

Qualitative validation of a model using stress and coping theories in gaming practice during COVID-19

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Abstract

Although numerous studies focus on the effects of COVID-19 on various industries such as hospitality and tourism, only a few studies have focused on its effects on the gaming industry at large. The study uses stress and coping theories to evaluate the mental health of casino managers and the organizational health of the gaming industry in Macau. 24 casino managers from six casino groups in Macau were interviewed in depth. Results demonstrate that economic difficulties, policy restrictions, operational stress, and uncertainty are factors causing stress in the industry. Both problem-focused and emotional-focused coping strategies were adopted by casino managers to maintain their wellbeing. Subsequent analyses on these results provide theoretical insights and practical implications for the industry.

Keywords: COVID-19, stress and coping, gaming industry, wellbeing, Macau

1. Introduction

The COVID-19 outbreak has impacted countries worldwide, bringing threats to physical health and stress to mental health, significantly reshaping daily life throughout. Key industries bearing the brunt of its effects include the tourism and hospitality industry, which continue to suffer today. Studies on crisis management have also significantly increased in recent years. Stress and coping theories have also been widely applied to explore the ways of handling stress since behavioral and social sciences contribute to pandemic management (Bavel et al., 2020) with prior research in psychology and management suggesting that stress influences individuals' physical and mental health (Brown, 1991; Lazarus, 1993; Shields, 2004; Watson, 1988).

However, existing literature on stress and coping are mainly from the perspectives of employees, with little to no studies focusing on the management perspective. A sudden and unexpected event threatens business goals and exerts stress on management to promptly respond (Hermann, 1963). Therefore, it is important to understand the stress experienced by the management level. Moreover, in the gaming industry, studies mainly focus on the stress issue of players and employees, and not on casino management. Although tourism crisis has been well studied during the pandemic, only few examine its specific impact on the gaming sector.

This research attempts to fill the gaps and explore the stress issue and coping strategies from the perspective of management staff of casino groups in Macau. Specifically, it aims to examine the impact of COVID-19 on the

gaming industry, and the subsequent applicable strategies. It contributes to the existing literature in two ways. First, this study pioneers the application of stress and coping theory to the management of the gaming industry during COVID-19. It is important to study how casino managers cope with stress in gaming industry by exploring and identifying the specific types encountered during the pandemic.

Second, this study provides direct managerial implications to crisis management and compares different coping strategies in different phases of the pandemic. Previous scholars summarized three main phases, namely preparation (the initial stage), response (during the crisis), and learning (post-crisis) (Coombs & Laufer, 2018). The initial stage focuses on prevention and preparation for the sudden crisis, followed by the response stage where people act towards the crisis. However, there exists an apparent lack of research on the post-crisis phase, where experience is generated, and revision is made accordingly. Lessons from the gaming sector's experience in managing the effects of COVID-19 could significantly contribute to crisis management in the tourism and hospitality industry and other places which heavily rely on consumer entertainment. The Objectives of this study are threefold:

- 1) Discover the type of stress casino managers faced during the pandemic;
- 2) Evaluate the coping strategies used by management staff take in response to COVID-19; and
- 3) Compare the gaming industry's response during the initial and post stages of the pandemic and to discuss the future direction of gaming industry in Macau.

2. Literature Review

2.1 Stress and coping theory

When confronted with a potentially stressful event, humans cognitively evaluate such phenomena in several ways. Lazarus, Speisman, and Mordkoff (1963) summarized human coping with stress into three stages: 1) primary assessment of the situation; 2) secondary assessment (i.e., preparing to cope with the danger); and 3) coping reaction (i.e., actual behavioral response). There is also a complicated interaction among these three stages (Islam, Mäntymäki, Laato, & Turel, 2022).

Primary assessment refers to a person's determination (Deci, Connell, & Ryan, 1989) and whether a stimulus has a significant relationship with the person and the extent of said relationship. There are three types of situations, namely "irrelevant to the individual", "beneficial", and "stressful". When an event is evaluated as stressful, three possible scenarios are generated, which are either harming, threatening, and challenging (Lazarus and Folkman, 1984). A harming evaluation is generally related to a real or anticipated injury that is generally more damaging to the individual's physical or mental health or resources, such as a divorce, the death of a loved one, etc.

Meanwhile, threatening evaluation means that when a scenario requires more competencies than the individual can cope with, the event is evaluated as threatening. This differs from loss appraisal as the latter is a premonition that a hurtful event is going to happen, but in fact, does not. Last, a challenge assessment evaluates an event as risky and carries an emotional tone of excitement and anticipation, as well as anxiety and panic. A secondary assessment then evaluates the individual's coping style, coping ability, and coping resources, and

determines how well the individual copes with the event. This answers the question "What should I do in this situation?"

Moreover, evaluation assessments can always change when newer and more useful information becomes available (Hall, 2013). Re-evaluation does not necessarily reduce stress every time, sometimes it increases it. This happens after the second stage of assessment when people take actions that do not produce the effect of solving the problem try to adopt other strategies. If they continue to fail, stress gradually piles up.

Coping is defined as "the effort to reduce stress" (Lazarus and Folkman, 1984). Since stress is a state of unhappiness, its presence may affect a person's health, and people try to adjust or change in their internal psyche or external environment to reduce its negative effects. After the stressful individual assessment and adjustments to the stress, the results of the stress on the individual's mind and body gradually become apparent and the results of the adjustment can be divided into either short-term or long-term.

Short-term outcomes occur immediately after stress adjustment. Such outcomes are the initial feelings after adjustment and do not involve precipitation at the cognitive level. However, after short-term outcomes have accumulated and settled over a longer period, stressed individuals develop long-term perceptions and impressions of stressful events (Schuster, Hammitt, & Moore, 2003), often deeply influencing individuals' behaviors and attitudes. Coping also has two functions, namely solving problems or relieving emotions. Hence, coping strategies generally fall into two broad categories: problem-oriented and emotion-oriented coping (Lazarus & Folkman, 1984). Although conceptually different, there is a complementary relationship between these two coping methods (Huang & Chen, 2021). The outcome of coping affects an individual's attitude and perceptions, social competencies, and physical and mental health and affects organizational health since it refers to employee well-being in the workplace (Cotton & Hart, 2003; Xenidis & Theocharous, 2014).

Due to the devastating impact of COVID-19, we have observed an increase in people's symptoms of stress, anxiety, and depression. (Gallagher, Zvolensky, Long, Rogers, & Garey, 2020; Shechter et al., 2020). Recently, numerous studies have explored how COVID-19 affects people's health and coping mechanisms. Li *et al.* (2020) pointed out that the COVID-19 outbreak caused psychological problems in different subpopulations. For example, Gallagher *et al.* (2020) found that pandemic-related worry could lead to coping-related motives for substance use (e.g., tobacco), making people more vulnerable to negative events. In hospitality literature, Yan *et al.* (2021) indicated that COVID-19 risk perception is associated with depression symptoms among hospitality workers. Kang, Park, Lee, and Lee (2021) further point out the extreme anxiety and stress associated with COVID-19 among many frontline employees where pandemic-induced stress negatively influences organization trust, job satisfaction, and self-esteem. However, most studies are quantitative, outlining the lack of qualitative perspectives on studying people's stress and coping mechanisms during the global pandemic.

2.2 Stress among the gaming industry workers

Various studies have noted that work stress in the hospitality industry is higher compared to that of other sectors (Faulkner & Patiar, 1997; Kim, Murrmann, & Lee, 2009; Mohamed, 2015; Zohar, 1994). Casino workers are often exposed to a variety of physical and emotional problems (Wan & Chan, 2013). Physically, workers suffer from heavy workload due to long and inhumane hours (Chan, Wan, & Kuok, 2015; Wong & Lam, 2013). Most casinos also require workers to stand for long periods, some even include lifting heavy items such as carrying a tray loaded with free drinks for gamblers (Bayard de Volo, 2003; Tate, 2001). Workers also have to deal with stress from training and career development issues (Chuang & Lei, 2011). Unhealthy work conditions caused by

noise, smoking, and light pollution is also another significant stressor to personal health since casinos are enclosed environments (Wong & Lam, 2013).

On emotional stress, casinos have strict behavioral guidelines aimed at keeping "professional" employees and managing relationships with customers. (Ashforth & Humphrey, 1993; Cheng & Wong, 2015). Employees are required to stay professional and demonstrate positive attitudes when interacting with guests, which automatically increases their levels of stress (Teoh, Wang, & Kwek, 2019). Additionally, hospitality employees face a great deal of pressure due to just-in-time service delivery, which obligates them to meet clients' needs as soon as they arrive (Wan, 2013). They also suffer from job insecurity, which mainly comes from external stimuli such as the economic condition, policies, or competitors (Wong & Lam, 2013).

Existing research on work-related stress mainly focus on employees such as frontline staff, restaurant chefs, cocktail waitress, casino dealers, pit managers, and supervisors. There is also an apparent lack of research on the stress experienced by the top-level management team in casino groups, especially during the pandemic. COVID-19 has clearly brought significant impact on the gaming industry. Given the devastating impact of COVID-19 and the observed increase in people's stress, anxiety, and depression symptoms (Gallagher et al., 2020; Huang & Chen, 2021; Shechter et al., 2020). The level of stress casino management has experienced before the pandemic has clearly shifted upwards post-pandemic. This study aims to explore the different types of stress casino managers are facing and what strategies they use to cope with the stress during the pandemic.

3. Research method

3.1 Study site

Macau has been known as the "Monte Carlo of the Orient". Its gaming industry can be traced back to the 16th century when Macau first opened its harbor to foreign visitors. In 2002, the monopolized gaming industry was opened up with five new operators from out of the country entering the market. Since then, six groups gained official licenses in local casino operations. These groups were SJM, Wynn, MGM, Melco, and Galaxy. Tourism from gambling accounts for half of Macau's economy takes up to 50% of the region's gross domestic product. Most of its visitors come from Mainland China and Hong Kong.

In 2007, Macau overtook the Las Vegas Strip in gambling revenues as large foreign casinos from both Las Vegas and Australia arrived. However, the outbreak of the COVID-19 pandemic brought a huge challenge to the region's lifeblood industry. Because liberalization of the gaming industry started last 20 years, the gaming licenses will expire come 2022. The government will then draft new concession contracts and decide whether Macau's six casino operators can continue operating. Because the gaming industry is so dominant in the Macanese economy, issues related to renewing gaming licenses are seen as the most significant problems, especially during the COVID-19. Casino groups therefore faced (and continue to face) tremendous challenge during the pandemic. To understand what specific stress they are facing and what strategies are being adopted to cope with the stress, it is best to select the current six main players in the gaming industry as the study's main research object.

3.2 Data collection

Two rounds of interviews with casino managers of the six casino groups were conducted for data extraction. The first round, composed of 12 interviews, was arranged from April to June 2020. As a follow-up measure,

second interviews of the six casino groups were conducted, which also comprised of 12 interviews in May 2022. Ultimately, data was collected from 24 unique interviewees. In-depth interviews with semi-structured questionnaires were employed as the main research tool. Interview questions included two major focuses: 1). What types of stress have you been experiencing during the COVID-19 pandemic; 2). What coping strategies are you using in response to said stress.

The questionnaire was composed of three main sections. In the first section, questions such as “What are the difficulties you are facing during this pandemic?”, “What is the most stressful part?”, “What impact does the pandemic bring to your company?” were included to explore the different categories of stress faced by the casinos. In the second section, questions mainly targeted the coping strategies during the pandemic, which included open-ended questions such as “How do you cope with stress?”, “What responses do you take?”, “What strategies do you apply?”. In the last session, demographic information of interviewees was collected. Grounded theory was then applied, which was then used to continue to interview until no new information of related topics could be generated (Chiovitti & Piran, 2003).

Purposive sampling was adopted in selecting interviewees inviting top management in Macanese casinos. Here, we hope to understand the overall situation of Macau gaming industry. The final data set was generated from 24 interviewees from different departments in the 6 casino groups in Macau. Three interviews were conducted face-to-face and the rest were conducted via telephone. Since all the interviewees selected were Chinese, both Mandarin and Cantonese were used during the interviews. The average interview period was around 30 minutes. All the interviews were recorded with their consent and later transformed into text. The original transcript was then carefully translated into English and then back-translated Chinese by adopting a two-way translation method to ensure accuracy (Esposito, 2001).

3.3 Data analysis

Using grounded theory procedures, we adopted a qualitative approach to analyze the data collected in the interviews. Grounded theory is a systematic methodology where the ideas emerge from the data. Researchers would identify the ideas with codes summarizing the key concepts. The codes are then grouped into higher-level concepts, which are then organized into categories as more data are being collected and re-evaluated (Corbin & Strauss, 1990; Morse et al., 2021). Coding was commonly divided into three phrases, namely open coding, axial coding, and selective coding (Strauss & Corbin, 1998).

This study used an inductive procedure to determine the stressors experienced by the casino management during the pandemic because of its suitability for exploring areas of limited knowledge (Bengtsson, 2016). The interview transcripts were first read by the authors to comprehend its overall meaning. Open coding was then conducted by identifying salient points which included specific stressors and coping strategies. After continually comparing similarity and differences among the coded units, they were then categorized into higher-level sub-categories and categories. The coding processes were conducted separately by two authors to ensure reliability (Leiva, Ríos, & Martínez, 2006; Perreault Jr & Leigh, 1989).

Following conventional content analysis, codes were defined during data analysis. The process was mainly divided into three stages: 1) salient points were identified from the interview transcript; 2) Nodes were summarized from the salient points (sub-categories); 3) Nodes under similar theme were finally formed into big

categories. The final coding categories included “stress” and “coping strategies” at the top levels and with several subcategories under each top level. Detailed information was demonstrated in Tables 2 and 3. The number that appeared in each sub-categories indicated the number of interviewees who mentioned this theme during their respective interviews.

4. Results

4.1 Demographic information of interviewees

We have collected responses from 24 interviewees in the six major casino groups in Macau. Among all the interviewees, 70.8% of them are male while 29.2% are female. Most of the interviewees are middle aged directors who have worked in the gaming industry for 10-20 years. The detailed profile is listed in Table 1.

Table 1 Demographic profile of interviewees (N=24)

Demographics	Frequency	%
Sex		
Male	17	70.8
Female	7	29.2
Age		
31-35	1	4.2
36-40	5	20.8
41-45	6	25.0
46-50	8	33.3
51-60	4	16.7
Position		
Vice President	1	4.2
Assistant Vice President	3	12.5
Director	12	50.0
Section Chief	8	33.3
Years in the Gaming industry		
Under 10 years	2	8.3
10-20 years	18	75.0
20 years above	4	16.7

4.2 Stress

4.2.1 Economic difficulties

The most obvious and direct stress comes from the economic difficulties. Economic stressors are one of the most common sources of stress (Huang & Chen, 2021) with economic recession being a major stressor of casino

employees in Macau (Wan, 2010; Wong & Lam, 2013). All the interviewees mentioned this severe stressor. During the pandemic (especially in its earlier stages in 2020), casinos suffered heavily from financial losses due to the initial responses to the outbreak. The pandemic affect revenues beyond gambling: hotels, shopping areas, and events management were also impacted. Huge economic losses generated the majority of stress for casino management leading to noticeable issues in mental health (Catalano et al., 2011; Zivin, Paczkowski, & Galea, 2011). This outlines the dire need for full attention and awareness on the subject at hand.

“The biggest impact of the pandemic should be on gambling revenue. There are few domestic and Hong Kong tourists, only local consumption. If you do worse than other casinos and hotels, you will have no business at all. The number of casino visitors and hotel occupancy have dropped to around 10% since the outbreak. And when it was closed at the beginning during the first outbreak, there was simply no business at all”. (Interviewee 1)

“The turnover of the gaming company has dropped very seriously, and it has reached a situation where it cannot break even. No matter "midfield", "high-roller betting areas" or "VIP junkets", they all have experienced a cliff-like decline in revenue. The company's hotels and stores are not performing well, and the convention and exhibition section has also canceled many planned activities. Overall, The company's revenue fell across the board in the past two years.” (Interviewee 5)

4.2.2 Policy restrictions

The second major stressor are policy restrictions. Tourist mobility was seriously influenced during the pandemic, especially during the initial phase. The individual travel scheme was suspended in January of 2020 after COVID-19 cases were reported in Macau. A 15-day closure of casino business soon followed in February the next month. The region then experienced a three month lock down from April to July where foreigners were not allowed to enter Macau, while mainland visitors were required to undergo a 14-day quarantine. Even when border reopened, visitors needed to present proper nucleic acid test reports when visiting Macau. This limited accessibility caused huge difficulties for the gaming industry.

“In fact, we look at the entire number of visitors, tourists, the number is much lower, and you can see that all mainlanders basically cannot come to Macau at the beginning of the pandemic. There is also a 14-day quarantine when you come to Macau. The limited mobility issue leads to a sharp decrease of visitors to casino. In fact, not only us, but the whole of Macau's tourism, food and other aspects have been affected.” (Interviewee 12)

Another noted hurdle post-pandemic was the tightened restrictions on gambling behavior of Chinese citizens. Many interviewees mentioned that the Chinese government established “cross-border gambling destination blacklist” in 2020 to combat money laundering schemes. Although the interviewees believe that the “blacklist” was not specifically aimed at Macau, the policy affected the number of short-term gambling tourists. Moreover, the National Immigration Administration has since taken a series of measures to persuade Chinese citizens not to leave the country unless necessary or urgent, decreasing the number of mainland tourists to Macau.

4.2.3 Operation-related stress

The interviewees mentioned the pandemic's influence on casino operation and industry structure. Due to the pandemic, social distance was required by all the casino groups. Further, the capacity of table games was limited to 3 – 4 people per table. Thus, the atmosphere and entertainment value was heavily affected.

“The guests come to the casino to relax and have fun. They may feel intense when they come to a casino with everyone wearing masks. The atmosphere is ruined.” (Interviewee 1)

Many interviewees also expressed concern about the change of customer portfolio. The main income of casinos pre-pandemic were from VIP junket customers. Post-pandemic however, a sharp decline of VIP customers happened. Previously, up to 80% of the customers were gamblers (VIP junkets). Now, most of the customers are individual tourists. Therefore, the pressure on CRM service dramatically increased.

The number of licensed junket operators in Macau has decreased to half in the past year. VIP business has shrunk to a quarter of Macau's total gaming revenue as our central government fight against money laundering and also travel restrictions brought on by the Covid-19 pandemic (interviewee 7)

As a result, numerous gaming companies have terminated their cooperation with gaming junkets, meaning employees hired by these gaming junkets are facing unemployment. Many casino managers report that this change will impact the market, but it is estimated that the impact will not be as strong as at the beginning of the pandemic outbreak because the market's expectations for the situation have been duly lowered.

4.2.4 Future uncertainty

Uncertainty is a cognitive phenomenon which will lead to stress (Gudykunst & Nishida, 2001) and cause threat to both physical and mental health (Peters, McEwen, & Friston, 2017). During the initial stage, most of the casino managers mentioned that the mental stress was generated by the uncertainty of COVID-19 pandemic. As one interviewee put it, “No one knows when will this pandemic end.” Many interviewees highlighted their concern on the uncertainty of pandemic situation.

In the pandemic's later stages, mental pressure came from the unemployment caused by the pandemic's aftershocks. The number of visitors to Macau is largely deceased, and there are fewer gamblers. Gaming companies were already overstaffed. Thus, the casino management, together with its employees, feel higher levels of pressure.

“At present, it can be seen that the supervision of employees has been gradually tightened, such as whether work clothes and customer attitudes meet the requirements. If employees receive three warning letters, they can be dismissed.”

The renewal of gaming licenses also increases uncertainty. All of the six casino groups showed concern on the government's decision. Simultaneously, the pandemic put extra pressure on these casino groups. They have to tread carefully with the license renewal while facing the pandemic's challenges. Moreover, the Macanese government submitted the working text of the new "Gaming Law" to the Legislative Council panel for a number of major revisions, which have increased the uncertainty level for Casino management teams. Many of the

interviewees expressed the concern on the mental stress caused by this specific uncertainty. Many of the interviewees expressed their job anxiety and how this affected their team morale and turnover rate.

“In view of the repeated outbreak of the COVID-19 pandemic, in the past two years or more, the number of tourists in Macau has dropped sharply, and the operation of the gambling industry has been restricted, which has caused many casinos to continue to “burn money”. It coincides with the revision of the “Gaming Law” in Macau, which is even more detrimental to the casino operation.” (Interviewee 10)

“Macau is currently in the process of amending the “Gaming Law”, which stipulates that casino must be located in the premises owned by gaming companies in the future and proposes to give a 3-year transition period to deal with the title issue, which makes it very difficult for satellite casino operations. We don’t know what the future is and feel a great level of uncertainty.” (Interviewee 7)

Table 2. Stress faced by casino management in Macau

Categories	Sub-categories	Salient points
Economic difficulties	Decreased Revenue (24)	Gambling revenue Hotel & Restaurant Shopping revenue
	Increased operational cost (22)	Expenditure on disease control
Policy restrictions	Restrict on mobility (19)	Lockdown Nucleic acid test Restrictions on visa issuing for individual travel scheme
		2-week compulsory closure of all the casinos business
	Restrict on gaming industry (11)	Establishment of cross-border gambling destination blacklist
Operation-related stress	Affect casino business operation (21)	Social distance is required Capacity is limited Affect the atmosphere of entertainment
		Affect the component of customer portfolio Fewer VIP junket customers
Uncertainty	Affect morale and turnover rate (16)	Uncertainty of future Renewal of the gaming licenses in 2022 Anxiety on job security Depression symptom among the employees

4.3 Coping strategies

Interview scripts were analyzed based on the framework where it was found that casino groups utilized both problem-focused and emotion-focused strategies to cope with the pandemic. The result of the coding themes, sub-themes, and salient points are shown in Table 3 herein.

4.3.1 Problem-focused coping

Problem-focused coping refers to problem-solving and managing the source of crisis. Three main sub-themes were generated. First, disease control is the most frequently mentioned strategy during the initial stage. All casino groups paid more effort in hygiene condition of the environment and provide sanitized environment since the breakout of COVID-19. They also offer healthcare to employees and provide hygiene kits such as medical masks, hand sanitizer, etc. Furthermore, casino teams always keep themselves updated on most recent pandemic news.

“We pay attention to the epidemic information released by the SAR government and keep close contact with relevant departments. Following the guidelines of the SAR government, all team members and guests entering casinos or our properties are required to undergo temperature checks, wear masks, and complete a personal health declaration. If any at-risk persons are found, they will be notified and dealt with in accordance with the guidelines of the Health Bureau.” (Interviewee 9)

“Provide personal disinfection equipment such as hand sanitizer at appropriate locations; Deep cleaning of “heating, ventilation and air-conditioning systems” and regular filter replacement; Increase the frequency of cleaning and disinfection of various public, hotel and back-office areas (including shuttle buses) and strengthen implementation in accordance with the prevention recommendations issued by the Health Bureau.” (Interviewee 4)

During the crisis, many CEOs and executives at large companies took voluntary pay cuts as their companies lay off workers in response to the widespread Coronavirus outbreak. Many casino managers mentioned that the firm’s executives, including its CEO, voluntarily reduced their salary by around 30 percent to save operation costs for the enterprise. They also “forfeited all unused leave”.

In the recovery stage, marketing effort was seen as an important coping strategy. Sales promotion and marketing campaign were commonly used marketing tools. Many interviewees mentioned hotel discounts and lucky draws for hotel and catering coupons along with other promotional activities to boost retail sales. Moreover, many casino groups considered it would take a relative long time for the recovery of the international market. Thus, they began to focus more on the local market during the short-term. Many casino groups provided hotel and restaurant discount for local Macanese Residents. Some interviewees mentioned about the promotion of “staycation”, which encourages local tourism: instead of targeting mass tourists from abroad, some casino groups market their hotel as a place where local residents can spend quality family time especially after the pandemic has kept them long indoors. The “Stay, Dine, and See Macau” project was very popular in Macau. All Macanese residents can enjoy special discounts for local tours and hotel staycations during the campaign. Many hoteliers have found this to be an effective strategy since long-haul travel is expected to resume slowly and in a phased manner. With the economy reopening, recovery would have to first start locally.

“The impact of the epidemic is longer than expected. Macau tourists did not increase quickly after the re-opening of independent travel. Therefore, we have to depend more on local market for recovery.” (Interviewee 6)

For the long term, future plans are crucial coping strategies, especially in the restarting phase. Due to the current mono-economy structure of Macau, the need for industrial diversification is mentioned by many interviewees. Public-private partnerships (PPP) are frequently mentioned in the development plans of many casino groups, which include projects in the MICE industry, sports tourism, and cultural and heritage tourism. For example, the MGM group have cooperated with Macau Cultural Development Promotion Association and promoted heritage tourism through a narrative film called “Macau: Back to Common Roots”. Other PPP projects are being planned for future execution.

Another planned revitalization scheme is regional cooperation. Most of casino groups showed great interest in cooperating with other members in the Guangdong-Hong Kong-Macau Greater Bay Area (GBA). Resource integration with neighbor cities is regarded as necessary to enhance regional competitiveness. Some interviewees mentioned that Macau serves as a connection between China and the Portuguese-speaking countries. It is important to utilize its unique cultural resources to brand Macau as an “entertainment capital” in the future. Consequently, many casino groups are expanding their non-gaming businesses and putting more emphasis on the city’s cultural aspects.

“The non-gaming element has always been an important part of our integrated resort blueprint, as we believe it is an integral part of the development of Macau as a “World Centre of Tourism and Leisure” and moderate economic diversification. we always believe that to develop high-quality tourism and non-gaming projects, our products must keep pace with the times and continue to innovate to meet market changes, especially the changing tastes of mainland tourists. There is still a lot of room for development in Macau's non-gaming elements, and there is still a lot of work to be done in MICE, tourism, catering, and shopping.” (Interviewee 11)

Interviewees also emphasized sustainable and resilient development. One sustainable development direction is through Corporate Social Responsibility (CSR) practices, which focus on supporting local communities. Government expects this kind of CSR practice from the gaming industry, especially during the COVID-19 pandemic (Liu, Wang, McCartney, & Wong, 2021; Liu, Wong, Rongwei, & Tseng, 2014). According to government officials, although the CSR practices of casino operators are not directly related to the decision on renewing gaming licenses, they are definitely considered (Yan, 2021). Hence, many interviews highlighted on their CSR practices during the pandemic.

“We invested HK\$100 million to subscribe for the “Small and Medium Enterprises (Epidemic Prevention and Control) Social Responsibility Bond” issued by Bank of China Macau Branch to help alleviate the impact of the epidemic on local enterprises. The funds raised by the bond will be used to support special loans for Macau SMEs to fight the epidemic and provide support for the capital needs of medical and health care, medical device manufacturing and other related fields of epidemic prevention and control, in order to effectively promote production recovery for the society, and effectively reduce the financing cost of local SMEs.” (Interviewee 2)

4.3.2 Emotion-focused coping

Emotion-focused coping strategies refer to actions taken to reduce emotional distress caused by stressors (Herman & Tetrick, 2009). Casino managers during the interviews expressed deep concern in terms of both employee care and customer care during the pandemic. The main focus therefore is to create a mutual trust. For employees, casinos try to create a sense of job security. Some casino groups provide accommodation for employees during the lockdown period. Many also offer special leave programs, which allow flexible working hours. Some even provide psychological consultancy services to help employees overcome anxiety during the pandemic period.

“Our group has always regarded our employees as family, and we have provided accommodation for non-local employees and offer paid leave during the lockdown. In addition, we also provide psychological counseling to our employees to help them release mental stress.” (Interviewee 18)

While for customers, they hope to create a guarantee for a “safe stay”. Many casino groups then provide free hygiene kit and provide aromatherapy in hotel rooms to ensure a relaxing atmosphere.

“We pay a lot attention to create a relaxing atmosphere for our guests. We use soothing aromatherapy in our hotel rooms. We understand that the major concern for the guests is health issue, so our group put a lot of effort in maintaining a hygiene environment, such as providing personal disinfection equipment like alcohol-based hand sanitizer and facial masks at appropriate locations. Instead of using traditional medical facial masks, we print beautiful patterns on it to bring a good mood to our guests. All these actions aim to make our guests relaxed.” (Interviewee 14)

For managers themselves, many interviewees adopt emotion regulation, which involves adjusting attitude and behavior of individuals during specific situations (Gross & John, 2003). Some interviewees mentioned that they would take meditation and exercise when they feel mental stress. Some also talked about controlling their temper and trying to remain positive at work.

Most interviewees, however, talked about the importance of family support. They spend quality time with their families and take a break during this pandemic. Company of friends are also frequently mentioned. Complaining about stressful situations with friends also effectively helps them reduce mental stress.

Moreover, changing the perspective is also useful. Some casino managers even treat the pandemic as an opportunity to restructure their business, which could be valuable time for them to recalibrate their life’s direction and where they should go after the pandemic. It could therefore be beneficial for the whole gaming industry in the long term.

“After the epidemic, I believe it is a great opportunity for Macau, particularly I personally believe that Macau should seize this opportunity and fully integrate into the Greater Bay Area. Therefore, we have confidence in the future development.” (Interviewee 22)

Table 3. Coping strategies used by casino groups in Macau

Themes	Sub-themes	Salient points
Coping strategies		
Problem-focused coping	Initial stage (24)	Disease control Provide sanitized environment Offer healthcare and medical equipment Keep updated on pandemic news Reduce cost: non-pay leave; Melco IR executive team voluntary reduced their salaries by 33% from (Wynn)
	Recover stage (21)	Sales promotion Marketing campaign Local market
	Restart stage (17)	Industrial diversification Corporate within GBA PPP CSR practices Sustainable and resilient development
Emotion-focused coping	Employee care (19)	Provide accommodation during lockdown period Subsidy Psychology consultant (Anxiety about job security)
	Customer care (18)	Emphasize on “safe stay” Free hygiene kit Adopt aromatherapy in hotel rooms Relax
	Individual adjustment (15)	Emotion regulation: meditation, yoga, enjoy family time, look for family support Cognitive reframing: Opportunity to restructure business

5. Discussion and conclusion

5.1 Theoretical implications

This research extends Lazarus and Folkman's transaction theory on the gaming industry during the COVID-19 pandemic. To better explain this process, a conceptual model was established, which included stress, coping strategies, and impact on wellbeing (Fig. 1). Previous studies on stress and coping mainly focused on individuals (Polizzi, Lynn, & Perry, 2020; Zhu, Gao, Zhang, & Jin, 2020), while this study chose the perspectives of management as a lens to the whole industry, therein enriching the literature of Lazarus and Folkman's transactional model in the context of the gaming sector.

Previous research on stress in the casino industry found role ambiguity, work overload, high customer expectations, and unreasonable complaints are some of the most common stressors (Wan, 2013). During the pandemic however, new sets of stressors emerged. Our study reveals that the major stressors that casino managers face nowadays mainly come from four aspects generated from the economy, policy, operation, and uncertainty of the future. Casino groups have suffered a lot from revenue loss and policy restrictions, directly affecting casino business operations, changed customer portfolio, and brought uncertainty of future. It also demonstrated that environmental stressors are capable of influencing individual mental health. Anxiety on job security also arose due to these abovementioned stressors. These results coincided with Huang and Chen (2021)'s argument that people's well-being are affected by financial losses caused by the pandemic.

This study also corroborates with research on crisis management, suggesting the existence of different phases during a global crisis (Coombs & Laufer, 2018; Kuščer, Eichelberger, & Peters, 2022). Coping strategies vary along with the changing situation of different phases (Dayour, Adongo, Amuquandoh, & Adam, 2020; Kuščer et al., 2022). For problem-focused coping, casino managers take various measurement during different stages of the pandemic.

During the initial stage, casino groups paid most of their attention in disease control and prevention. Cost reduction was another way to lower impact of sudden revenue decrease. Results demonstrate that casino managers have taken voluntary pay cuts to help their companies overcome tough situations, which is regarded as a useful approach in leadership studies. While largely a symbolic act, cutting executive pay could help managers enhance leadership and improve their ability to attract and retain employees in the long term (Alves, Gietzmann, & Jørgensen, 2021).

During the recovery stage, casino groups tried different approaches for business recovery. Marketing effort here becomes the major focus. Similar to previous global pandemics, recovery marketing plans were launched as an effective way to rejuvenate the economy during as seen during the SARS (Severe Acute Respiratory Syndrome) outbreak before (Cooper, 2017; Kim, Chun, & Lee, 2005). Moreover, previous scholars argue that tourism recovery always begins with local and short-haul tourism demands (Smeral, 2010; Zhang, Song, Wen, & Liu, 2021). Our study shows that casino managers utilizes sales promotion, marketing campaigns, and focused on developing local market for recovery. As a result, staycation became an effective tool to trigger economy recovery.

The restart phase focuses future plans. Three directions were derived from the interviews, namely industrial diversification, regional cooperation, and sustainable and resilient development. Mono-economy with over dependance on the gaming industry is a widely recognized issue for the region (Chau, Luo, & Duan, 2022; Liu et al., 2021). Industry diversification is therefore seen as urgent and necessary, with Wu and Master (2017) stating

that Chinese government leaders highlighted the importance of Macau's diversification beyond the gaming sector. According to the Macanese government's Policy Address, it plans to regulate the gaming industry by promoting the construction of a "world tourism and leisure center" (Yan, 2021).

Following other studies, regional cooperation within the Greater Bay Area has also become a trend as a research focus and a tourism plan (Kirillova, Park, Zhu, Dioko, & Zeng, 2020; Park, Tse, Mi, & Song, 2022). Sustainable development has also been mentioned by many casino managers, with a specific highlight on corporate social responsibility. This is because casino operators' performance on CSR matters for their deliberations and it is likely that new contracts will incorporate provisions dealing with CSR (Yan, 2021). Consequently, all six casino groups are trying to demonstrate their contribution to the local community, which is beneficial for their license renewals in the near future.

For emotion-focused coping strategies, casino managers focused on employee and customer care and individual adjustment. Seeking support from family and friends is proven to be an effective way to release stress (Huang & Chen, 2021). Emotional regulation and cognitive reframing has also been found to be useful in coping with stress when facing difficult situations (Bonanno & Burton, 2013; DeLongis & Holtzman, 2005; Vernooij-Dassen, Draskovic, McCleery, & Downs, 2011; Wang & Saudino, 2011). Zhu *et al.* (2020) have stated that emotion-related strategies are frequently applied when people have little control over the external environment. This study also found that both problem-focused and emotion-focused strategies are useful when facing stress, especially because they supplement with each other (Huang & Chen, 2021). Along with helping casino managers achieve better mental health, coping strategies may also improve the organizational health of casino groups.

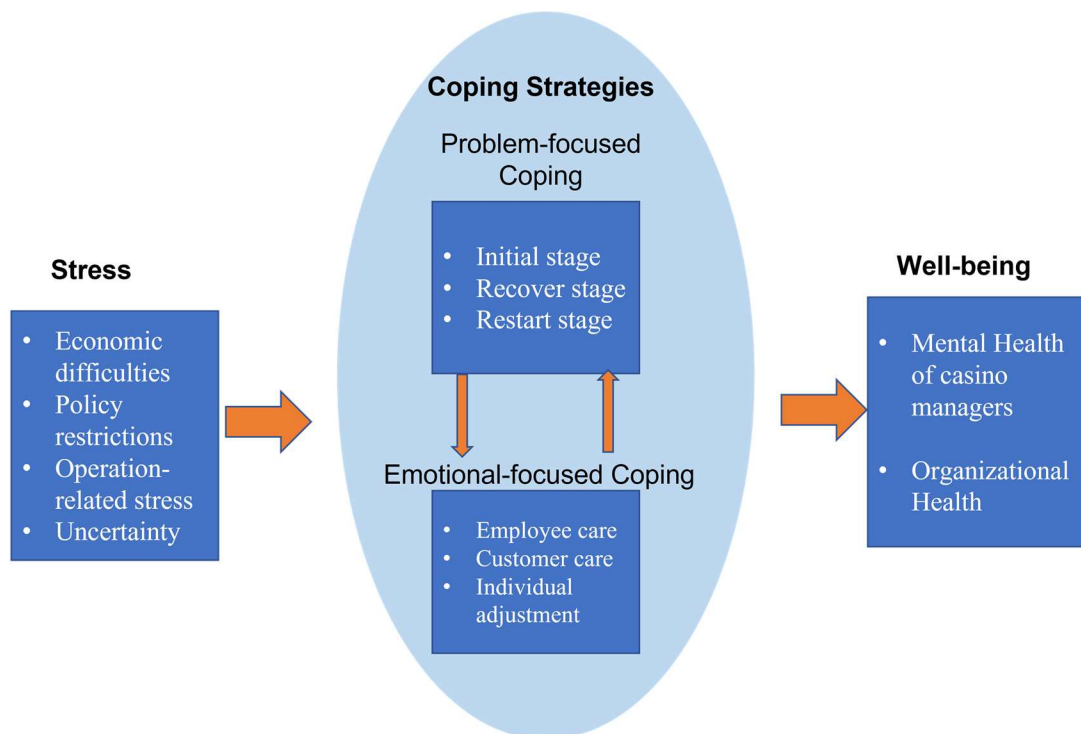


Figure 1. Conceptual model of stress and coping in the gaming industry

5.2 Managerial implications

This study also provides practical suggestions for the gaming and hospitality related industry during the COVID-19 pandemic. First, the industry should be aware of the stress experienced by casino workers, who face completely different sets of challenges than what was accustomed to before the pandemic. Safety also becomes a major concern in daily operation. Thus, the casinos should enhance hygiene conditions and support disease control policies. Another stressor is uncertainty, which casinos can mitigate should they come up with strategies to improve job security and help their staff overcome said anxiety.

This COVID-19 pandemic also came as an alert for the gaming industry. Sustainable and resilient development is the most significant implication from this pandemic. To tackle Macau's overreliance on its gaming industry, several practices could be applied. First, cooperate social responsibility is needed. As suggested by Liu *et al.* (2021), it is possible for the industry to provide resources to local communities and residents in collaboration with the government as part of the partnership. Second, industry diversification must be placed in high priority. For instance, many casino groups are planning to reform their business structure. It is suggested that casino groups should allocate more resources in non-gaming sectors. As stated by Liu *et al.* (2021) that Macau illustrates how challenges and opportunities coexist in a crisis such as a globalized pandemic. Stress could even be positive to a certain degree, which may lead to the future transformation of the entire gaming industry.

6. Limitations and future research

The limitations of this study mainly reside on three aspects. First, this study only looks at the case of Macau, which may not be applicable to other cities since Macau is a special administrative region (SAR) in China. The gaming industry in different countries and social systems may therefore face different stress sources. Second, coping strategies may take a relatively long period of time. Sustainable and resilient development needs more research, especially during the ongoing COVID-19 pandemic. The nature of stress constantly changes, thus coping strategies need to be adjusted accordingly. Therefore, more research on stress and coping needs to be conducted in the future. Finally, this study adopts a qualitative approach, which may have pitfalls in terms of interviewee subjectivity. Future research could be conducted from the following directions. First, quantitative studies may be conducted afterwards to examine the relationship between stress and coping strategies using survey instruments. Second, casino managers' stress levels and coping strategies may differ depending on the gaming culture and management system in their respective locales. Thus, it is suggested that future studies could be conducted in other gaming destinations as well.

7. References

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