD	1.43	3.74	7.34	1.76	5.98	1.69

Note: OSB = online shopping behavior  
 \*=  $p < .05$ , \*\*=  $p < .01$

Table 2. Result of covariance between variables

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1592.270 <sup>a</sup>	36	44.230	3.872	.000
Intercept	74013.734	1	74013.734	6480.203	.000
Gender	3.795	1	3.795	.332	.565
Coping Stress	1484.851	35	42.424	3.714	.000
Error	4751.350	416	11.422		
Total	511345.000	453			
Corrected Total	6343.620	452			

a. R Squared = .251 (Adjusted R Squared = .186)  
 b. Dependent Variable: Online Shopping Behavior

Table 3. Differences in all variables based on gender

	Female students	Male students	t score	Sig.
Online shopping behavior	33.63 (3.71)	32.42 (3.73)	2.787	< .01
Coping stress	33.14 (7.06)	28.95 (7.51)	5.013	< .01
Escape	6.08 (1.78)	5.59 (1.65)	2.388	< .05
Relaxation	20.65 (4.72)	17.49 (4.84)	5.699	< .01
Hang out	6.41 (1.66)	5.87 (1.74)	2.737	< .01

## Discussion

The results of this study show some interesting findings. First, the fact that the older students are, the easier it will be to shop online. Several studies confirm the important role of age on online shopping behavior (Hernandez, Jiminez, & Martin, 2011; Wan, Nakayama, & Sutcliffe, 2012). One of the reasons is the issue of maturity of the use of technology in shopping in the older age group compared to the younger age group. Another factor that supports this is financial matters and payment aids such as credit cards or e-wallet which are indeed perceived more positively and tend to be easier for the more financially established age group to own (Chawla & Joshi, 2020; Sharpe, Yao, & Liao, 2012).

Age is also correlated with coping skills. This is related to their emotional

maturity. Emotional maturity helps students find coping strategies that suit the demands of the academic environment and the achievement of their achievement targets (Nicholls, Levy, & Perry, 2015; Wagde & Ganaie, 2013). The findings of Babicka-Wirkus, Wirkus, Stasiak, and Kozlowksi (2021) also state that the younger students are, the less mature the choice of stress coping is. That is, when students are more mature, their emotions are more mature, so that the selection of stress coping is more appropriate to the context of the problems being faced.

This research also found that by controlling gender, coping with stress has an influence on online shopping behavior in college students during the COVID-19 pandemic. Gender itself in this study has no influence on online shopping behavior. It seems that although women tend to be easier

to deal with problem-focused type of stress and are also easier to engage in online shopping behavior, in the context of this pandemic, men are also doing the same stress coping and online behavior. Furthermore, several previous studies have confirmed shopping behavior to reduce perceived stress (Hama, 2001; Ozen & Engizek, 2014). Interestingly, stress coping such as emotion-focused is done to reduce stress by shopping for things that are not important (Di Crosta et al., 2021; Kemp, Kennett-Hensel, & Williams, 2014).

Feelings of joy are one of the biggest reasons individuals engage in online shopping behavior (Kuswanto, Pratama, Ahmad, & Salamah, 2019). This feeling of joy can be obtained when individuals escape, relax, and hang out when shopping online (Martinez-Lopez et al., 2016). One of the reasons for online shopping behavior is to suppress the negative emotions felt by individuals related to the problems they are facing. By doing self-suppression, individuals try to forget they are having problems by shopping online (Mir, 2021; 2021a). This is where students are running away from the perceived problems of shopping online.

One of the motivations for shopping is to get a feeling of relaxation and release tension (Kim & Hong, 2011; Ozen & Engizek, 2014). Shopping is also referred to as self-gratification behavior (Kang & Park-Poaps, 2010). Individuals feel that by shopping, they reward themselves for the tough moments in life that they have passed or are currently experiencing. The pandemic atmosphere that has made many things done digitally actually accommodates this motivation for relaxation in shopping. The findings of Seo and Green (2008) even mention that by browsing the internet, opening the web, and looking at shopping objects, individuals already feel happy and can release tension.

On the other hand, the seemingly endless COVID-19 pandemic provides many moments where individuals must stay at home, especially during the first two years of the pandemic. The impact of the lockdown brought cabin fever and caused many people including students to become depressed and

depressed (Crawford, 2021; Sugianti, Widiyanti, & Hendrawati, 2022). This situation makes individuals need certain activities to spend their time. Activities in leisure time help individuals to get rid of the depressed feelings they feel (Aliabadi, Zobairy, & Zobairy, 2013), and online shopping behavior is one of the activities to spend their free time (Martinez-Lopez et al., 2016; McCarville, Shaw, & Ritchie, 2013).

Other findings from this study reveal differences in online shopping behavior and stress coping in students based on gender. Female college students are known to tend to shop more online, and display emotion-focused coping stress in the form of escape, relaxation and hang out. This confirms previous findings which say that it is indeed easier for women to shop online than men (Hernandez et al., 2011; Pradana & Sastiono, 2018). This is because women are more tolerant of the risks of online shopping and are more interested in seeking the benefits of shopping than men (Garbarino, & Strahilevitz, 2004; Widayat, Rakhmi, Indrasari, & Masudin, 2019). On the other hand, women display more hedonic motivations, especially to spend their free time shopping online during a pandemic and are more socially influenced to shop than men (Kanwal, Burki, Ali, & Dahlstorm, 2022; Koch, Frommeyer, & Schewe, 2020).

The tendency of female students to display stress coping such as escape, relaxation, and hang out can be understood considering that this type of stress coping is emotion-focused coping. Emotion-focused coping is mostly done by women while men do more problem-focused coping (Craciun, 2013; Graves, Hall, Dias-Karsch, Haischer, & Apter, 2021). Men tend to display problem-focused coping not only because of the issue of cognitive importance, but also because of the problem-solving target (Li, Liu, Yaou, & Chen, 2019) compared to women who place more importance on affection.

## Conclusion

The findings of this research confirm that in specific contexts such as the COVID-19 pandemic, controlling for gender, online

shopping behavior is carried out to release the tension and stress felt by students. Online shopping behavior can be an emotion-focused type of coping behavior because by browsing and shopping online, students can escape for a moment from the sources of pressure in their lives, or just spend free time, then feel relaxed, and get a sense of joy. This research also found that the older the college students, the greater their involvement in online shopping behavior. Another finding is that female students tend to be more prone to online shopping behavior.

### Recommendation

The suggestion for future research in the same context is to consider the socioeconomic status of the students. This is important to do considering that financial factors are crucial to realizing online buying intentions into online shopping behavior, and also considering self-regulation as a counterweight to financial factors in influencing online shopping behavior. Other things that can be considered from an economic point of view are payment media, types of online shops, and objects of purchase.

### References

- Akhlaq, A., & Ahmed, E. (2016). Gender differences among online shopping factors in Pakistan. *Organizations and Markets in Emerging Economies*, 7(1), 74-89.
- Al-Hattami, H. M. (2021). Determinants of intention to continue usage of online shopping under a pandemic: COVID-19. *Cogent Business & Management*, 8(1), 1936368. doi: 10.1080/23311975.2021.1936368
- Alhaimer, R. (2021). Fluctuating attitudes and behaviors of customers toward online shopping in times of emergency: The case of Kuwait during the COVID-19 pandemic. *Journal of Internet Commerce*, 1-26. doi: 10.1080/15332861.2021.1882758
- Aliabadi, S., Zobairy, M., & Zobairy, L. (2013). The relationship between depression and leisure time activity in female high school students. *Procedia Social and Behavioral Sciences*, 84, 256-258. doi: 10.1016/j.sbspro.2013.06.546
- Asih, R. R. D., & Pratomo, L. A. (2018). Peran mediasi e-satisfaction dan e-trust terhadap e-loyalty. *Jurnal Manajemen dan Pemasaran Jasa*, 11(1), 125-144. <http://dx.doi.org/10.25105/jmpj.v10i1.2537>
- Babicka-Wirkus A., Wirkus, L., Stasiak, K., & Kozłowski, P. (2021) University students' strategies of coping with stress during the coronavirus pandemic: Data from Poland. *PLoS ONE*, 16(7), e0255041. <https://doi.org/10.1371/journal.pone.0255041>
- Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: Measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*, 20(4), 644-656. doi: 10.1086/209376.
- Ben Hassen, T., El Bilali, H., & Allahyari, M. S. (2022). Food shopping during the COVID-19 pandemic: An exploratory study in four Near Eastern countries. *Journal of Islamic Marketing*, 1759-0833. doi: 10.1108/JIMA-12-2021-0404
- Chawla, D., & Joshi, H. (2020). The moderating role of gender and age in the adoption of mobile wallet. *Foresight*, 22(4), 483-504. doi: 10.1108/fs-11-2019-0094
- Clabaugh, A., Duque, J. F., & Fields, L. J. (2021). Academic stress and emotional well-being in United States college students following onset of the COVID-19 pandemic. *Frontiers in Psychology*, 12, 628787. doi: 10.3389/fpsyg.2021.628787
- Craciun, B. (2013). Coping strategies, self-criticism, and gender factor in relation to quality of life. *Procedia - Social and Behavioral Sciences*, 78,

- 466-470. doi: 10.1016/j.sbspro.2013.04.332
- Crawford, P. (2021). Editorial perspective: Cabin fever – the impact of lockdown on children and young people. *Child and Adolescent Mental Health, 26*(2), 167-168. doi: 10.1111/camh.12458
- Di Crosta, Ceccato, I., Marchetti, D., La Malva, P., Maiella, R., Cannito, L., ..., & Di Domenico, A. (2021). Psychological factors and consumer behavior during the COVID-19 pandemic. *PLoS ONE, 16*(8), e0256095. <https://doi.org/10.1371/journal.pone.0256095>
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*(3), 219-239. doi: 10.2307/2136617
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*(1), 150-170. doi: 10.1037/0022-3514.48.1.150
- Garbarino, E., & Strahilevitz, M. (2004). Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation. *Journal of Business Research, 57*(7), 768-775. doi: 10.1016/s0148-2963(02)00363-6
- Gautam, V. (2018). Shopping convenience: A case of online retailing. *Review of Professional Management, 16*(1), 1-16. doi: 10.20968/rpm/2018/v16/i1/129207
- Graves, B. S., Hall, M. E., Dias-Karch, C., Haischer, M. H., & Apter, C. (2021). Gender differences in perceived stress and coping among college students. *PLoS ONE 16*(8), e0255634. <https://doi.org/10.1371/journal.pone.0255634>
- Haidery, A., Kamran, A., Syed, N. A., & Rizvi, M. A. (2020). Factors influencing online shopping behavior experience and customer satisfaction in Karachi. *Advances in Intelligence Systems and Computing, 13*-31. [https://doi.org/10.1007/978-3-030-49829-0\\_2](https://doi.org/10.1007/978-3-030-49829-0_2)
- Hama, Y. (2001). Shopping as a coping behavior for stress. *Japanese Psychological Research, 42*(4), 218-224.
- Harahap, D. A., & Amanah, D. (2018). Perilaku belanja online di Indonesia: Studi kasus. *Jurnal Riset Manajemen Sains Indonesia, 9*(2), 196-213. doi: [doi.org/10.21009/JRMSI.009.2.02](https://doi.org/10.21009/JRMSI.009.2.02)
- Hasan, B. (2010). Exploring gender differences in online shopping attitude. *Computers in Human Behavior, 26*(4), 597-601. doi: 10.1016/j.chb.2009.12.012
- Heatherton, T. E., & Baumeister, R. E. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin, 110*(1), 86-108. <https://doi.org/10.1037/0033-2909.110.1.86>
- Hernández, B., Jiménez, J., & José Martín, M. (2011). Age, gender, and income: Do they really moderate online shopping behaviour? *Online Information Review, 35*(1), 113-133. doi: 10.1108/14684521111113614
- Howerton, A., & van Gundy, K. (2009). Sex differences in coping styles and implications for depressed mood. *International Journal of Stress Management, 16*(4), 333-350. doi: 10.1037/a0016843
- Javadi, M. H. M., Dolatabadi, H. R., Nourbakhsh, M., Poursaedi, A., & Asadollahi, A. R. (2012). An analysis of factors affecting on online shopping behavior of consumers. *International Journal of Marketing Studies, 4*(5), 81-98.
- Kaligis, F., Indraswari, M. T., & Ismail, R. I. (2020). Stress during COVID-19 pandemic: Mental health condition in Indonesia. *Medical Journal of Indonesia, 29*(4), 436-441.

- <https://doi.org/10.13181/mji.bc.204640>
- Kanwal, M., Burki, U., Ali, R., & Dahlstrom, R. (2022), Systematic review of gender differences and similarities in online consumers' shopping behavior. *Journal of Consumer Marketing*, 39(1), 29-43. <https://doi.org/10.1108/JCM-01-2021-4356>
- Kang, J., & Park-Poaps, H. (2010). Hedonic and utilitarian shopping motivations of fashion leadership. *Journal of Fashion Marketing and Management: An International Journal*, 14(2), 312-328. doi: 10.1108/13612021011046138
- Kemp, E., Kennett-Hensel, P. A., & Williams, K. H. (2014). The calm before the storm: Examining emotion regulation consumption in the face of an impending disaster. *Psychology & Marketing*, 31(11), 933-945. doi: 10.1002/mar.20744
- Kim, H. S., & Hong, H. (2011). Fashion leadership and hedonic shopping motivations of female consumers. *Clothing and Textiles Research Journal*, 29(4), 314-330. doi: 10.1177/0887302x11422819
- Koch, J., Frommeyer, B., & Schewe, G. (2020). Online shopping motives during the COVID-19 pandemic: Lessons from the crisis. *Sustainability*, 12, 10247. doi: 10.3390/su122410247
- Kuswanto, H., Pratama, W. B. H., Ahmad, I. S., & Salamah, M. (2019). Analysis of students' online shopping behaviour using a partial least squares approach: Case study of Indonesian students. *Cogent Business & Management*, 6(1), 1699283. doi: 10.1080/23311975.2019.1699283
- Li, R., Liu, H., Yao, M., & Chen, Y. (2019). Regulatory focus and subjective well-being: The mediating role of coping styles and the moderating role of gender. *The Journal of Psychology*, 1-18. doi: 10.1080/00223980.2019.1601066
- Lim, L. T. S., Regencia, Z. J. G., Dela Cruz, J. R. C., Ho, F. D. V., Rodolfo, M. S., Ly-Uson, J., & Baja, E. S. (2022) Assessing the effect of the COVID-19 pandemic, shift to online learning, and social media use on the mental health of college students in the Philippines: A mixed-method study protocol. *PLoS ONE* 17(5): e0267555. <https://doi.org/10.1371/journal.pone.0267555>
- Liang, T. P., & Lai, H. J. (2002). Effect of store design on consumer purchases: An empirical study of on-line bookstores. *Information & Management*, 39(6), 431-444. doi: 10.1016/s0378-7206(01)00129-x
- Listianingrum, T., Jayanti, D., & Afendi, A. M. (2021). Smartphone hedonic price study based on online retail price in Indonesia. *Journal of Physics*, 1863, 012023. doi:10.1088/1742-6596/1863/1/012032
- Martinez-Lopez, F. J., Pla-Garcia, C., Gazquez-Abad, J. C. & Rodriguez-Ardura, I. (2016). Hedonic motivations in online consumption behavior. *International Journal of Business Environment*, 8(2), 121-151. doi: 10.1504/IJBE.2016.076628
- McCarville, R. E., Shaw, S. M., & Ritchie, M. (2013). Shopping as leisure: A study of avid shoppers. *World Leisure Journal*, 55(2), 167-178. doi: 10.1080/04419057.2013.782561
- Mir, I. A. (2021). Self-escapism motivated online shopping engagement: A determinant of users' online shopping cart use and buying behavior. *Journal of Internet Commerce*. doi: 10.1080/15332861.2021.2021582.
- Mir, I. A. (2021a). Self-escapism motivation: A determinant of e-cart use and abandonment. *International Review of Management and Business Research*, 10(2), 94-108.
- Moret-Tatay, C., Beneyto-Arrojo, M. J., Laborde-Bois, S. C., Martínez-Rubio,

- D., & Senent-Capuz, N. (2016). Gender, coping, and mental health: A Bayesian Network Model Analysis. *Social Behavior and Personality: An International Journal*, 44(5), 827-835. doi: 10.2224/sbp.2016.44.5.827
- Nicholls, A. R., Levy, A. R., & Perry, J. L. (2015). Emotional maturity, dispositional coping, and coping effectiveness among adolescent athletes. *Psychology of Sport and Exercise*, 17, 32-39. doi: 10.1016/j.psychsport.2014.11.004
- Ozen, H., & Engizek, N. (2014). Shopping online without thinking: Being emotional or rational? *Asia Pacific Journal of Marketing and Logistics*, 26(1), 78-93. doi: 10.1108/apjml-06-2013-0066
- Polas, M. R. H., Tabash, M. I., Jahanshashi, A. A., & Ahamed, B. (2022). Consumers' sustainable online purchase behavior during COVID-19 pandemic: The role of relational benefit and site commitment. *Foresight*, 24(3/4), 473-503. doi: 10.1108/FS-01-2021-0012
- Pradana, F., & Sastiono, P. (2018). Gender differences in online shopping: Are men more shopaholic online? *Advances in Economics, Business and Management Research*, 72, 123-128. doi: 10.3390/su122410247
- Seo, W. K., & Green, W. B. (2008). Development of the motivation scale for sport online consumption. *Journal of Sport Management*, 22, 82-109.
- Sharpe, D. L., Yao, R., & Liao, L. (2012). Correlates of credit card adoption in urban China. *Journal of Family and Economic Issues*, 33(2), 156-166. doi: 10.1007/s10834-012-9309-0
- Sorce, P., Perotti, V., & Widrick, S. (2005). Attitude and age differences in online buying. *International Journal of Retail & Distribution Management*, 33(2), 122-132. doi: 10.1108/0959055051058145
- Sugianti, A., Widiyanti, E., & Hendrawati, H. (2022). Gambaran kecenderungan cabin fever pada mahasiswa fakultas keperawatan. *Jurnal Keperawatan Jiwa*, 10(1), 29-36.
- Sumi, R. S., & Ahmed, M. (2022). Investigating young consumers' online buying behavior in COVID-19 pandemic: Perspective of Bangladesh. *IIM Ranchi Journal of Management Studies*. doi: 10.1108/IRJMS-09-2021-0127
- Svatosova, V. (2020). The importance of online shopping behavior in the strategic management of e-commerce competitiveness. *Journal of Competitiveness*, 12(4), 143-160. <https://doi.org/10.7441/joc.2020.04.09>
- Wagde, A. D., & Ganaie, S. H. (2013). Study on emotional maturity and coping strategies among the students pursuing rehabilitation studies. *International Journal of Science and Research*, 2(8), 451-457.
- Wan, Y., Nakayama, M., & Sutcliffe, N. (2010). The impact of age and shopping experiences on the classification of search, experience, and credence goods in online shopping. *Information Systems and e-Business Management*, 10(1), 135-148. doi: 10.1007/s10257-010-0156-y
- Warnars, D. T. S., Mardika, E. A., Pratama, A. R., Mua'azi, M. N., Erick, E., Warnars, H. L. H. S. (2022). Smartphone application using fintech in Jakarta transportation for shopping in the marketplace. In: I. Jeena Jacob, F. M. Gonzalez-Longatt, S. S. Kolandapalayam, & I. Izonin (Eds.), *Expert clouds and applications: Lecture notes in networks and systems, vol 209*. Springer, Singapore. [https://doi.org/10.1007/978-981-16-2126-0\\_34](https://doi.org/10.1007/978-981-16-2126-0_34)
- Widayat, W., Rakhmi, D. I., Indrasari, M., & Masudin, I. (2019). The roles of gender in moderating the effects of shopping intensity and online buying

risks interactions on buyers' anxiety. *International Journal of Advance Research in Dynamical & Control Systems*, 11(8), 236-244.

- Yang, C., Chen, A., & Chen, Y. (2021). College students' stress and health in the COVID-19 pandemic: The role of academic workload, separation from school, and fears of contagion. *PLoS ONE*, 16(2), e0246676. <https://doi.org/10.1371/journal.pone.0246676>
- Zhao, L., Wang, H., Xue, Y., Li, Q., & Feng, L. (2016). Psychological stress detection from online shopping. In F. Li, K. Shim, K. Zheng, & G. Liu. (Eds.), *Web technologies and applications*. APWeb 2016. Lecture Notes in Computer Science (9931). Springer, Cham. [https://doi.org/10.1007/978-3-319-45814-4\\_35](https://doi.org/10.1007/978-3-319-45814-4_35)