AL-QANATIR
INTERNATIONAL JOURNAL OF ISLAMIC STUDIES
eISSN: 2289-9944
Vol. 28. No. 2. (2022)

THE IMPLICATION OF COVID-19 CHANGES, THE QUALITY OF LIFE OF THE RESIDENTS IN TIOMAN ISLAND

Nik Rozilaini Wan Mohamed[i] & Dziauddin Sharif[ii]

[i] (*Corresponding author*). Lecturer, Faculty of Hotel and Tourism Management. Universiti Teknologi MARA (UiTM), Melaka Branch. rozilaini@uitm.edu.my
[ii] Senior Lecturer, Academy of Contemporary Islamic Studies. Universiti Teknologi MARA (UiTM), Melaka Branch. dziau646@uitm.edu.my

Abstract

The aspiration of this study is the curiosity about the Malay Muslim community's quality of life after the strike of the tourism industry due to COVID-19 spreading and restriction of movement control in Malaysia. The tourism industry is the most fragile as compared to other sectors. Tourism remains uncertain, and rebuilding depends hardly on government policy and strategies. The island community continues to be one hardest hit by the pandemic because the islands are dependent heavily on the tourism industry. Scientifically, the Malay Muslim community's quality of life and the economic impact primarily affect the community's mental well-being. Data were collected from 307 local community residents in Tioman island using the mediating effect of three subjective well-being domains. The data of the relationship between constant variables was proven using Pearson Correlations. A two-phase process was endorsed the hypothesised model, (1) a confirmatory factor analysis to measure data fit and (2) the structural equation model (SEM). The final stage model comprised one hypothetical latent independent factor, three latent mediator factors and one latent dependent factor (life satisfaction). This study will be useful to tourism organisations in understanding how those factors influence the quality of life. It allows the tourism organisation to implement policy, remuneration, and activities to retain life quality.

Keywords: *Economic, Impacts, Quality, Life, Tioman.*

INTRODUCTION

The world was attacked by the coronavirus (COVID-19) in the early year 2020, deep impacting the world economy. The world tried to control the virus through distancing from other individuals, entrance and restricted residence, and isolation. Therefore, the restrained movement forms emotions of risk, health matters anxiety, and a reluctance to travel among tourists. Tourism statistics dropped between 2020, and travel constraints were enforced on all nations. The tourism industry in Malaysia is specifically significant to the economy. It contributes to the local community involved directly or indirectly in the industry. The unpredictable pandemic has continued to disrupt enourmously on the global economy concerning development and labour, as Ahorsu et al. (2020) mentioned. It has established crucial forecasts, unpredictability, dilemmas, and resiliency (Adib-Hajbaghery, 2015; Elemo et al., 2020; Fazeli et al.; 2020). Tourism recovery will take longer due to the new variant virus known as Omicron. The Health Ministry (2021) keeps on alarming the public over this new variant. The resiliency of local community quality of life is crucial at this moment. The most affected are the communities on the islands, which highly rely on the tourism business for earnings.

The island community's quality of life is shaped by the financial, social, education, and surroundings (Gossling et al., 2020). During the movement control order (MCO), the closed border between states affected the quality of life of the Tioman island community. The locals of Tioman's island demand stimulation to enhance their quality of life and maintain their livelihood and family. Before the pandemic, many tourists travelled to Tioman because of the island's natural beauty, unique nature, products, and services. Investigating Tioman community is significant to maintain and improve the quality of life and fulfilling the optional resources to satisfy the tourists' demands. A new ideology or innovation needs to be introduced, which can prolong the income and focus on the crucial resources that influenced the tourists' arrival at its destination post-Covid-19. Under the tourists arriving in the last two years in 2019, the tourist arrival was 242,147 to Tioman's Island. In late 2019, after the government implemented the Movement Control Order (MCO) in March 2020 to prevent the spread of COVID-19, the tourists' arrivals on Tioman's Island decreased drastically. According to Ibrahim (2007), the number of populations on Tioman's Island was 3031. All of them were involved in the tourism industry. The pandemic caused unemployment and loss of income for local people. This study investigates the quality of life of the Tioman island community and a position on a scale of their quality of life caused by COVID-19.

LITERATURE REVIEW

Island tourism is highly dependent on the tourism industry to support the local communities' socioeconomic status. At the same time, island tourism is the activity within the limited resources of an island that normally have diversed natural environments, marine species, and wildlife (Brown & Cave, 2010). Alfred Marshall (1998) mentioned that economic factors are the most important in human beings (Adib-Hajbaghery et al., 2015; Abbot et al., 2012; Abd Rashid et al., 2018), emphasising some economic support for island tourism growth. For instance, it creates employment for unskilled employees, material well-being, properties, and business opportunities (Gronum et al., 2012; Hemmati et al., 2013; Kraus et al., 2020). Tourism development creates infrastructure and networking expansion, and property enhances local community socio-economics through employment and salary income. Malaysia has established the island tourism economy in the last twenty years, including on Tioman Island. Most previous research focuses on the negative impact on the islands since the environment is fragile, and the mass development creates pressure on the environment. In the early year 2020, the strike of COVID-19, according to Manniko et al. (2020), badly weakened the island community's social economy. The total lockdown has created a sudden financial cease of income to the local community due to zero tourists' arrival and demands and affected all kinds of business, including accommodation sectors (Kwasi, 2020; Laing, 2017; Lin, 2018). Due to the pandemic, not just tourism, other sectors struggle for survival (Mehrolia et al., 2020); many companies have turned to bankruptcy due to travel limitations and social distancing. Malaysia and the rest of the world have made unprecedented financial support to lessen the burden on society and enterprises affected by the pandemic.

Relationship Between Material Well-Being Domain and Quality of Life

Material well-being is related to individual emotional self-fulfilment through their own money. The material is related to different personnel reasons (Radoica, 2017). Material well-being is characterised by fulfilling the essential needs through the salary earned from one's work. Without financial stability, it normally means that the individual has a low quality of life or other terms known as life dissatisfaction. In diverse words, earnings and assets of one's function as estimates of material well-being. According to Nakano et al. (1995), the material belonging states the degree of quality of life depends on one's physical necessities and satisfaction once one possesses the materials. Previous studies conceptualised quality of life, including the dimensions of several factors: accommodation, reasonable basic groceries, clothes, transportation, properties, and tangible materials

(Renata, 2015). According to other authors, Renata (2015) describes material well-being as people buying power beyond the necessary need such as branded clothes or transportation and high-volume shopping or high-quality materials. The requirement of material well-being attainability can upgrade progress to another objective level, including being fortunate in politics, enhancing multiple businesses and existing properties, and upgrading or solidifying current material well-being. The ongoing identified material well-being in the marketing approach can produce customer loyalty and confidence to utilise the same material or products because of customer satisfaction of purchasing wanted goods, services, and amenities. The satisfaction will lead to feeling the happiness of possession. The level increases and is durable for a longer time or period. The person with higher earnings proves to have a high expectation and wish to acquire superior material or facilities. Additional findings on material well-being and individual happiness can be defined in economic impact through multiple effects on the nation by paying taxes and contributing back to the local community or public. The consequences of gaining enough income may be the opposite feelings of frustration in life that influence psychological or mental health.

CONCEPTUAL STUDY FRAMEWORK

This study has developed a conceptual model to demonstrate the local community's quality of life on the Tioman island in Malaysia whilst the pandemic COVID19 strikes Malaysia in early 2020. To measure the community's level of quality of life, the four major factors are considered, including the economic impacts to be included in the studies. All the above variables take a role in connecting the doubt about the quality of life of the local community on the island. Based on the compilation of the previous study on the most cited variables, the concept of quality of life on Tioman island is as follows:

H1. Tourism economy impacts have a significant effect on material well-being in Tioman's Island.
H2. Tourism economy impacts have a significant effect on community well-being in Tioman's Island.
H3. Tourism economy impacts significantly affect emotional well-being on Tioman's Island.
H4. Material well-being significantly affects life satisfaction on Tioman's Island.
H5. Community well-being significantly affects life satisfaction on Tioman's Island.
H6. Emotional well-being has a significant effect on life satisfaction on Tioman's Island.
H7. Material well-being has a significant effect on health well-being in Tioman Island.
H8. Community well-being has a significant effect on emotional well-being in Tioman Island.
H9. Tourism economy impacts significantly affect life satisfaction in Tioman Island.
H10. Material well-being has a significant effect on emotional well-being in Tioman Island.

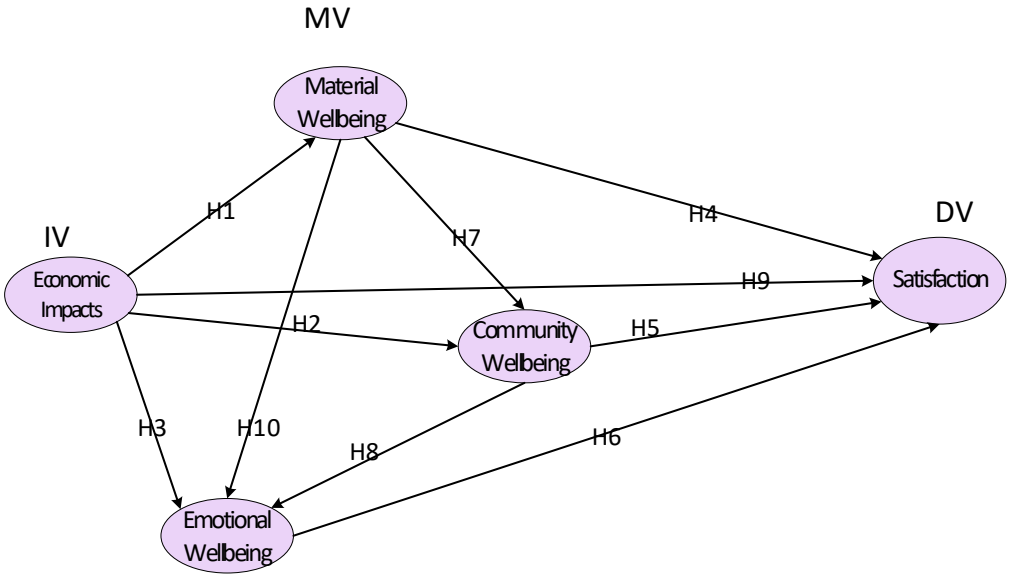

Figure 1: The diagram for the Conceptual Framework of Study Model for Quality of Life.

RESEARCH METHODOLOGY

The total population of Tioman Island is 4231. Twenty-one resorts were selected for this study, ranging from small-scale chalets to four-stars, such as Berjaya Resort Tioman, Pahang. The head of villages were selected to distribute the questionnaires from Kampung Salang, Kampung Juara, Kampung Air Batang,/Tekek, Kampung Paya, Kampung Genting, Kampung Mukut. Respondents directly and indirectly involved in the hospitality and tourism industry were selected for the study. The simple random method has been used as the sampling technique to conduct this study. The data were collected in February 2021 on the field. The data were collected following the standard of procedure whilst most of the sampling collected was hospitality employees in the Tioman islands. Due to the resort procedures, some of the questionnaires were sent through Google form. The human resources delegated them to their employees who work in the hospitality industry. Forty-five per cent did not reply to the email sent out of 571 emails. Due to slow responses, three assistant researchers from degree students extended the collection another three months from six months. They selected the resorts' managers, and snowball techniques got dispersed networks. The non-probability sampling, respondents of the island population, due to constraints in data collection and no opportunity to precisely determine the sampling. However, the predicted non-probability sampling does not allow sampling errors or bias in research. The questionnaire for this study comprises separated into 6 sections. Thirty-two questions were posed using the 7 Likert scales ranging from "strongly disagree, slightly disagree, disagree, neutral, agree, slightly agree and strongly agree".

Table 1: Socio-Demographic Analysis (N=307)

No	**Respondents**	**Frequency *N***	**%**
1	Gender		
	Male	96	47.6
	Female	211	52.4
2	Age group		
	<30	109	36.9
	31-45	87	29.2
	46-60	107	32.8
	>60	12	1.3

3	Nationality		
	Malaysian	291	98.8
	Others	16	2.3
4	Years of residents		
	>Less than a year	50	17
	More than 3 years	87	29
	More than 5 years	57	19
	More than 10 years	13	5
3	Education		
	No education	13	5
	Primary School	110	36
	Secondary School	151	50
	University	32	11
	Others	1	1
4	Occupations level in the hospitality industry		
	Self-business	231	75
	Management	10	4
	Operational	56	24
	Others	10	4
5	Income		
	<RM1000	179	59
	RM1001-RM3000	110	36
	RM3001-RM6000	18	6
	RM6001-RM10,000	1	1
	>RM10,000	0	0
	Total:	307	

Data on the socio-demographic attributes of the respondents was gathered consisting of gender, age, nationality, years of residents, employment status in the hospitality industry and income level. The latent construct of the proposed study is a combination of negative and positive impacts on the tourism economy due to the pandemic COVID-19, and 17 validated questions are negative impacts and 15 questions are positive impacts with a total of 32 questions including demographic questions. A few adjustments were made based on five expert reviews and expertise in the hospitality industry during the pilot test to ensure the questionnaires' components were valid and understood by respondents. The finalised questionnaires were then examined using the Structural Equation Modelling (SEM) procedure. Structural equation modelling is the following generation of statistical analysis known as multivariate analysis (Zainudin, 2015). To determine the consistency and validity of factors constructs during the Confirmatory Factor Analysis (CFA) assessment, the result acceptable for compatibility the value should be more than 0.50. There are three types of fitness validity: the fitness index, convergent, and construct validity. The fitness index value should be more than 0.80 for RMSEA and more than 0.90 for GFI, CFI and TLI values (Hair et al., 2014). The value for Convergent Validity (Average Variance Extracted-AVE) and Construct Validity measurements is at least 0.50. The Composite Reliability should be more than 0.70 values to be accepted. Testing theories necessitate measuring the constructs to be precise, exact, and scientifically before the intensity of the relationships can be examined. Measurement explains several properties of a phenomenon of interest, usually ascribing a number's reliability and validity (Hair et al., 2015).

Validating The Measurement Model: Confirmatory Factor Analysis (CFA)

Missing data occurred when some of the respondents declined or avoided answering any questions in the questionnaires. In this study, 120 missing cases were found. The missing data were resolved by selecting the highest probability answered by overall respondents.

Assessment of outliers was initially detected with mild outliers with a score of more than 1.5 Interquartile Range (IQR). Then, the validity test was conducted for each factor construct, a total of 45 items. Each coefficient alpha value was gathered, and the items with the minimum value of 0.70 are shown in table 2. In the initial stage, the data were tested by convergent validity. The convergent validity is the evaluation to check the degree of correlation of each construct and the level of similarity between items constructs in the study framework. The further detail of testing the convergent validity, other important components to examine are the factor loading of the indicator, composite reliability (CR) and the average variance extracted (AVE) (Awang, 2016). The lower factor loading of less than 0.6 will be removed during the CFA until the fitness indexes are achieved. The elimination should not be more than 20% of overall items in constructs, and a total of 3 items constructs were removed (Awang, 2015; Aimran et al., 2017; Mohamad et al., 2019).

Table 2: Properties of Constructs

Construct	**Sub constructs or Items**	**Loadings**	**AVE**	**CR**
Economic	Eco1- economic decrease due to pandemic	0.756	0.79	0.84
α = 0.83	Eco2 -problems with jobs opportunities	0.752		
	Eco3- not creating an equal job substitute job	0.830		
	Eco4- benefits offered by the government are suitable	0.510		
	Eco5- improve roads, jetties, and public services	0.659		
	Eco6 -created a shortage of livestock	0.709		
Material	Exp1 -purchasing power decreased	0.744	0.73	0.82
α =0.81	Exp2 -part time job to pay debts	0.700		
	Exp3 -no pay and fringe benefit you receive	0.815		
	Exp4 -The cost of necessities increases	0.707		
	Exp5 -financial support for children's education	0.721		
	Exp6 -financial approval for a loan	0.791		
	Exp7 -Less power to pay overhead costs	0.720		
Emotional	Emo1-Determined with my current career	0.953	0.83	0.87
α =0.83	Emo2-Relationship with spouse	0.766		
	Emo3-Spiritual values and belief practices	0.800		
	Emo4-Financially reflect my daily spiritual	0.921		
Community	Cea1-Supportive Neighbourhood	0.818	0.85	0.89
α =0.86	Cea2- Other villagers' moral support	0.738		
	Cea3- Relationship on the island	0.902		
	Cea4- Surrounding are clean	0.855		
	Cea5- Respect foreigners	0.615		
	Cea6-Household garbage well maintain	0.687		
Life (QoL)	Saf1-A better live-hood	0.621	0.52	0.68
α =0.64	Saf2-Positive attitudes	0.512		
	Saf3-Goal achievement	0.503		
	Saf4-Experience person	0.578		
	Saf5-Better Status	0.502		
	Saf6-Knowledgeable person	0.478		
Total of		29 items		

CR= Composite Reliability: AVE= Average Variance Extracted;
* All item loadings were significant p<0.001

ANALYSING THE STRUCTURAL MODEL OF THE STUDY

Bringing together the structural model, a few steps need to be conducted, initially estimate the fitness of the measurement of all constructs (see Figure 2), then assess all hypotheses developed for this study framework and thirdly, evaluate the significance of the study framework. This study examined five main constructs verified with ten planned hypotheses.

Community well-being, material well-being, and emotional well-being are mediator constructs that mediate the exogenous constructs of economic impacts. The endogenous construct in this study is quality of life satisfaction. The evaluation of model fit is necessary to ensure that the model accomplished the sorts of model fit and was adequate to endure the full range of causal effects. Typically, the fitness indexes are Chi-Square, RMSEA, and GFI. The model should reach a satisfactory comprehensive set of causal effects (Hair et al., 2019; 2017; 2014). In accordance with the fitness indexes of the model results the (Chisq/df = 1.578 < 3.0, RMSEA = 0.046 < 0.08, CFI = 0.901 > 0.90, TLI = 0.853 > 0.85, and IFI = 0.908 > 0.90). As a result, the step was further analysed to test each hypothesis as predicted in earlier study processes refer to table 3 below.

Table 3: Model Fit Indexes for the Structural Model

Index	**Level of Acceptance**	**Structural Model**	**Remarks (Final Model)**
Chi-Square	p-value >0.05	0.00(N=307)	Not applicable if sample size more than 200
RMSEA	<.05 good; .05-.10 moderate;>.10 bad	0.046	Achieved
TLI	>0.90>0.85 is permissible for complex model	0.853	Achieved
CFI	>.95 great;>90 traditional;>85 permissible for complex model	0.901	Achieved
Chi-square/df	<3.00 good;<5 permissible for complex model	1.578	Achieved

Figure 2 displays the acceptable and standardised analysis results and squared multiple correlations (R^2) requirement for the structural model. It demonstrated that R1's economic impacts described 0.44 or 44% of material well-being constructs during COVID-19 and emotional well-being. R2 that economic impacts described 0.52 or 52% of emotional well-being during COVID-19. R3 that 0.54 or 54% of the community well-being was interpreted by emotional well-being, material well-being and economic impacts. While R4 that economic impacts explained 0.34 or 34% satisfaction construct during COVID-19, material well-being, emotional well-being, and community well-being. As a preliminary model specifically prepared to evaluate the quality of life among Tioman island hospitality employees, the model has 0.48 or 48% of total variance confirmed by the economic impacts during COVID-19, community well-being, emotional well-being, and material well-being and life satisfaction constructs. Otherwise stated, there exists 52% of the total variance. Let it be explicated by other constructs that are unidentified, which can fit with the current study. Table 3 explains the regression load for the path analysis's construct, which is suggested in the study hypotheses. In table 3, all constructs have a significant participation approach in the endogenous constructs. The community well-being (Beta = 0.630) has the highest point approaching quality-of-life satisfaction by observing the appraised positive value. Contrasting to the appraised positive values of community well-being to material well-being is lower (Beta = 0.124). A specific examination according to hypotheses is proven in table 4.

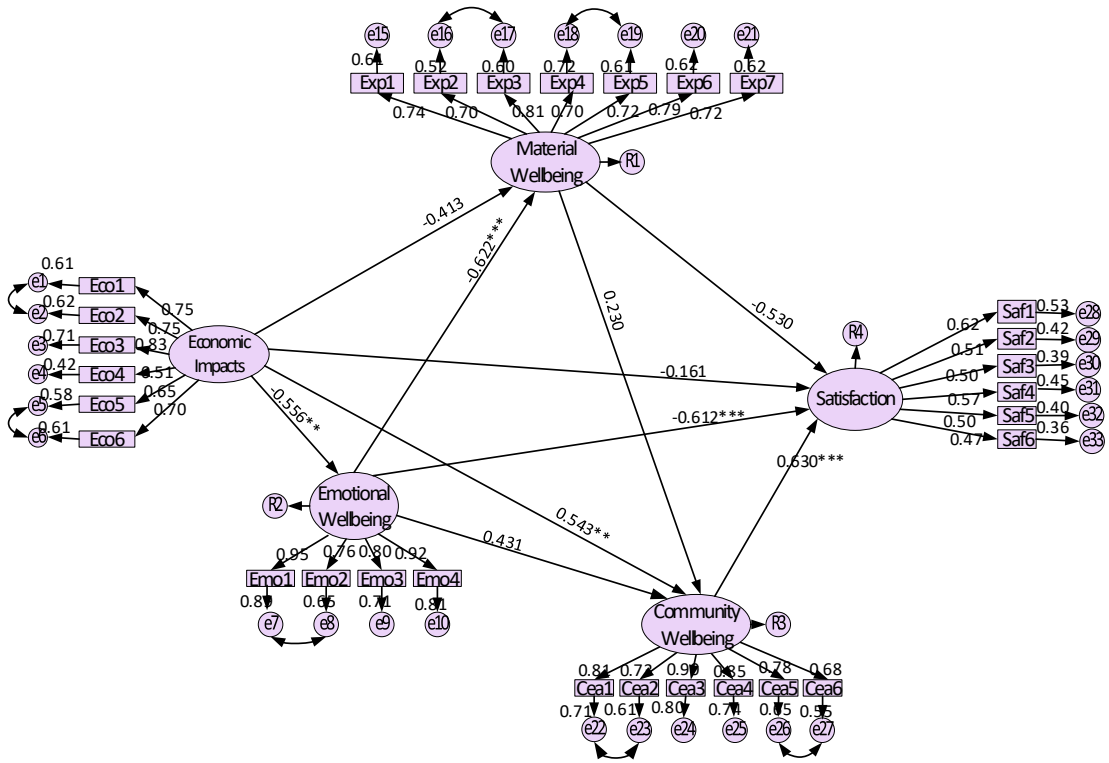

Figure 2: The diagram for the Standardised Path Coefficients between Constructs in Structured Model for Quality of Life

Table 4: Causal Effects of Constructs

			Est.	S.E	C.R	P	Result
Material well-being	<-	Economy impacts (H1)	-0.41	.046	09.10	***	Significant
Community well-being	<-	Economy impacts (H2)	0.54	.065	10.11	***	Significant
Emotional well-being	<-	Economy impacts (H3)	-0.55	.067	11.01	***	Significant
Life satisfaction	<-	Material wellbeing (H4)	-0.53	.078	12.02	***	Significant
Life satisfaction	<-	Community wellbeing H5)	0.52	.064	11.84	***	Significant
Life satisfaction	<-	Emotional wellbeing (H6)	-0.63	.071	13.01	***	Significant
Community well-being	<-	Material wellbeing (H7)	0.23	.043	04.67	***	Significant
Emotional well-being	<-	Material wellbeing (H10)	-0.62	.054	10.01	***	Significant
Emotional well-being	<-	Community wellbeing H8)	0.43	.049	09.68	***	Significant
Life satisfaction	<-	Economy impacts (H9)	-0.16	.047	03.45	.003	Significant

Note: *** indicates a p-value of 0.001

RESULTS

The (H6) was the most significant effect between emotional well-being and life satisfaction during COVID-19, as table 3 shows that the effect is -.630. This indicates that for every one-unit decrease in emotional well-being, its effect would contribute to a -.630 unit decrease in life satisfaction during COVID-19. The regression weight estimate of -.630 has a standard error of .071, and the critical ratio is 13.01 standard errors above zero. The probability of getting a critical ratio of as large as 13.01 in an absolute value is less than 0.001. The second highest is (H10) tested is that there was a significant positive effect between material well-being and emotional well-being, the path coefficient is -.612, this value indicates that for every one-unit decrease in material well-being, its effect would contribute to the value of -.612 unit decrease in emotional well-being. The regression weight estimate of -.612 has a standard error of .054. The critical ratio is shown as 10.01 standard errors above zero. The (H3) test shows a positive significance between economic impacts during COVID-19 and emotional well-being; the path coefficient is -.551 and has a standard error of .067. The (H2) test significantly positively affects economic impacts during COVID-19 and community well-being. The path coefficient is .543. The critical ratio is shown as 10.11 standard errors above zero. The lowest is (H9) tested is that there was a significant positive effect between economy impacts and life satisfaction during COVID-19, the path coefficient is -.164, this value indicates that for every one-unit increase a value on economic impacts during COVID-19 its effect would contribute -.164 unit decrease in individual quality of life satisfaction. The probability of getting a critical ratio of as large as 03.45 in an absolute value is less than 0.001.

CONCLUSION

In conclusion, the COVID-19 epidemic effect on emotional well-being and quality of life among Tioman Islands residents who work directly and indirectly in the tourism industry. The survey was carried out before the Malaysian government implemented the second lockdown after the positive cases increased to 20,000. However, the MCO was pulled out once 87% population had been vaccinated. The pandemic has not ended as the new variant of Omicron detected from South Africa rapidly spread in many countries. Many researchers investigated the mental health of the population of COVID-19 to investigate further the quality of life of the small island residents. The study findings reveal that the residents of Tioman Island were most likely to have emotional well-being compared to other constructs in quality of life. This study might not confirm representing other islands in Malaysia but give different impacts on the whole population in small islands in Malaysia considering the different phases of the spreading cases in different states.

The result shows negative emotional well-being and decreased quality of life in the Tioman islands, and some disturbance psychological due to movement lockdown. It can be concluded that most of the island's residents depend highly on tourism activities to continue their livelihood. The COVID-19 pandemic has been broadly resolved to a society's health, well-being, and economic impacts. Newsbreaks of sequence confront casualties, loss of lives and occupations. The Malaysian government is starting to focus on financial support and losses at the extent and intensity of the emergency to tactics for reclamation opportunities happen for a change. With the global economic impact tendencies and the requirement for long-term recovery, few economic researchers suggest emphasising the need for a long-range standpoint that evolves schemes and policies that establish resilience for subsequent crises (Trevittaya, 2016). To sudden surge in health care suppliers, the spectacles of emotional health and stress among hospitality employees, functioning long hours working endanger their lives for survival. The optional online classes are mentally tiring for students. Many have quit schooling to observe data and trends for the ministry of education. The tourism industry on job opportunities in the industry and the hospitality career resilience have been described as unsecured if the MCO been implemented again. The worst scenario for islands as tourism destinations is that the economic impacts are truly about adapting and persisting new planning and strategies when faced with economic turbulence and its

butterfly effects in the long term. The study showed a significant negative impact on three mediator subjective constructs and life satisfaction in the hospitality industry associated with risk and protective factors (Vong, 2006). The residents directly and indirectly involved in the hospitality industry should need motivation and characteristics to respond positively to the industry. The background elements such as supportive community seem to be positive and significant to the island's residents, and supportive family members influence the emotional well-being of the hospitality employees. The lack of material well-being, such as the facilities, transportation, and housing, puts the individual negatively influences mental and emotional health. The ability to adapt to the situation, such as community support multi-tasks, can lead to a positive outcome in life satisfaction (Pakpour, 2020). The current study focuses on the residents involved directly and indirectly in hospitality. There were some limitations, including some respondents' bias in the employ of snowballing sampling procedure, which is a non-probability sampling method because of the constraints of getting respondents to the study due to government frequently change policies, unstable political situations, or economic turbulence prior to the pandemic. Nevertheless, with a rigorous SOP, optional using an online survey allowed data to be collected.

RECOMMENDATIONS

The main issue to our understanding was examining emotional well-being and quality of life on the Tioman Island due to the COVID-19 pandemic with moderate emotional and spiritual impact. However, it also encouraged some positive impacts on community support and health awareness. There is a necessity to enhance the consciousness among the diverse social media about emotional disputes during pandemics and emphasise the significance of asking for assistance and captivating bodily activity to supervise mental health problems. Moreover, the Ministry of Health and the government highlighted a rise in consciousness among politicians in determining and pointing out the risky communities. The policymakers should provide emotional and monetary assistance for low-income earners and jobless individuals during the pandemic. Future research should focus on large-scale individual surveys among other areas or states to understand their responses to the same situation.

REFERENCES

Book

Abd Rashid, A., Hanif, A., & Kamaruddin, R. 2018. *Public Acceptance on GST and Quality of Life*. e-International Publishing House (e-IPH) Ltd., UK.

Ahorsu, D., Imani, V., Lin, C., Timpka, T., Broström, A., Updegraff, J., Pakpour, A. 2020. *Associations between fear of COVID-19, mental health, and preventive behaviours across pregnant women and husbands: An actor-partner interdependence modelling*. Springer.

Elemo, A., Satici, S., & Griffiths, M. 2020. *The Fear of COVID-19 Scale: Psychometric properties of the Ethiopian Amharic version*. Springer Science and Business Media LLC.

Kwasi, D., Lin, C., Imani, V., Saffari, M., Griffiths, M., & Pakpour, A. 2020. *The Fear of COVID-19 Scale: Development and initial validation*. Springer.

Pakpour, A., Griffiths, M., & Lin, C. 2020. *Assessing psychological response to the COVID-19: The fear of COVID-19 Scale and the COVID Stress Scales*. Springer.

Journal

Adib-Hajbaghery, M., Ahmadi, M., & S, P. 2015. *Health related quality of life, depression, anxiety and stress in patients with beta-thalassemia major.* Iranian Journal of Pediatric Hematology and Oncology, 5(4), 193-205

Awang, Z., Afthanorhan, A., & Mamat, M. 2016. *The Likert scale analysis using parametric based Structural Equation Modeling (SEM).* Computational Methods in Social Sciences, 4(1), 13.

Awang, Z., Afthanorhan, A., & Asri, M. A. M. 2015. *Parametric and non-parametric approach in structural equation modeling (SEM): The application of bootstrapping*. Modern Applied Science, 9(9), 58.

Fazeli, S., Mohammadi Zeidi, I., Lin, C., Namdar, P., Griffiths, M., Kwasi Ahorsu, D., & Pakpour, A. 2020. *Depression, anxiety, and stress mediate the associations between internet gaming disorder, insomnia, and quality of life during the COVID-19 outbreak.* Elsevier. Addictive Behaviors Reports, Vol. 12, 100307. https://doi.org/10.1016/j.abrep.2020.100307

Gossling, S., Scott, D., & Hall, C. M. 2020. *Pandemics, tourism and global change: a rapid assessment of COVID-19*. Journal of Sustainable Tourism, 29(1), 1-20, DOI: 10.1080/09669582.2020.1758708

Gronum, S., Verreynne, M. L., & Kastelle, T. 2012. *The role of networks in small and medium-sized enterprise innovation and firm performance.* Journal of Small Business Management, 50(2), 257-282.

Hemmati, A., Hemmati, M., & Kia, S. H. 2013. *Investigating the effect of quality of work life on quality of family life*. Growing Science. Vol. 3(9), 2411

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. 2017. *PLS-SEM or CB-SEM: updated guidelines on which method to use.* International Journal of Multivariate Data Analysis, 1(2), 107-123.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. 2019. *When to use and how to report the results of PLS-SEM.* European business review. Vol. 31, 2-24

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. 2017. *An updated and expanded assessment of PLS-SEM in information systems research*. Industrial Management & Data Systems, Vol. 30(1), 514

Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. 2014. *Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research.* European business review, Vol. 26(2), 106-107

Hoque, A. S. M. M., & Awang, Z. 2019. *Does gender difference play moderating role in the relationship between entrepreneurial marketing and Bangladeshi SME performance?* Accounting, 5(1), 35-52.

Kraus, S., Clauss, . T., Breier, . M., Gast, . J., Zardini, . A., & Tiberius, V. 2020. *The economics of COVID-19: Initial empirical evidence on how family firms in five European countries cope with the corona crisis*. Emerald, Vol. 26 (5), 1067-1068

Lin, C.-Y., Strong, C., Scott, A. J., Brostrom, A., Pakpour, A. H., & Webb, T. L. 2018. *A cluster randomised controlled trial of a theory-based sleep hygiene intervention for adolescents.* Journal of Sleep Research, 41(11), zsy170. https://doi.org/10.1093/sleep/zsy170.

Mannikko, N., Ruotsalainen, H., Miettunen, J., Pontes, H. M., & Kaariainen, M. 2020. *Problematic gaming behaviour and health-related outcomes: A systematic review and meta-analysis.* Journal of Health Psychology, 25(1), 67–81. https://doi.org/ 10.1177/1359105317740414.

Mohamad, M., Afthanorhan, A., Awang, Z., & Mohammad, M. 2019. *Comparison between CB-SEM and PLS-SEM: Testing and confirming the maqasid syariah quality of life measurement model.* The Journal of Social Sciences Research, 5(3), 608-614.

Persaud, N., Steiner, L., Woods, H., Aratangy, T., Wanigaratne, S., Polsky, J., Pinto, A. 2019. *Health outcomes related to the provision of free, tangible goods: A systematic review*. Public Library of Science (PLoS), Vol. 14(3), 142

Radoica, L., & Nikola, F. 2017. *Money and the Quality of Life*. Sciendo, Vol. 3, 17-21

Renáta, J., Péter, T., & Gergely, F. 2015. *Relation of Health Condition and Quality of Life: Examination of the Quality of Life of the Disadvantaged Population in Nyíregyháza by the FT Quality of Life Index*. Sciendo, Vol. 10(2), 157-159.

Conference & Proceeding

Aimran, A. N., Ahmad, S., Afthanorhan, A., & Awang, Z. 2017, May. *The assessment of the performance of covariance-based structural equation modeling and partial least square path modeling*. In: AIP Conference Proceedings, Vol. 1842, No. 1, 030001, AIP Publishing LLC.

Theses & Dissertation

Abbott, P., Wallace, C., 2012. *Social quality: A way to measure the quality of society*. University of Aberdeen. Politics, Sociology & Education.

Laing, C. M., Phillips, L. H., Cooper, C. L., Hosie, J. A., Summers, F., 2017. *Anger, Quality of Life and Mood in Multiple Sclerosis.* Psychology, Applied Health Sciences, Institute of Applied Health Sciences. University of Aberdeen.

Trevittaya, P. 2016. *Concepts of quality of life*. Chaing Mai University.

Vong, M. I. 2006. *Quality of work life and life satisfaction*. University of Macau.