

THE RELATIONSHIP *BETWEEN LOCUS OF EXTERNAL CONTROL AND CYBERLOAFING: THE ROLE OF ACADEMIC SELF-EFFICACY MEDIATION IN COLLEGE STUDENTS*

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Abstract

The advancement of digital technology has increased the opportunities for university students to engage in cyberloafing, which refers to the use of the internet for non-academic activities during lectures. This study aims to analyze the relationship between external locus of control and cyberloafing behavior by examining the mediating role of academic self-efficacy. Using a correlational research design, data were collected from 345 students who completed scales measuring external locus of control, academic self-efficacy, and cyberloafing. Data were analyzed through bootstrapping techniques ($N = 5000$) using Hayes' PROCESS Model 4. The results indicate that external locus of control has a significant negative effect on cyberloafing ($\beta = -0.36$). However, academic self-efficacy partially mediates this relationship by exerting a positive indirect effect ($\beta = 0.10$). These findings suggest that although academic self-efficacy generally has beneficial effects, in certain contexts it may foster overconfidence that actually increases the tendency to engage in cyberloafing. This study highlights the importance of strengthening academic self-efficacy alongside self-control training to reduce deviant behaviors within digital learning environments.

Keywords: Locus of control external, Academic self-efficacy, Cyberloafing

Abstrak

Perkembangan teknologi digital meningkatkan peluang mahasiswa untuk terlibat dalam cyberloafing, yaitu penggunaan internet untuk aktivitas non-akademik selama perkuliahan. Penelitian ini bertujuan menganalisis hubungan locus of control eksternal terhadap perilaku cyberloafing dengan mempertimbangkan peran mediasi academic self-efficacy. Desain penelitian menggunakan pendekatan korelasional dengan jumlah responden sebanyak 345 mahasiswa yang mengisi instrument skala locus of control eksternal, skala academic self-efficacy, dan skala cyberloafing menggunakan teknik analisis data bootstrapping ($N = 5000$) melalui Hayes PROCESS model 4 diperoleh hasil penelitian bahwa locus of control eksternal berpengaruh negatif signifikan terhadap cyberloafing ($\beta = -0,36$). Namun, academic self-efficacy memediasi hubungan tersebut secara parsial dengan memberikan pengaruh tidak langsung yang positif ($\beta = 0,10$). Temuan ini menunjukkan bahwa kepercayaan diri akademik, meskipun umumnya berdampak positif, dalam konteks tertentu dapat memunculkan keyakinan berlebih yang justru meningkatkan kecenderungan cyberloafing. Penelitian ini menegaskan pentingnya penguatan academic self-efficacy yang disertai pelatihan pengendalian diri untuk mengurangi perilaku menyimpang di lingkungan perkuliahan digital.

Kata kunci: Locus of control Eksternal, Academic self-efficacy, Cyberloafing

INTRODUCTION

The internet is currently a common facility used by the Indonesian people. Based on data from the Indonesian Internet Service Providers Association (APJII), there has been a significant increase in the number of internet users in Indonesia reaching 79.5% in 2024 (APJII, 2024). Students as one of the largest user groups use the internet not only for academic purposes, but also for personal activities. This condition increases the risk of *cyberloafing*, which is the behavior of using the internet for non-academic purposes such as accessing social media, online shopping, or entertainment during lecture activities (Akbulut et al., 2017; Lim & Teo, 2005). Empirical findings show that these behaviors have a negative impact on performance, which can reduce productivity in both the academic and professional worlds (Weerasooriya & Rebecca, 2024).

Ideally, the use of the internet by students is used as a learning resource that has a positive influence on student achievement (Aditia et al., 2017). However, reality shows that there is abuse of the internet in the form of *cyberloafing* high among Indonesian students (Muharammi et al., 2025). This indicates that *cyberloafing* It has become a widespread phenomenon in the higher education environment and needs to receive serious attention.

One of the factors that can affect behavior *cyberloafing* be *locus of control* (Kartinah et al., 2023). This concept describes an individual's beliefs about the extent to which they can control the outcome of an event (Azzahra et al., 2023; Craig et al., 1984). Previous research has shown mixed results: *locus of control* found to have a negative and significant effect on *cyberloafing* (Andini et al., 2023), while other studies state that *locus of control internal* no significant effect (Hastini et al., 2018). Research in the world of work has also found that the positive effects of cyberloafing on creativity, such as increased creativity more visible in individuals with high internal locus, suggest that the dimensions of the locus of control have different implications depending on the context (Hendryadi, 2022). These differences in findings indicate the need for a sharper study, especially by separating the internal and external dimensions. This is theoretically important because the external locus has different implications than the internal locus in explaining deviant behavior in the digital environment, and is important practically because psychological interventions will be more effective when directed according to the dominant dimension in the student.

Academic self-efficacy It is also believed to be an important factor that can lower the tendency *cyberloafing*. This concept refers to a person's belief in his or her ability to complete academic tasks well (Bandura, 1997; Schunk & Dale H, 1996). From a social-cognitive perspective, *self-efficacy* influence how individuals assess digital distractions and regulate learning behaviors (Schunk & DiBenedetto, 2020), as well as the existence of *self-efficacy* can also affect how individuals respond to pressure or distraction in a digital environment (Lu et al., 2024; Sholehah, 2021). Recent research confirms that students with *academic self-efficacy* tall tend to have better self-control and are able to minimize behavior *cyberloafing* even though they have *locus of control eksternal* (Kautsarina & Tantiani, 2024; Lakka et al., 2023; Melati & Niamah, 2024). In addition,

an international meta-analysis found that *academic self-efficacy* Negatively related to *cyberloafing*, through the mechanism of increasing self-control and reducing moral disengagement (Peng, 2022). Thus, *academic self-efficacy* has the potential to be a mediating variable that explains the relationship between *locus of control eksternal* and *cyberloafing*.

The novelty of this study lies in the focus of the analysis on *the external locus of control* in particular, because most previous studies still treated *the locus of control* as a single variable without distinguishing between internal and external dimensions. As a result, the results of previous research tend to be less specific in explaining the dynamics of student behavior in the digital era. In addition, studies that place *academic self-efficacy* as a mediating variable in the relationship between *external locus of control* and *cyberloafing* are still very limited, especially in the context of Indonesian higher education. Therefore, this study not only makes a theoretical contribution by strengthening the understanding of the psychological mechanisms underlying *cyberloafing*, but also a practical contribution by providing a basis for intervention strategies, such as student *academic self-efficacy* improvement programs to reduce the tendency of *cyberloafing* and support learning effectiveness.

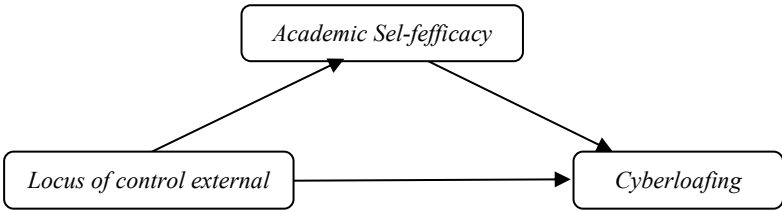
METHOD

The research design used in this study is correlational. The subjects in this study are 345 active students of Semarang State University from the 2018 - 2024 batch. The respondents who were the sample were 18-25 years old who were still taking courses and using several social media applications. Those who are willing to participate in this research will fill in the instruments that have been prepared by the researcher. Data collection is carried out online by sharing *google forms* with students using *random sampling techniques*. To uncover *cyberloafing* students of Semarang State University, the instrument used is an instrument developed from the theory (Lim & Teo, 2005) with a total of 12 items which are divided into two dimensions and have been adapted into Indonesian by Saldsamon (2021). Both dimensions are activities *browsing* and activities *E-mail*. Examples of items in this instrument are "*Visiting sites that are not related to lectures*". Validity of instruments using scores *product moment r* with a range of (0.345 – 0.620) and instrument reliability using calculations *Cronbach's Alpha*, obtained the result $r = 0.714$.

Locus of control eksternal developed from the theory Craig et al. (1984) consists of 10 items that have been adapted into Indonesian by Sholehah (2021). Examples of items in this instrument are "*Most of what happened to me was probably just a coincidence*". Validity of instruments using scores *product moment r* with a range (0.595 to 0.681) and instrument reliability using calculations *Cronbach's Alpha* Results $R = 0.841$. Meanwhile, *academic self-efficacy* Also developed by Schunk & Dale H (1996) which consists of 8 items. Examples of items in this instrument are "*I believe that I will get perfect grades in lectures*". Instrument validity using the value range *r product moment* (0.439 to 0.574) and instrument reliability using calculations *Cronbach's Alpha* So that $r = 0.658$ is obtained. In this study, IBM SPSS 25.0 was used. Mediation (PROCESS model

4) in this study used the *corrected bootstrapping* method N = 5000 with a 95% secret interval in the PROCESS software installed on IBM SPSS 25.0. The current research is based on 4 model templates for PROCESS for SPSS and SAS by Andrew Hayes. This study uses template model number 4 which consists of 1 independent variable (*locus of external control*), 1 dependent variable (*cyberloafing*), and 1 mediator variable (*academic self-efficacy*). The conceptual model is presented in Figure 1.

Figure 1. Model of relationships between variables in Y (*cyberloafing*)



RESULTS AND DISCUSSION

Mean scores, standard deviations and zero-order correlations for *the locus of external control*, *academic self-efficacy*, and also *the cyberloafing* variable are shown in label 1.

Table 1. Descriptive Statistics and Correlation Between Variables

VARIABLE	MEAN	SD	1	2	3
1. LOCUS OF CONTROL EXTERNAL	32.27	4.65	1	-	-
2. ACADEMIC SELF-EFFICACY	28.99	1.97	0.33**	1	-
3. CYBERLOAFING	38.39	4.28	-0.27**	0.16**	1

In addition to looking at the direct influence and direction of correlation, this analysis also aims to find out the indirect influence between variables. This model does not include five personality types as moderator variables. The mediation effect was analyzed using *a bootstrapping technique* with N = 5000 and a 95% confidence interval; the data were processed using the Hayes PROCESS installed on SPSS version 25. The results of the data processing showed that the indirect influence between *the locus of external control* and *cyberloafing* was mediated in part by *academic self-efficacy*, because in the absence of *academic self-efficacy* both had a significant negative direct influence as shown in Table 2.

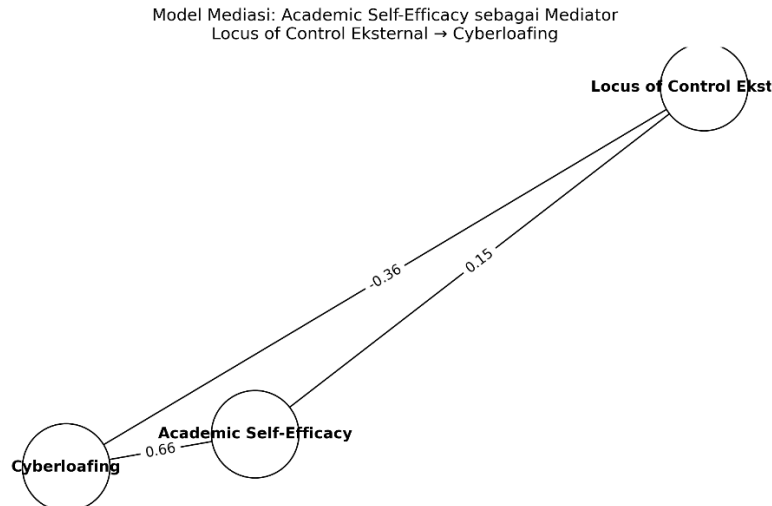
Table 2. Results of Analysis of Direct and Indirect Influence of Variables

PREDICTOR	MODEL DEPENDENT VARIABLES (SPECIFIC DIRECT INFLUENCE)			
B	HERS ELF	t	p	

OUTCOME : ACADEMIC SELF-EFFICACY LOCUS OF CONTROL EXTERNAL	0.15	0.02	6.89	0.00**
OUTCOME : CYBERLOAFING	-0.36	0.05	-7.36	0.00**
1. LOCUS OF CONTROL EXTERNAL	0.66	0.12	5.76	0.00**
2. ACADEMIC SELF-EFFICACY				
	Indirect effects			
	B	HERS ELF	Bootstrapping BC 95% CI	
MEDIATOR			Lower	Higher
ACADEMIC SELF-EFFICACY	0.10	0.02	0.06	0.14

Visualization of the relationship between variables can be seen in Figure 2.

Figure 2. Academic Self-Efficacy *Mediation Model* between *External Locus of Control* and *Cyberloafing*



The results of this study show that there is a direct negative influence between *locus of control eksternal* on behavior *cyberloafing* with a coefficient of $\beta = -0.36$. These findings indicate that students with a tendency to *External locus* are actually less likely to engage in *cyberloafing*. Theoretically, this result seems contradictory because *External locus* generally associated with maladaptive behavior due to low self-control (Rotter, 1966).

However, an explanation can be given through *Social Cognitive Theory* Bandura (1986), especially the principles *reciprocal determinism*. Individuals with *External locus* Strong may view academic success as the result of external support (lecturers, campus systems, or academic rules). Therefore, they are encouraged to conform to environmental expectations and avoid deviant behaviors such as *cyberloafing* in order to still obtain the expected results. In other words, *External locus* In an academic context, it can function

adaptively, that is, encouraging compliance with external norms (Craig et al., 1984; Hendryadi, 2022).

The results of the mediation analysis also show that *academic self-efficacy* has a significant positive influence on *cyberloafing* ($\beta = 0,66$). This means that the higher the *self-efficacy* academically, the greater the tendency of students to *cyberloafing*. This effect seems paradoxical, given that *self-efficacy* generally seen as a protective factor (Bandura, 1997; Schunk & DiBenedetto, 2020). A possible explanation is that students with *self-efficacy* high feeling able to complete academic tasks despite doing *cyberloafing*. This overconfidence makes them feel "safe" to engage in non-academic behavior without fear of failing academically. These findings are in line with the meta-analysis Peng (2022), which indicates that *self-efficacy* In certain contexts, it can reduce the urgency to control digital distractions. Thus, *self-efficacy* Too high can turn into a risk factor because it fosters a pseudo-sense of security.

In total, the effects of *External locus* against *cyberloafing* was reduced from $\beta = -0.36$ to $\beta = -0.26$ after considering the role of mediation *self-efficacy*. This supports the theory of mediation Hayes (2018), that the mediator can weaken or alter the power of the influence of independent variables on the dependent. Thus, *academic self-efficacy* It serves as a complex variable: on the one hand it increases academic confidence, but on the other hand it can open up space for behavior *cyberloafing* because of too high a sense of confidence.

Comparisons with previous research are also important to emphasize. These results are different from the findings Hastini et al. (2018), which states *locus internal* less significant effect on *cyberloafing*. However, other studies (Kautsarina & Tantiani, 2024) supporting the outcome of mediation *self-efficacy* That the students with *self-efficacy* high indeed tends to take advantage of online time more flexibly. These differences in results underscore the importance of cultural and institutional contexts. In Indonesia, external orientation can be closely related to adherence to academic rules and norms, thus having different implications than Western theoretical assumptions.

Moreover Jatmiko & Suhermin (2023) found that *self-regulation* has a positive effect on *cyberloafing* if not accompanied by academic stress management, it emphasizes that self-control and *self-efficacy* need to be seen in a broader framework. Koay & Lai (2023) also found that work environment ostracism triggers *cyberloafing* through *moral disengagement*, showing the importance of social factors as part of these behavioral dynamics. This comparison shows that *cyberloafing* is a multidimensional phenomenon that cannot be explained by a single factor.

The results of this research make an important contribution to the development of theory and practice. From a theoretical perspective, this research expands the understanding that *external loci* are not always synonymous with maladaptive behavior, but can function adaptive depending on cultural and social contexts. In addition, this study strengthens *Social Cognitive Theory* with evidence that the interaction between personal factors (*self-efficacy*, *external locus*), *environmental factors* (campus rules, academic norms), and

behavior (*cyberloafing*) is dynamic. From a practical perspective, this study emphasizes the need for educational interventions that not only increase *students' self-efficacy*, but also equip them with self-regulation and time management skills. Without such interventions, *self-efficacy* that is too high can actually strengthen *cyberloafing*

CONCLUSION

This study found that *external locus of control* has a significant negative effect on *cyberloafing* behavior, suggesting that external orientation in academic contexts can actually function adaptive by encouraging adherence to external norms and rules. These findings expand the theoretical understanding that external locus is not necessarily synonymous with maladaptive behavior as assumed in Rotter's early theory, but can rather be a protective factor when the environment has strong expectations and regulations. The results of the study also show that *academic self-efficacy* plays a role as a complex mediator. Although *self-efficacy* is usually seen as a protective factor, the study found that too high *self-efficacy* can actually encourage *cyberloafing* because it fosters overconfidence. This strengthens Bandura's *Social Cognitive Theory* perspective that the interaction between personal factors (*self-efficacy*, *external locus*), environmental factors (academic rules, campus norms), and behavior (*cyberloafing*) is dynamic.

The theoretical contribution of this study is to clarify the specific role of *external locus* and *self-efficacy* in explaining students' *cyberloafing* behavior, as well as enriching the literature with the context of collectivist Indonesian culture. The practical contribution of this research is to provide a basis for colleges to design interventions that balance increased *self-efficacy* with self-regulation, time management, and academic stress management skills, so that students are able to utilize the internet productively without getting caught up in *cyberloafing*. For further research, it is suggested that the model be expanded to include the variables of *self-regulation*, *academic stress*, and *moral disengagement* as mediators or moderators, because these variables have been proven to be relevant in influencing students' digital behavior. In addition, cross-cultural research can be conducted to test the consistency of *external locus dynamics* and *self-efficacy* in explaining *cyberloafing* in different social contexts.

REFERENCES

- Aditia, A. M., Latianingsih, N., & Menik, W. (2017). Pengaruh Penggunaan Internet Sebagai Media Belajar Terhadap Prestasi Belajar Mahasiswa Jurusan Administrasi Niaga Politiknik Negeri Jakarta. *Epigram*, 14(1). <https://doi.org/https://doi.org/10.32722/epi.v14i1.953>
- Akbulut, Y., Dönmez, O., & Dursun, Ö. Ö. (2017). Cyberloafing and social desirability bias among students and employees. *Computers in Human Behavior*, 72, 87–95. <https://doi.org/10.1016/j.chb.2017.02.043>
- Andini, Titing, A. S., & Ismanto. (2023). Pengaruh Locus Of Control Dan Stres Kerja Terhadap Perilaku Cyberloafing Pada Karyawan RSUD Kabupaten Buton Tengah. *Intellektika : Jurnal Ilmiah Mahasiswa*, 1(6), 190–201. <https://doi.org/10.59841/intellektika.v1i6.495>

APJII, A. P. J. I. I. (2024). *APJII Jumlah Pengguna Internet Indonesia Tembus 221 Juta Orang*. <https://apjii.or.id/berita/d/apjii-jumlah-pengguna-internet-indonesia-tembus-221-juta-orang>

Azzahra, F., Karina, A., & Digdowiseiso, K. (2023). Pengaruh Locus Of Control, Organizational Commitment Dan Turnover Intention Terhadap Perilaku Menyimpang Auditor (Dysfunctional Audit Behavior). *Management Studies and Entrepreneurship Journal*, 4(6), 8690–8698. <http://journal.yrpiiku.com/index.php/msej>

Bandura. (1986). *Social Foundatio of Thought and Action, a Social Cognitive Theory* (E. Cliff (ed.)). Prentince Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Craig, A. R., Franklin, J. A., & Andrews, G. (1984). A scale to measure locus of control of behaviour. *British Journal of Medical Psychology*, 57, 173–180. <https://doi.org/10.1111/j.2044-8341.1984.tb01597.x>

Hastini, L. Y., Chairael, L., & Mustika, M. S. (2018). Pengaruh Locus Of Control, Peraturan Tentang Penggunaan Internet, Dan Norma Yang Berlaku Pada Rekan Kerja Serta Pimpinan Terhadap Perilaku Cyberloafing Pada Karyawan Universitas Dharma Andalas. *Menara Ekonomi*, 4(1). <https://doi.org/https://doi.org/10.31869/me.v4i1.674>

Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis*.

Hendryadi, H. (2022). How cyberloafing impacts employee's creativity: The role of locus of control. *Indonesian Journal of Business, Accounting and Management*, 5(1), 31–40. <https://doi.org/10.36406/ijbam.v5i1.867>

Jatmiko, U., & Suhermin. (2023). Self-Regulation Towards Cyberloafing: the Role of Academic Stress Mediation. *3rd International Conference on Business & Social Sciences*, 8–19. <https://doi.org/https://doi.org/10.24034/icobuss.v3i1.337>

Kartinah, Saifulah, A. M., Anisah, T. N., Nurwiyanta, & Sunyoto, D. (2023). Pengaruh Pengendalian Diri Dan Stres Kerja Terhadap Perilaku Cyberloafing Pada Dosen Di Indonesia. *Jurnal Ilmu Sosial Dan Pendidikan (JISIP)*, 7(1). <https://doi.org/http://dx.doi.org/10.58258/jisip.v7i1.4400>

Kautsarina, K. A., & Tantiani, F. F. (2024). Relationship Between Academic Self-efficacy and Cyberloafing Behavior Among College Students in Malang City. *KnE Social Sciences*, 2024(ICoPsy), 75–87. <https://doi.org/10.18502/kss.v9i30.17507>

Koay, K. Y., & Lai, C. H. Y. (2023). Workplace ostracism and cyberloafing: a social cognitive perspective. *Management Research Review*, 46(12), 1769–1782. <https://doi.org/10.1108/MRR-07-2022-0490>

Lakka, D. D., Zubair, A. G. H., & Musawwir. (2023). Self Regulated Learning Sebagai Prediktor Terhadap Perilaku Cyberloafing pada Mahasiswa di Kota Makassar. *Jurnal Psikologi Karakter*, 3(2), 638–643. <https://doi.org/10.56326/jpk.v3i2.3408>

Lim, V. K. G., & Teo, T. S. H. (2005). Prevalence, perceived seriousness, justification and regulation of cyberloafing in Singapore: An exploratory study. *Information and Management*, 42, 1081–1093. <https://doi.org/10.1016/j.im.2004.12.002>

Lu, X., Wang, Y., Chen, X., & Lu, Q. (2024). From Stress to Screen: Understanding

Cyberloafing through Cognitive and Affective Pathways. *Behavioral Sciences*, 14. <https://doi.org/10.3390/bs14030249>

Melati, R., & Niamah, I. Y. (2024). Edukatif: Jurnal Ilmu Pendidikan Pengaruh Locus of control dan Academic Self Efficacy terhadap Academic Burnout pada Mahasiswa. *Edukatif: Jurnal Ilmu Pendidikan*, 6(6), 6301–6309. <https://doi.org/10.31004/edukatif.v6i6.7482>

Muharammi, N., Triyono, & Putri, B. N. D. (2025). The Relationship Between Academic Stress and Cyberloafing Behavior in Guidance and Counseling Students of PGRI University of West Sumatra. *JKPI: Jurnal Konseling Pendidikan Islam*, 6(1). <https://doi.org/https://doi.org/10.32806/jkpi.v6i1.223>

Peng, J. (2022). The Impact of College Students' Academic Self-Efficacy on Cyberloafing: The Role of Moral Disengagement and Individual Self-Control. *Open Access Library Journal*, 9. <https://doi.org/10.4236/oalib.1108788>

Rotter, J. B. (1966). *Generalize D Expectancie S for Interna L Versus*. 80(1). <https://doi.org/10.1037/h0092976>

Saldsamon, Y. (2021). *Hubungan Kepribadian dengan Perilaku Cyberloafing Pada karyawan Universitas Islam Riau*. Universitas Islam Riau.

Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60, 101832. <https://doi.org/10.1016/j.cedpsych.2019.101832>

Schunk, & Dale H. (1996). *Self-Efficacy for Learning and Performance*.

Sholehah, L. M. (2021). *Pengaruh Locus of Control, Loneliness, Sef-Efficacy, Teacher Behavior, dan Jenis Kelamin Terhadap Cyberloafing Pada Mahasiswa di DKI Jakarta* [Universitas Islam Negeri Syarif Hidayatullah]. <https://repository.uinjkt.ac.id/dspace/handle/123456789/78126>

Weerasooriya, W. A. N. S., & Rebecca, E. (2024). Impact of Cyberloafing on Job Performance: Self-Efficacy. *Journal of Human Resource Management Perspectives*, 9(1). <https://doi.org/https://doi.org/10.4038/jhrmp.v9i1.2>