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The Role of Communications in the Resilience of Risk Group in Kuching, Sarawak, During The Dispersal of COVID-19 Virus

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ABSTRACT

The Covid-19 Pandemic has significantly interfered with all aspects of human life. Notably, this dangerous epidemic has a more significant impact on the risk group. It has caused them to feel stress, fear, and suffering from the ripple effect of Covid-19. Hence, this disruption occurred instantaneously, requiring people to demonstrate noteworthy adaptability and resiliency through communication. Therefore, this study examined the two dimensions of communication, namely self-centred communication (knowledge and optimistic thinking) and external communication (family support and media exposure), in predicting the resilience among the risk group in Kuching, Sarawak. The data collection was during the movement control order, so the distribution of the online questionnaire used voluntary response sampling to the target respondents through WhatsApp and social media accounts. Data collected was analysed using Partial Least Squares analyses. The results show that knowledge, optimistic thinking, and family support significantly correlate with the resilience of the risk group. Moreover, the self-centred communication constructs were the best predictor for resilience. However, media exposure was insignificant because they were in survival mode when it threatened the risk group's lives. So, this makes them prone to rely more on their knowledge, optimistic thinking, and their own family to help their resilience. Hence this has made them think the role of media is less important in resilience. This study has managed to contribute some useful suggestions for helping risk groups protect themselves during a pandemic. Critically, these findings can update relevant authorities in designing effective interventions to support risk groups by strengthening communication factors associated with resilience.

Keywords: *Risk group, chronic illness, COVID-19 pandemic, resilience, communication.*

INTRODUCTION

By mid-March 2020, there were 428 favourable cases of COVID-19 in Malaysia. Due to the event, the Malaysian government passed its first Movement Control Order (MCO) on March 18, 2020. It caused businesses and services to close, interstate travel to slow down, public sports activities to stop, and the cancellation of religious events and gatherings (Cheng, 2020). In official numbers, Malaysia had 203,933 positive cases, 157,722 recovered cases, 45,478 active patients, and 733 deaths as of January 29, 2021 (Kementerian Kesihatan Malaysia, 2021). Since December 9, 2020, the number of COVID-19 cases has increased fourfold daily

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(CNA, 2021). According to estimates, there will be about 5,000 new positive cases every day in the third week of February 2021, one year after the first reported case. The current pandemic has no end in sight (Kaur, 2021).

As of January 29, 2021, the number of reported positive cases in Sarawak had risen to 4,124, with 2,330 recovering patients and 36 deaths. In Kuching, 12 people died, and 941 had the disease (Kementerian Kesihatan Malaysia, 2021). Datuk Amar Dougglas Uggah, Chairman of the State Disaster Management Committee (SDMC), stated in a media release, "The battle against the virus in Sarawak is still on." Complying with the movement control order (MCO) to stop the COVID-19 virus from spreading, there is an extended period covering Sibu, Kanowit, and Selangau districts until February 14, 2021. "Our state has never faced a health crisis like this." Therefore, a conditional movement control order (CMCO) for the rest of the state is needed (Then, 2021).

Masson (2020) states that COVID-19 affects the elderly more often. A World Health Organization report in 2020 also states that COVID-19 generally affects older people and those with health conditions more severely. For instance, on January 26, 2021, 11 deaths were reported (4 in Kuala Lumpur, 3 in Sarawak, and 1 in Perak, Johor, Selangor, and Penang). There are 11 Malaysians and one foreigner, aged between 42 and 92 (Salim, 2021). Radhi (2020) also talked about a man who was 61 years old and had high blood pressure, dyslipidemia, and a stroke. Thus, six people aged 27 to 71 in Sabah and Labuan died due to COVID-19 in October 2020. In addition, there were older women with breast cancer and stroke histories, older men with high blood pressure and diabetes histories, chronic hepatitis B, and chronic hemolytic anaemia (Choong, 2020).

COVID-19 is an example of a disaster risk that could make a risk group less resilient because scientists do not know enough about it. For example, spreading social media misinformation may cause harmful health effects during COVID-19 (Barua et al., 2020). It is, therefore, necessary to understand how knowledge affects the resilience of risk groups. Compared to the financial crisis of 2008, the health crisis caused by COVID-19 is far worse. (Manan et al., 2022) The severity measures have left several healthcare systems needing more personnel and other resources to function. Therefore, it is critical to have support not only during crises but also on a daily basis. Hurley (2020) believes that connecting with compassionate and empathetic people reduces loneliness. The approach may differ depending on the age group. Some older people prefer phone calls or letters over technology. Identifying this problem will provide insights into how risk groups can be resilient during the dispersal of COVID-19 (Ghani et al., 2022).

Due to the current situation, most people are exposed to social media (Arriaga et al., 2021). Technological advances like radio, movies, TV, the internet, mobile phones, and the cultural climates surrounding 9/11 and the Cold War show that this is true. Eden et al. (2020) found that the pandemic had changed media use patterns. In both cases, users sought out pandemic-themed media or reassuringly familiar content. It is possible that COVID-19 stress and anxiety can be linked to a rise in media consumption or a rise in a particular type of media consumption. So, more research needs to be done on how COVID-19 affects people in risk groups and how they use the media to deal with it.

When faced with stressful situations such as COVID-19, optimistic thinking can play a vital role in adapting to them. Optimists demonstrate greater resilience when facing a challenge (Souri & Hasanirad, 2011). People with optimistic thinking tend to accept

disappointing and traumatic events positively. On the other hand, pessimists avoid dealing with trauma by using the wrong ways to cope (Arampatzi et al., 2019).

Many chronic infection management blueprints have been developed in response to such resistance. These blueprints can promote positive adaptation to chronic infections. Kim et al. (2018) say that the idea of resilience comes from the idea of building on the strengths of patients. A resilient person can overcome a shock or crisis and rebound from it.

Additionally, resilience is the psychological quality that allows some people to bounce back from hard times and become stronger. Highly resilient people will find a way to make changes, heal emotionally, and keep moving forward regardless of obstacles (Zahari et al., 2020).

The concept of resilience has been well-defined in different ways, and it fits the description of the tendency to recover from adversity, frustration, and misfortune (Moore, 2021). Because there are so many different viruses or infections, resilience is one of the most valuable traits that can help people with chronic illnesses. This study warrants the application of resilience theory. Many individuals have used it to explain how they cope with the harmful effects of traumatic events like COVID-19 (Paredes et al., 2021).

OBJECTIVE

Based on the arguments, this study formulated five research objectives as follows.

1. To measure the relationship between knowledge and resilience of high-risk groups in Kuching Sarawak.
2. To measure the relationship between Optimistic thinking and resilience of high-risk groups in Kuching Sarawak.
3. To measure the relationship between family support and resilience of high-risk groups in Kuching Sarawak.
4. To measure the relationship between Media exposure and resilience of high-risk groups in Kuching Sarawak.
5. To examine the best predictor of and resilience of high-risk groups in Kuching Sarawak.

LITERATURE REVIEW

Resilience Theory

This study used a collective resilience theory developed by many researchers, including Norman Garmezy. Psychologists discovered the roots of resilience studies fifty years ago (Li, 2021). Cherry (2022) explains that resilience equips people with the psychological strength to deal with stress and difficulties in life. Essentially, it is the mental capacity to carry on without breaking down. It is believed that more resilient people can better cope with tragedies of this kind and rebuild their lives following them (Rahmanto, 2021). This theory aims to help people move beyond stressful situations, bad experiences, or traumatic events. It explains that resilience makes it possible to think about things when they are hard (Boles, 2021). It is generally agreed that psychological resilience involves measuring adversity, trauma, challenge, and subsequent psychological functioning. Despite these factors, useful indicators can still fluctuate momentarily. Various factors affect the research design, study population, and research questions. Examples include differences in adversity, emotional functioning, and time-frame measures (Zager Kocjan et al., 2021).

The Wiig and Fahlbruch study (2018) illustrates that one of the most vital aspects of the resilience concept is its ability to accommodate various phenomena at various levels and in various phases. The Wiig and Fahlbruch study (2018) illustrates that one of the most substantial aspects of the resilience concept is its ability to accommodate a wide variety of phenomena at various levels and in various phases. Several groups of resilient phenomena have been identified by Masten and her colleagues: (1) at-risk individuals achieve better results than expected; (2) positive adaptation remains regardless of the number of stressful experiences experienced; and (3) trauma is well recovered from (Luthar, Cicchetti, & Becker, 2000).

Resilience and COVID-19

There have been many efforts to prevent COVID-19 from spreading. Travel restrictions, lockdowns, and national or local quarantines are among the measures the international community takes. People may still experience psychological distress and suffering. There is a high likelihood that individuals or members of their families may experience fear, anxiety, doubt, and worry regarding the virus's spread (Moradi et al., 2020). There is a high likelihood that individuals or members of their families may experience fear, anxiety, doubt, and worry regarding the virus's spread (Moradi et al., 2020).

In the aftermath of COVID-19, resilience can help people to overcome hardships. They do not inherit resilience; instead, they learn through experience. Stress and difficulties affect people differently (Pink et al., 2021). According to Dubey et al. (2020), lockdowns in the country to fight COVID-19 might cause severe anxiety, panic, and obsessive behaviour. Keeping the countries strong would be ensured. Leaders with knowledge can quickly create and implement realistic goal plans (Zabaniotou, 2020). Additionally, it promotes a sense of urgency by fostering and learning resilience skills to improve the individual body shield (Matthews, 2020). Additionally, it promotes a sense of urgency by fostering and learning resilience skills to improve the individual body shield (Matthews, 2020).

Self-Centred Communication (Optimistic Thinking and Resilience)

Optimistic thinking consists of an upbeat, self-directed communication style characterised by optimism and the likelihood of success in the future. According to them, adverse events are caused by external factors and are isolated exceptions. When people think a test result is mediocre because it was difficult (an external factor), they expect a better result the next time. Optimistic people view failure as a risk and are unlikely to experience it all the time (Momaya, 2020).

It is usually accompanied by resilience during stressful events such as COVID-19, and optimistic thinking has a significant role to play in adapting to traumatic conditions. Optimists display greater resilience when faced with a challenge, whereas pessimists use evasive coping strategies and avoid stressful situations (Souri & Hasanirad, 2011; Arampatzi et al., 2019). Optimists usually appear more resilient when facing difficulties and tend to bounce back like a phoenix from the ashes. In a nutshell, positive and optimistic thoughts will increase resilience in people (Maheswari & Jutta, 2020).

Nevertheless, some people tend to think positively, while others think pessimistically. Furthermore, this can escalate into anxiety-provoking and overwhelming worrying. However, changing one's thinking can still lead to optimism. Assuming everything will always go well

does not constitute positive thinking. Rather than getting overwhelmed by fear or hopelessness, it helps people deal with challenges by focusing on solutions (Labrague, 2021).

When COVID-19 dispersed, optimism had a dark side, according to Van Nieuwerburgh (2020). The effects of excessive optimism in dangerous situations can be acute. When optimists downplay risks, underestimate costs, and miss warning signs, their strengths can turn into dangerous weaknesses.

External Communication (Family Support and Resilience)

Unlike other crises, COVID-19 has brought many changes to people's lives and created a hefty mental and emotional burden. For people in the high-risk group to handle stress and anxiety during the pandemic, they need help from outside sources (Hidayat, Anisti, Purwadhi & Wibawa, 2020). During the pandemic, having help from family is an excellent way to deal with the public health crisis. In short, building a supportive network of people outside themselves and surrounding themselves with caring people can help most feel less lonely when needed. So, knowing how each person's mental health turns out and what helps protect it, like social support, can help people at all levels get better plans and help (Li et al., 2021; Hurley, 2020).

During the pandemic, Coulombe et al. (2020) found that family functioning and social support promote better mental health and well-being. For example, the Ebola and SARS survivors indicated that friends, family, and peer group support were influential coping strategies for handling mental distress and developing social connections during the social isolation caused by the pandemic (Rabelo et al., 2016). In their study, Xing et al. (2020) also found that social support helped healthcare providers sleep better, which reduced their anxiety and made them feel more capable of doing their jobs. Generally, social support is the primary driver of people's well-being and resilience.

External Communication (Media Exposure and Resilience)

Humanitarians need help to do their usual work of building resilience on-site and face-to-face due to COVID-19 and other lockdowns. Since then, the media channel has played an essential role in communities worldwide. High-risk groups are provided with information about COVID-19 through media exposure. For example, the Zurich Flood Resilience Alliance (Ulrich, Lanni, & Cuevas, 2020) shows how COVID-19 has used digital tools and methods.

Media plays an important role in shaping how people experience the world, as Arriaga et al. (2021) claimed. The media's role in supporting crisis management responses is critical to reducing psychopathology. It is vital for clear, accurate, and reliable messages to be sent during mass public health crises (Levaot, Greene, & Palgi, 2020).

According to Eden et al. (2020), the pandemic changed media usage patterns. Media content on pandemics or familiar content reassuring people during the crisis A rise in media use or certain types of content may have been caused by stress and anxiety during COVID-19. In her study, "Media Exposure to COVID-19: How Much Is Too Much?" Greenberg (2020) says that the media play an essential role in telling people about major health threats, the spread of the virus, what the government is doing, and how COVID-19 control efforts are going. The positive effects of behavioural strategies on containment include healthy behaviours such as washing hands and staying away from people. Consequently, some exposure to the media can be beneficial and help people make informed decisions. It can still be stressful and dangerous for their future health to repeatedly see the same scary news or sad stories. When media is used in moderation and a reasonable amount, people will be safer from these

dangers (Uran, Mohamed & Aziz, 2022). As Jurgens and Helsloot (2017) demonstrated, social media can be helpful during times of crisis and risk. The results of a study by Dijl et al. (Heydari et al., 2021) showed that social media increased people's security and information levels.

Conceptual Framework

Based on the literature, this study has formulated the following conceptual framework.

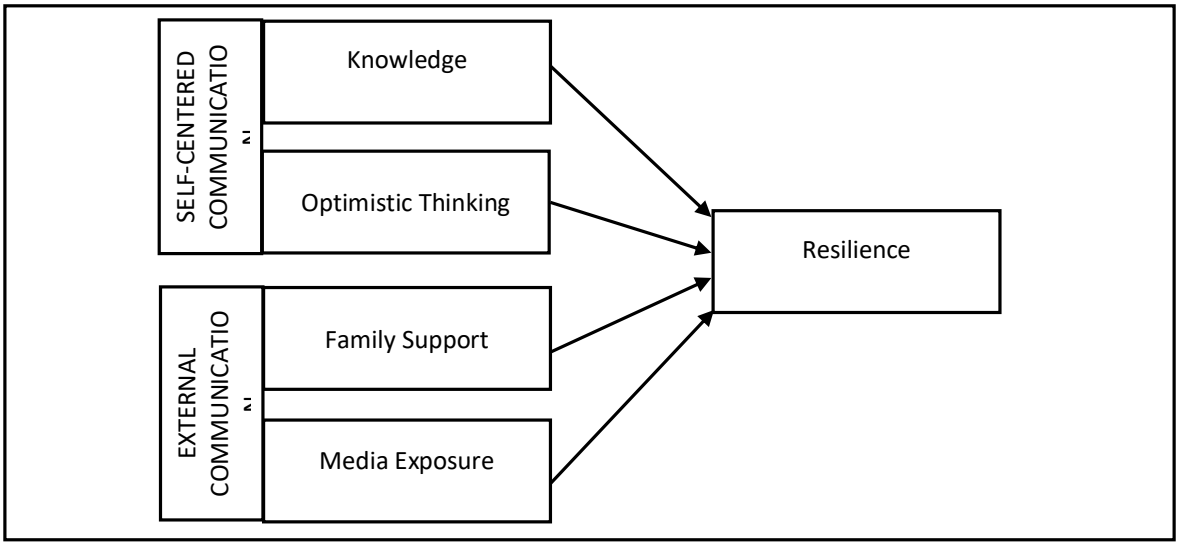

Figure 1: Research conceptual framework

METHODOLOGY

This study selected an online survey questionnaire to collect the respondents' data. Data collection was during the Movement Control Order (27 June to 31 July 2021). Moreover, the target population was among the high-risk group. Hence, the respondents felt more comfortable participating in the research because there was no physical contact between the enumerators and respondents. Therefore, to meet the research objectives, this instrument was the best data collection method (Biasio et al., 2021).

Population and Sampling

The population of this study was 435 respondents with chronic diseases, senior citizens, and pregnant women living in Kuching (Raosoft, n.d.). They were selected as they were more prone to being infected by Covid-19. In reaching the high-risk group, the study used voluntary response sampling, as this is the possible sampling method to access the high-risk group during the Movement Control Order.

Data Collection and Instrument

Before the data collection process, the researchers conducted an online briefing to the enumerators to ensure that they understood the characteristics of their target population and how the instruments work. The enumerators then began to use their network in choosing the respondents and contacted them directly via WhatsApp and social media accounts. As for the instruments, the online questionnaire has two (2) sections: Section 1 focuses on

respondents' demographic information, and section 2 is the 5 points Likert scale items, namely respondents' Knowledge, Family Support, Media exposure, Optimistic thinking, and Resilience. The piloted instrument targeted 40 respondents, where the comments regarding timing, language error, and understanding of the items were recorded and corrected. The reliability analysis also found that Cronbach's alpha values for all variables were above 0.7. There is a distribution of a total of 800 online surveys, and only 460 completed them. Thus, 435 were valid respondents after the data-cleaning process.

Data Analysis

The data presentation begins with the demographic result to achieve the research objectives and to give a broad background about the respondents. Due to the non-probability sampling methods, this study employed the Partial Least Squares (SmartPLS) to examine the data (Ringle et al., 2015). The analysis began with the model's validity and reliability measurement and next with an examination of the association of the constructs in the model.

The Goodness of Measures of SmartPLS

Table 1 explains the goodness of measures used by this study as procedures to test the conceptual model validity, reliability, the association among constructs, and its overall model fit.

Table 1: Goodness-of-fit measures

Types of Fitness Value	**Acceptable Value of Fitness**
Factor Loading	greater than or equal to 0.50**
Composite Reliability	greater than or equal to 0.70**
Average Variance Extracted (AVE)	greater than or equal to 0.50**
Heterotrait-Monotrait Ratio of Correlations	less than 0.90**
HTMT inference criteria	less than 1.0**
p-value	below than or equal to 0.05**
VIF	less than 5.0**
R^2	greater than 0.1**
Q^2	greater than 0**
SRMR	less than .10**

*Source: Manan et al. (2022)

RESULT

Demographic

Table 2 presents the respondents' demographic data. The result shows that female respondents are slightly more than half of the sample (53.5%) than males (46.5%). As for the respondent's age range, 28.8% from the 31 - 40 years category, closely followed by 41 - 50 years (23.2%) and then by 61 years and above (19.1%). The rest of the respondents fall under the 51 - 60 years category (16.2%) and the 20 - 30 years category (12.6%).

In addition, in terms of race, 44.7% of respondents are Malay, 25.6% are Chinese, 24.7% are Indigenous natives of Sarawak (Iban, Bidayuh and Melanau), 4.7% are Indian, and 0.3% are others. Moreover, 63.2% of the respondents are married, 16.2% are single, and the rest are either separated (8.5%), widowed (7.9%), or divorced (4.1%).

Table 2: Demographic of gender

Demographic characteristic	Category	Frequency	Percentage
Gender	Female	182	53.5
	Male	158	46.5
Age	31 – 40 years	98	28.8
	41 – 50 years	79	23.2
	61 years and above	65	19.1
	51 – 60 years	55	16.2
	20 – 30 years	43	12.6
Race	Malay	153	45
	Chinese	87	25.6
	Indigenous natives of Sarawak	84	24.7
	India	16	4.7
Marital status	Married	215	63.2
	Single	55	16.2
	Separated	29	8.5
	Widowed	27	7.9
	Divorced	14	4.1
Highest level of Education	Bachelor's degree	143	42.1
	Certificate/ Diploma	127	37.4
	Secondary school	33	9.7
	Master	27	7.8
	Primary school	8	2.4
	Doctorate	2	.6
Employment status	Full-time employment	142	41.8
	Self-employed	56	16.5
	Retired	49	14.4
	Part-time employment	31	9.1
	Student	22	6.5
	Housewife	22	6.5
	Unemployed	18	5.3
Risk Group Category	High blood pressure patient	78	22.9
	Diabetes patient	73	21.5
	61 years and above	64	18.8
	Weaken immune system	56	16.5
	Cardiovascular disease patient	41	12.1
	Chronic respiratory disease patient	38	11.2
	Pregnant woman	33	9.7
	Other chronic disease patients	32	9.4
	Cancer patient	29	8.5
TOTAL		**435**	**100**

The study results also indicate that most respondents (41.8%) are bachelor's degree graduates, 37.4% are certificate or diploma graduates, 9.7% are secondary school leavers, 7.8% are master graduates, 2.4% are primary school leavers, 0.6% are doctorate qualifications. 41.8% of respondents are full-time employed and closely followed by the self-employed category (16.5%) and then, followed by the retired category (14.4%), part-time employed category (9.1%), students, and housewife category each recorded 6.5% and unemployed category (5.3%).

In the context of the risk group category, most respondents are high blood pressure patients (22.9%), followed by diabetes patients (21.5%). Results also indicated that 18.8% of the respondents are in the 61 years and above category, 16.5% have a weak immune system, 12.1% are cardiovascular disease patients, and 11.2% are chronic respiratory disease patients. The rest of the respondents fall under the pregnant women's category (9.7%), the other chronic disease patient (9.4%), and the cancer patients' category with 8.5%.

Structural Equation Modelling Analysis

The study used structural equation modelling analysis to achieve research objectives 1, 2, 3, and 4. The analysis begins with the reliability and validity of the model, followed by research model testing.

Convergent Validity

Table 3 presents the convergent validity analysis for family support, knowledge, media exposure, optimistic thinking, and resilience. The analysis measured whether its conceptual framework was reliable and valid. The analysis examined the factor loading, Cronbach's alpha, composite reliability, and average variance extracted (AVE) and VIF value to examine the multiple items used to measure the variable (Hair et al., 2019).

Table 3: Convergent validity for family support, knowledge, media exposure, optimistic thinking, and resilience

Variable	Items	Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Variance Inflation Factor (VIF)
Knowledge	Knowledge3: Individuals with chronic disease and the elderly are at higher risk of contracting the Covid-19 virus	0.925	0.929	0.950	0.825	3.827
	Knowledge5: I know how to protect myself from the Covid-19 virus	0.903				
	Knowledge6: I understand that I am at high risk of contracting Covid-19	0.904				
	Knowledge7: I have knowledge about Covid-19 infection	0.901				
Optimistic Thinking	Optimisticthinking1: I was able to adjust to a life of new norms	0.857	0.963	0.969	0.820	

	Optimisticthinking2: I can find a peace of mind	0.939				
	Optimisticthinking3: I was able to achieve my life goals even in a new norm	0.884				
	Optimisticthinking4: I am optimistic that I can face the life's challenges	0.953				
	Optmisticthinking5: I believe the Covid-19 vaccine is safe	0.941				
	Optimisticthinking6: I managed to be happy even in a new norm	0.924				
	Optimisticthinking7: I can reduce my stress level in this new normal life	0.832				
Family Support	Familysupport1: my family support is important	0.864	0.974	0.978	0.867	2.293
	Familysupport2: I get good support from my family members	0.964				
	Familysupport3: my family cared more about me	0.952				
	Familysupport4: my family support made me stronger to fight the Covid-19 virus	0.965				
	Familysupport5: my family always reminds me to keep SOP when out from the house	0.953				
	Familysupport6: my family did not encourage me to go out in public	0.918				
	Familysupport7: my family encouraged me to do the physical exercises at home	0.895				
Media Exposure	Mediaexposure1: I monitor the latest number of Covid-19 cases through news reports on television	0.858	0.866	0.909	0.714	2.698
	Mediaexposure2: I received updates about the Covid-19 virus through WhatsApp	0.893				
	Mediaexposure3: I shared Covid-19 news on my Facebook account	0.862				
	Mediaexposure7: I trust the mass media reports on the Covid-19	0.761				

Resilience	Resilience1: I have never been infected with the Covid-19 virus	0.785	0.947	0.957	0.762	3.155
	Resilience2: I was able to adapt to the Covid-19 SOP	0.895				
	Resilience3: I was able to cope with the stress related to my health	0.885				
	Resilience4: I am stronger now in the new normal life	0.852				
	Resilience5: I was able to keep my family and myself from getting infected with the Covid-19 virus	0.858				
	Resilience6: I carry out my daily activities well even in a new norm	0.927				
	Resilience7: I stay focused to achieve life goals despite the new norms	0.901				

*Note: The deletion of Items was due to low loadings
the average variance extracted (AVE) = (summation of the square of the factor loadings)/ {(summation of the square of the factor loadings) + (summation of the error variances)}
Composite reliability (CR) = (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (square of the summation of the error variances)}

Based on the result shown in Table 3, deleted items were due to a low loading factor. The remaining variables ranged between that loading factors for all constructs and between 0.761 to 0.965. This result shows that all construct loading was above the minimum accepted value.

Next, the reliability of the constructs was measured based on Cronbach's Alpha and composite reliability values. The result shows that Cronbach's Alpha for the research constructs was between 0.866 to 0.974, and the composite reliability result was from 0.909 to 0.978; therefore, the result exceeded the recommended value. Then the AVE values were assessed to examine the mean of the squared loadings of each indicator associated with a construct. The result shows that AVE values for all constructs were more significant than the recommended value (AVE = 0.714 to 0.867).

Lastly, the examined inner VIF data was to evaluate the level of collinearity among the constructs in the path coefficients model. The findings were from 2.293 to 3.827. Based on the parameter estimates, the Convergent validity analyses found that all five constructs, family support, knowledge, media exposure, optimistic thinking, and resilience, are valid measures.

Heterotrait-Monotrait Ratio of Correlations (HTMT)

To test the construct discriminant validity, the analysis carries on with the Heterotrait-Monotrait Ratio of Correlations (HTMT). Table 4 presents the value of the HTMT correlation among all constructs. According to Henseler, Ringle and Sarstedt (2015), the HTMT value for all constructs must not exceed 0.9. The result ranged between 0.670 to 0.887. This result indicated that the correlation between the constructs is valid.

Table 4: Heterotrait-Monotrait ratio of correlations (HTMT)

	Construct	1	2	3	4	5
1	Family support	1				
2	Knowledge	0.749	1			
3	Media exposure	0.670	0.855	1		
4	Optimistic thinking	0.713	0.836	0.780	1	
5	Resilience	0.725	0.851	0.773	0.887	1

Next, the analysis proceeds with bootstrapping to check HTMT inference criteria for further confirmation. Table 5 shows the result of Confidence Intervals between 0.740 to 0.924, which is below the recommended value of 1.0. Hence, all HTMT inference criteria were significantly different from one, and the establishment of discriminant validity.

Table 5: Heterotrait-Monotrait ratio (HTMT) confidence intervals bias corrected

	Original Sample (O)	Sample Mean (M)	Bias	Confidence Intervals Low	Confidence Intervals Up
Knowledge -> Family Support	0.749	0.748	-0.002	0.677	0.805
Media Exposure -> Family Support	0.670	0.668	-0.002	0.578	0.740
Media Exposure -> Knowledge	0.855	0.854	-0.001	0.800	0.898
Optimistic Thinking -> Family Support	0.713	0.711	-0.002	0.635	0.777
Optimistic Thinking -> Knowledge	0.836	0.834	-0.001	0.773	0.881
Optimistic Thinking -> Media Exposure	0.78	0.778	-0.001	0.700	0.840
Resilience -> Family Support	0.725	0.723	-0.002	0.645	0.785
Resilience -> Knowledge	0.851	0.850	-0.001	0.792	0.897
Resilience -> Media Exposure	0.773	0.772	-0.001	0.692	0.835
Resilience -> Optimistic Thinking	0.887	0.886	-0.001	0.838	0.924

Overall Model Fit

Once the model's validity and reliability were established, the analysis examines the overall model fit. The assessment of model fit was conducted to quantify the goodness of the whole model. R2, Q2, and SRMR were measured to check whether the model was fit to be tested.

The R2 result shows that the respondent's Knowledge, Optimistic thinking, Family support, and Media exposure contributed to 0.771 of the variances in resilience is valid and accepted. In addition, blindfolding analysis was conducted to measure Q2 and whether the model has predictive relevance. The result indicated that the Q2 values for knowledge (0.685), optimistic thinking (0.756), family support (0.817), and media exposure (0.518) was above the acceptance values.

Table 6: The overall model fit

Model	R^2	Q^2	SRMR
Knowledge	0.771	0.685	0.056
Optimistic Thinking		0.756	
Family Support		0.817	
Media Exposure		0.518	
Resilience		0.679	

Finally, to measure whether the model has a predictive relevance, SRMR analysis was conducted to measure the model fit. The result displays that the SRMR value was 0.056, which meets the model fit standards. Therefore, based on the result presented in table 6 confirmed that the research model is fit and acceptable (Ramayah et al., 2018).

After the model was established, the path analysis was conducted to test the relationship between knowledge, optimistic thinking, family support, and media exposure with resilience. This analysis was conducted to achieve research objectives 1, 2, 3 and 4. In addition, this analysis also will help the researcher to achieve its research objective 5.

Table 7: Model path analysis

Relationship Testing	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
Knowledge -> Resilience	0.252	0.248	0.072	3.525	0.000
Optimistic Thinking -> Resilience	0.522	0.527	0.060	8.744	0.000
Family Support -> Resilience	0.111	0.109	0.046	2.416	0.016
Media Exposure -> Resilience	0.068	0.071	0.048	1.428	0.154

Based on the result presented in table 6, optimistic thinking (*t*=8.744; *p*=0.000) was found to have the strongest and most significant relationship with resilience. This followed by knowledge (*t*=3.525; *p*=0.000) and family support (*t*=2.416; *p*=0.000). However, media exposure was found to have a weak relationship and not significant with resilience. Therefore, research objectives 1, 2, 3, and 4 could be achieved. Moreover, this analysis also found that optimistic thinking was the best predictor for the resilience of high-risk groups in Kuching Sarawak. Hence objective 5 is achieved.

DISCUSSION

Based on the result, this study found that risk group knowledge is vital to develop their resilience. These findings align with Clavel et al. (2021) also found that knowledge of Covid-19 will develop the perceived severity of the virus; hence it developed resilience among the high-risk group populations. In addition, the positive relationship is due to the consistent message from Malaysian health authorities and the government, which keeps providing up-to-date information to the people. Therefore, the public, especially senior citizens or individuals with chronic disease, may perhaps improve their knowledge, attitudes, and practices to stay resilient. With such action, the pandemic outbreak effects in our country can be abridged (Azlan et al., 2020). Hence, it is important for the Malaysian government to develop a pandemic crisis planning that will help the knowledge transfer process and speed up positive attitude development and resilience.

In addition, this study also highlights that it is significant for the high-risk group to have optimistic thinking by adjusting their lifestyle to the new normal. It is in line with findings from a past study that stipulated that 38.4% of research participants agreed that the current generation is optimistic and tends to live in the moment (Joshi & Gupta, 2021). Some studies also found that people with a higher level of optimistic thinking have the tendency to develop a better sense of life, hope, and subjective well-being (Arslan et al., 2021; Genç & Arslan, 2021; Yıldırım & Çiçek, 2021). Gale (2020) in his study argues that an optimistic mind-set is an important skill to help the risk group to leverage the current pandemic situation. Given that the pandemic Covid-19 is still ongoing, it is vital for the public, particularly the risk group, to continue to stay alert and be more optimistic and resilient. In addition, it is also necessary for the public, government and non-government agencies, or even health practitioners to continuously advocate the necessity of leading and living quality lives in order to retain optimistic thinking among the public. This is because the consistency of optimistic thinking is beneficial for the risk group to develop positive resilience.

Similarly, this study found that optimistic thinking is the best and stronger predictor of behaviour and intention of resilience among the risk group in Kuching, Sarawak (Manan et al., 2019). This is because the data showed that most of the respondents who are optimistic were intent to adapt to the new norms and believe the Covid-19 vaccine is safe. According to Van Nieuwerburgh (2020), optimism safeguards friends and provides the risk group with much assistance, including positive emotion, a strong mind, boost resilience, and better health conditions. Hence, it is not an exaggeration to say that optimistic thinking is a critical factor in motivating positive behaviour intention among Covid-19 risk groups.

Another point to note is that family support is undeniably necessary during the health crisis and crucial situation to encourage resilience among the risk group, in particular during the Covid-19 pandemic. The Covid-19 pandemic has reminded us about the importance of family. Support from family members is important because the family is the closest and most trusted people that can influence and motivate that risk group in the Covid-19 battle and prevention (The Herald, 2021). Wang et al. (2021) in their study also supported the argument that family support is integral to pregnant women's resilience during Covid-19. Based on the discussion, there is consistency between family support and increasing risk group resilience.

On the other hand, media exposure was found to have a negative relationship with resilience. In their study, Zhao and Zhou (2020) found that media exposure can harm human behaviour, and it is because greater exposure to Covid-19 news across various media platforms is associated with developing stress. Moreover, this finding also aligns with Kellerman, Hamilton, Selby and Kleiman (2022), who found that the information about how fast and easily Covid-19 spreads, the number of infected cases, and the number of deaths can develop anxiety among the high-risk group. It is because the Covid-19 media exposure can enhance the propensity to view the pandemic as "catastrophising." Therefore, this will develop personal worries among the high-risk group. In addition, media exposure will also increase expectations of worst-case outcomes because, as the high-risk group, the effect of this virus is severe and can cost their lives. Hence, this results in the high-risk group in Kuching Sarawak thinking that media exposure does not help their resilience.

CONCLUSION

This research has managed to achieve all its objectives. Based on the findings, this research concluded that self-centred communication is vital in developing resilience among the high-risk group in Kuching Sarawak. The risk group in Kuching, Sarawak, practically showed that they were knowledgeable and had optimistic thinking about the Covid-19 pandemic. It is because they were aware that their lives were in danger. Hence, they must strengthen their knowledge and stay positive through self-centred communication. Therefore, positive self-centred communication about the Covid-19 virus has resulted in them taking proactive measures to protect themselves from getting infected by the disease. However, improvement is still required for consistent and continuous health education, which emphasises the importance of following the Covid-19 standard operating procedure (SOP), which is now part of their lifestyle. It is to ensure that the risk group is always alert and not negligent in taking care of themselves since the Covid-19 virus is still with us.

On the other hand, external communication factors such as family support should not be neglected. The risk group has had positive support from their family members during the spread of the Covid-19 virus. Managing the Covid-19 impacts can be very challenging as the risk group has been forced to adapt to rapidly changing environments and deal with disruptions at home, work, and in the community. Hence, it can be challenging to adapt. Therefore, the support from external communication will increase calm, and connecting with them will make the risk group adapt better to the challenges of the pandemic.

However, this study revealed that media exposure does not predict the resilience of the risk group due to the media information about Covid-19 has resulted in unpleasant emotions and thinking among the high-risk group. Therefore, the authority body and content developer should balance negative and positive content in reporting across various media platforms. It is undeniable that harmful content, such as fear appeal, is beneficial to ensure that the risk group stays alert in protecting themselves from the virus. Still, the positive information that motivates them to fight the virus is equally essential and will ensure that the risk group can adapt to the new normal and continue living with it. It is important to note that Covid-19 is not the last pandemic; proper resilience planning can help the country adapt faster and recover to live in the new normal.

RECOMMENDATION

This study was carried out in Kuching Sarawak and examined the urban respondents. Therefore, future studies can consider examining the respondents from suburban and rural areas to measure the resilience of Covid-19 high-risk groups. This study also recommends further qualitative study to understand the resilience of high-risk groups during the pandemic.

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REFERENCE

Arampatzi, E., Burger, M., Stavropoulos, S., & Tay, L. (2019). The role of positive expectations for resilience to adverse events: Subjective well-being before, during and after the Greek bailout referendum. *Journal of Happiness Studies, 21*(3), 965-995. https://doi.org/10.1007/s10902-019-00115-9

Arriaga, P., Esteves, F., Pavlova, M. A., & Piçarra, N. (2021). Coronavirus disease (COVID-19): the impact and role of mass media during the pandemic. *Frontiers in Psychology, 12*, 729238.

Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., & Allen, K. A. (2021). Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the coronavirus stress measure. *International Journal of Mental Health and Addiction, 19,* 2423–2439. https://doi.org/ghq5

Azlan, A. A., Hamzah, M. R., Sern, T. J., Ayub, S. H., & Mohamad, E. (2020). Public knowledge, attitudes and practices towards COVID-19: A cross-sectional study in Malaysia. *PLOS ONE, 15*(5), e0233668. https://doi.org/10.1371/journal.pone.0233668

Barua, Z., Barua, S., Aktar, S., Kabir, N., & Li, M. (2020). Effects of misinformation on COVID-19 individual responses and recommendations for resilience of disastrous consequences of misinformation. *Progress in Disaster Science, 8,* 100119. https://doi.org/10.1016/j.pdisas.2020.100119

Biasio, L. R., Bonaccorsi, G., Lorini, C., & Pecorelli, S. (2021). Assessing COVID-19 vaccine literacy: a preliminary online survey. *Human Vaccines & Immunotherapeutics, 17*(5), 1304-1312. https://doi.org/10.1080/21645515.2020.1829315

Boles, D. (2021, November 18). What is resilience, why it matters, and how to build yours up. *New Life Portugal*. https://newlifeportugal.com/what-is-resilience/

Cheng, C. (2020). COVID-19 in Malaysia: Economic impacts & fiscal responses. *ISIS Malaysia.* https://www.isis.org.my/2020/03/26/covid-19-in-malaysia-economic-impacts-fiscal-responses/

Cherry, K. (2022, Oct 17). How resilience helps with the coping of crisis. *Verywell Mind.* https://www.verywellmind.com/what-is-resilience-2795059

Choong, J. (2020, October 21). Malaysia sees six new Covid-19 deaths, 732 new cases, and 580 recoveries today. *Malay Mail.* https://www.malaymail.com/news/malaysia/2020/10/21/malaysia-sees-six-new-covid-19-deaths-732-new-cases-and-580-recoveries-toda/1914997

Clavel, N., Badr, J., Gautier, L., & Lavoie-Tremblay, M. (2021). Risk perceptions, knowledge, and behaviors of general and high-risk adult populations towards COVID-19: A systematic scoping review. *Public Health Reviews,* 42, 1603979. https://doi.org/jxtv

CNA. (2021). Malaysia reports 5,728 new COVID-19 cases, second consecutive daily record. https://www.channelnewsasia.com/asia/malaysia-second-daily-record-covid-19-5728-new-cases-13-deaths-442926

Coulombe, S., Pacheco, T., Cox, E., Khalil, C., Doucerain, M. M., Auger, E., & Meunier, S. (2020). Risk and resilience factors during the COVID-19 pandemic: A snapshot of the experiences of Canadian workers early on in the crisis. *Frontiers in Psychology, 11.* https://doi.org/10.3389/fpsyg.2020.580702

Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., Lahiri, D., & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews, 14*(5), 779–788. https://doi.org/10.1016/j.dsx.2020.05.035

Eden, A. L., Johnson, B. K., Reinecke, L., & Grady, S. M. (2020). Media for coping during COVID-19 social distancing: Stress, anxiety, and psychological well-being. *Frontiers in Psychology, 11.* https://doi.org/10.3389/fpsyg.2020.577639

Ghani, M. T. A., Hamzah, M., Daud, W. A. A. W, & Romli, T. R. M. (2022). The impact of mobile digital game in learning arabic language at tertiary level. *Contemporary Educational Technology, 14*(1), ep344. https://doi.org/10.30935/cedtech/11480

Gale, M. (2020, April 28). Four thoughts and five base strategies for thriving in newly developing worlds - With Valerie Granoff parts 1 and 2. *Forbes*. https://www.forbes.com/sites/forbesinsights/2020/04/28/new-lessons-to-live-with-in-a-post-covid-19-world/?sh=6b385be52b87

Genç, E., & Arslan, G. (2021). Optimism and dispositional hope to promote college students' subjective well-being in the context of the COVID-19 pandemic. *Journal of Positive School Psychology*, *5*(2), 87–96.

Greenberg, M. (2020, April 1). Media exposure to COVID-19: How much is too much? *Psychology Today.* https://www.psychologytoday.com/ca/blog/the-mindful-self-express/202004/media-exposure-covid-19-how-much-is-too-much

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, 31*(1), 2-24.

Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. (2021). *A primer on partial least squares structural equation modelling (PLS-SEM*) (3rd ed.) Thousand Oakes, CA: Sage.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science, 43*, 115-135. https://doi.org/10.1007/s11747-014-0403-8

Heydari, S. T., Zarei, L., Sadati, A. K., Moradi, N., Akbari, M., Mehralian, G., & Lankarani, K. B. (2021). The effect of risk communication on preventive and protective Behaviours during the COVID-19 outbreak: Mediating role of risk perception. *BMC Public Health, 21*, 54. https://doi.org/10.1186/s12889-020-10125-5

Hidayat, D., Anisti, Purwadhi & Wibawa, D. (2020). Crisis management and communication experience in education during the COVID – 19 pandemic in Indonesia. *Jurnal Komunikasi: Malaysian Journal of Communication, 36*(3), 67-82

Hurley, K. (2020, April 21). How to build your resilience during the COVID-19 pandemic. *Everyday Health*. https://www.everydayhealth.com/coronavirus/how-to-build-your-resilience-during-the-covid-19-pandemic/

Joshi, V. A., & Gupta, I. (2021). Assessing the impact of the COVID-19 pandemic on hospitality and tourism education in India and preparing for the new normal. *Worldwide Hospitality and Tourism Themes, 13*(5), 622–635. https://doi.org/gpxbqr

Jurgens, M., & Helsloot, I. (2017). The effect of social media on the dynamics of (self) resilience during disasters: A literature review. *Journal of Contingencies and Crisis Management, 26*(1), 79–88. https://doi.org/10.1111/1468-5973.12212

Kaur, K. (2021, Jan 25). It's been one year since Malaysia's first Covid-19 case: Here's where we're at today. *The Rakyat Post.* https://www.therakyatpost.com/2021/01/25/its-been-one-year-since-malaysias-first-covid-19-case-heres-where-were-at-today/

Kellerman, J. K., Hamilton, J. L., Selby, E. A., & Kleiman, E. M. (2022). The mental health impact of daily news exposure during the COVID-19 pandemic: Ecological momentary assessment study. *JMIR Mental Health, 9*(5), e36966. https://doi.org/10.2196/36966

Kementerian Kesihatan Malaysia. (2021). Status Covid-19. Retrieved 29 January, 2021, from http://covid-19.moh.gov.my/

Kim, G. M., Lim, J. Y., Kim, E. J., & Park, S. (2018). Resilience of patients with chronic diseases: A systematic review. *Health & Social Care in the Community, 27*(4), 797–807. https://doi.org/10.1111/hsc.12620

Labrague, L. J. (2021). Psychological resilience, coping behaviours and social support among health care workers during the COVID-19 pandemic: A systematic review of quantitative studies. *Journal of Nursing Management, 29*(7), 1893-1905. https://doi.org/10.1111/jonm.13336

Levaot, Y., Greene, T., & Palgi, Y. (2020). The associations between media use, peritraumatic distress, anxiety, and resilience during the COVID-19 pandemic. *Journal of Psychiatric Research, 145,* 334-338. https://doi.org/10.1016/j.jpsychires.2020.11.018

Li, P. (2021). Resilience theory in psychology (Definition & characteristics). *Parenting for Brain*. https://www.parentingforbrain.com/resilience-theory/

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*(3), 543–562. https://doi.org/10.1111/1467-8624.00164

Maheshwari, A., & Jutta, V. (2020). Study of relationship between optimism and resilience in the times of COVID-19 among university students. *The International Journal of Indian Psychology, 8*(3), 1539-1550. https://doi.org/10.31219/osf.io/5a3gs

Manan, K. A., Tajuddin, S. N. A. A., Ali, R., Bahari, K. A., Ahmad, Z. A., & Downing, K. (2022). Media exposure, attitude, anxiety and practices among university students during the COVID-19 pandemic. *International Journal of Public Health Science (IJPHS), 11*(2), 589-600. https://doi.org/10.11591/ijphs.v11i2.21232

Manan, K. A., Tajuddin, S. N. A. A., Singh, C. K. S., Chaniago, R. H., & Mohammad, E. R. (2022). Primary pupil parents conducting digital learning at home during pandemic Covid-19: A technology acceptance model approach. *NeuroQuantology, 20*(8), 1283-1302.

Manan, K. A., Ahmad, C. M., Manaf, A. M. A., & Samin, A. S. M. (2019). Factors driving the intention to adopt a tobacco-free policy among employees in a public higher education institution. *Intellectual Discourse, 27*(1), 431–453.

Masson, G. (2020, October 21). 5 risk factors for long-term COVID-19: Study. *Becker's Hospital Review.* https://www.beckershospitalreview.com/public-health/5-risk-factors-for-long-term-covid-19-study.html

Matthews, M. D. (2020). Resilience in a pandemic: Lessons on fighting the pandemic from military psychology. *Psychology Today.* https://www.psychologytoday.com/us/blog/head-strong/202004/resilience-in-pandemic

Momaya, K. S. (2020). Return from COVID-19: Thinking differently about export competitiveness and sustainability. *International Journal of Global Business and Competitiveness, 15,* 1–9. https://doi.org/10.1007/s42943-020-00012-6

Moore, C. (2021, December 30). Resilience theory: What research articles in psychology teach us (+PDF). *Positive Psychology*. https://positivepsychology.com/resilience-theory/

Moradi, Y., Mollazadeh, F., Karimi, P., Hosseingholipour, K., & Baghaei, R. (2020). Psychological disturbances of survivors throughout COVID-19 crisis: A qualitative study. *BMC Psychiatry, 20*, 594. https://doi.org/10.1186/s12888-020-03009-w

Paredes, M. R., Apaolaza, V., Fernandez-Robin, C., Hartmann, P., & Yañez-Martinez, D. (2021). The impact of the COVID-19 pandemic on subjective mental well-being: The interplay of perceived threat, future anxiety, and resilience. *Personality and Individual Differences, 170,* 110455. https://doi.org/10.1016/j.paid.2020.110455

Pink, J., Gray, N. S., O'Connor, C., Knowles, J. R., Simkiss, N. J., & Snowden, R. J. (2021). Psychological distress and resilience in first responders and health care workers during the COVID-19 pandemic. *Journal of Occupational and Organizational Psychology, 94*(4), 789-807. https://doi.org/10.1111/joop.12364

Rabelo, I., Lee, V., Fallah, M. P., Massaquoi, M., Evlampidou, I., Crestani, R., Decroo, T., van den Bergh, R., & Severy, N. (2016). Psychological distress among Ebola survivors discharged from an Ebola Treatment Unit in Monrovia, Liberia – A qualitative study. *Frontiers in Public Health, 4.* https://doi.org/10.3389/fpubh.2016.00142

Radhi, N. A. M. (2020, December 24). Covid-19 in Malaysia: Cases hit 100,000 marks. *New Straits Time.* https://www.nst.com.my/news/nation/2020/12/652007/covid-19-malaysia-cases-hit-100000-mark

Rahmanto, A. N. (2021). Crafting normalcy: How communication enhances tourist village's resilience during the Covid-19 pandemic. *Jurnal Komunikasi: Malaysian Journal of Communication, 37*(3), 244-256.

Ramayah, T. J. F. H., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). *Partial least squares structural equation modeling (PLS-SEM) using smartPLS 3.0: An updated guide and practical guide to statistical analysis*. Pearson Malaysia.

Raosoft. (n.d.). Sample Size Calculator. http://www.raosoft.com/samplesize.html

Kementerian Kesihatan Malaysia. (2021). *Sarawak COVID-19 tracker.* Retrieved 30 January 2021, from https://covid-19.moh.gov.my/

Salim, S. (2021, January 26). Covid-19: Malaysia's new cases rise to 3,585 with 85% involving locals; death toll hits 700*. The Edge Markets*. https://www.theedgemarkets.com/article/covid19-malaysia-records-3585-new-cases-11-deaths

Souri, H., & Hasanirad, T. (2011). Relationship between resilience, optimism, and psychological well-being in students of medicine. *Procedia - Social and Behavioral Sciences, 30,* 1541-1544. https://doi.org/10.1016/j.sbspro.2011.10.299

The Herald. (2021, April 21). Covid-19 vaccination: Family support important. https://www.herald.co.zw/covid-19-vaccination-family-support-important/

Then, S. (2021, January 27). Sarawak reports 70 new Covid-19 cases, 1 fresh fatality today. *The Vibes.* https://www.thevibes.com/articles/news/15524/70-new-covid-19-cases-one-fresh-fatality-in-sarawak-today

Ulrich, J., Lanni, F., & Cuevas, J. (2020, August 10). Adaptability in times of Covid-19: Exploring digital resilience building. *Prevention Web*. https://www.preventionweb.net/news/adaptability-times-covid-19-exploring-digital-resilience-building

Uran, P., Mohamed, S. & Aziz, A. A. (2022). Disseminating information through social media during Covid-19 pandemic among university students. *Jurnal Komunikasi: Malaysian Journal of Communication, 38*(2), 265-279.

Van Nieuwerburgh, C. (2020, October 22). Why optimism can be dangerous during a pandemic. *The Conversation.* https://theconversation.com/why-optimism-can-be-dangerous-during-a-pandemic-148073

Wang, Y. N., Yuan, Z. J., Leng, W. C., Xia, L. Y., Wang, R. X., Li, Z. Z., Zhou, Y. J., & Zhang, X. Y. (2021). Role of perceived family support in psychological distress for pregnant women during the COVID-19 pandemic. *World Journal of Psychiatry, 11*(7), 365–374. https://doi.org/10.5498/wjp.v11.i7.365

Wiig, S., & Fahlbruch, B. (2018). *Exploring resilience: A scientific journey from practice to theory.* Springer Nature.

World Health Organization (WHO Europe). (2020, April 3). Statement – Older people are at highest risk from COVID-19, but all must act to prevent community spread. https://www.who.int/europe/news/item/03-04-2020-statement-older-people-are-at-highest-risk-from-covid-19-but-all-must-act-to-prevent-community-spread

Xing, Y., Mo, P., Xiao, Y., Zhao, O., Zhang, Y., & Wang, F. (2020). Post-discharge surveillance and positive virus detection in two medical staff recovered from coronavirus disease 2019 (COVID-19), China, January to February 2020. *Eurosurveillance, 25*(10). https://doi.org/10.2807/1560-7917.es.2020.25.10.2000191

Yıldırım, M., & Çiçek, L. (2021). Optimism and pessimism mediate the association between parental coronavirus anxiety and depression among healthcare professionals in the era of COVID-19. *Psychology, Health & Medicine, 27*(9), 1898-1906. https://doi.org/10.1080/13548506.2021.1966702

Zabaniotou, A. (2020). A systemic approach to resilience and ecological sustainability during the COVID-19 pandemic: Human, societal, and ecological health as a system-wide emergent property in the Anthropocene. *Global Transitions, 2,* 116-126. https://doi.org/10.1016/j.glt.2020.06.002

Zager Kocjan, G., Kavčič, T., & Avsec, A. (2021). Resilience matters: Explaining the association between personality and psychological functioning during the COVID-19 pandemic. *International Journal of Clinical and Health Psychology, 21*(1), 100198. https://doi.org/10.1016/j.ijchp.2020.08.002

Zahari, M. A. M., Yaakub, R., & Norazimah, A. A. A. (2020). Application of ICT in Teaching and Learning (TL) Malay literature to generate students' creativity international. *Journal of Academic Research in Business and Social Sciences, 10*(11), 156-173.

Zhao, N., & Zhou, G. (2020). Social media use and mental health during the COVID-19 pandemic: Moderator role of disaster stressor and mediator role of negative affect. *Applied Psychology: Health and Well-Being, 12*(4), 1019-1038. https://doi.org/gng2m6