

# Guidelines For Enhancing Happiness At Work Through Recreational Activities For Personnel In The Industrial Business Sector

Suwannee Rooplor\*<sup>1</sup>, Sunee Wattanakomol\*<sup>2</sup>, Thanin Silpcharu\*<sup>3</sup>,

<sup>1</sup>King Mongkut's University of Technology North Bangkok, Thailand 10800

Email: [r.suwann@gmail.com](mailto:r.suwann@gmail.com)

<https://orcid.org/0009-0006-7451-2879>

<sup>2</sup>(Corresponding author) Associate Professor Dr.,

King Mongkut's University of Technology North Bangkok, Thailand 10800

Email: [sunee.w@fba.kmutnb.ac.th](mailto:sunee.w@fba.kmutnb.ac.th)

<https://orcid.org/0000-0001-7518-8229>

<sup>3</sup>Professor Dr., King Mongkut's University of Technology North

Bangkok, Thailand 10800

Email: [thanin.s@fba.kmutnb.ac.th](mailto:thanin.s@fba.kmutnb.ac.th)

Orcid ID: <https://orcid.org/0000-0001-9503-2379>

---

## Abstract

Personnel are a crucial resource for any organization. If personnel are happy in their work, it has a positive impact on their work efficiency. Recreational activities are one way to increase personnel happiness. This research aims to study Guidelines for Enhancing Happiness at Work through Recreational Activities for Personnel in the Industrial Business Sector and then develop a structural equation model. The research was conducted using both qualitative and quantitative methods. For the qualitative research, 9 experts were interviewed and 11 individuals participated in focus group discussions. Quantitative data was collected from questionnaires administered to 500 executives in the industrial business sector, using descriptive statistics, inferential statistics, and multivariate statistics. The research results revealed the following prioritized approaches to enhancing work happiness through recreational activities for personnel in the industrial business sector were of dimensions arranged in the order of importance as follows: 1) Recreation Activity ( $\bar{X} = 4.58$ ) continuous monitoring of changes and post-activity evaluation. 2) Participation Centric ( $\bar{X} = 4.55$ ) providing opportunities for personnel to propose Recreation activity plans with clear details. 3) Organization Support ( $\bar{X} = 4.50$ ) adjusting organizational rules and regulations to align with the format of recreational activities. and 4) Data Insight ( $\bar{X} = 4.49$ ) linking organizational goal data with recreational activities to align with policies. Hypothesis testing results showed that small and medium-sized enterprises and large enterprises differ significantly in their emphasis on approaches to enhancing work happiness through recreational activities for personnel in the industrial business sector, at a statistical significance level of 0.05. The analysis of the developed structural equation model showed that it met the evaluation criteria for consistency with empirical data, with a chi-square probability level of 0.100, a relative chi-square value of 1.099, a goodness-of-fit index of 0.950, and a root mean square error of approximation of 0.014

**Keywords:** Happiness at Work, Recreation Activity, Personnel, Industrial Business

---

## BACKGROUND AND SIGNIFICANCE OF THE STUDY

All the operations in both government sector and private sector are mainly based on personnel or human resources for all successful procedures. Meanwhile, it is found that there are so many factors affecting the personnel's work performance. This reduces their work performance abilities and eventually drives them to resign from jobs. The problems found are health problems, private stress problems like those stemming from work, relationships, or finances. The Department of Mental Health, Ministry of Health (2024) realized the problems and started a helpful project of physical health and mental health promotion for working-age population. It was found that in June 2024, the working age-population

were between 15 and 59 years old, with 56.57 million labor age-population, 38.82 million working age-population, and 17.75 million population who were not in workforce. For the health problems, chronic diseases occurred in working age-population with improper physical and mental health behaviors, and physical health behavior, e.g., unhealthy food consumption, lack of exercise or physical inactivity, insufficient rest or sleep deprivation, smoking, and drinking, whereas, mental health behavior, e.g., stress and anxiety or adjustment disorder. From the suicide report in Thailand, it revealed that 3,091 working population with the age range of 20 to 59 committed suicide. The results of comparative study before and after the helpful project of physical health and mental health promotion for working-age population revealed that the happiness levels of employees were increased, the stress levels of employees were decreased, and the conflicts in organizations were decreased. Mental health care of employees in organizations was built and this created effective employee morale and work motivation and increased productivity, quality work performance, and marketing competitiveness.

The data reveals the top 5 common diseases of patients who have received medical care services as shown in Table 1-1.

Table 1-1: top 5 common diseases

| No. | Diseases                                  | Number of Services |
|-----|-------------------------------------------|--------------------|
| 1   | Circulatory system disease                | 418,192,557        |
| 2   | Endocrinology malnutrition and metabolism | 392,211,852        |
| 3   | Musculoskeletal disease/disorders         | 279,183,458        |
| 4   | Respiratory diseases                      | 278,086,276        |
| 5   | Gastrointestinal tract and oral diseases  | 274,275,274        |

Source: The National Statistical Office, Thailand (2024)

Table 1-1 shows that the most common diseases are circulatory system diseases, followed by endocrine, malnutrition, metabolic diseases, musculoskeletal system and connective tissue diseases, respiratory system diseases, and digestive system diseases including oral diseases respectively. Some diseases are categorized as NCDs, or non-communicable diseases that are not caused by pathogens and cannot be transmitted from person to person, but common lifestyle habits or behaviors cause the diseases and progress slowly with symptoms gradually accumulating over time. Once symptoms appear, they often become chronic conditions. In addition, there has been a significant increase in the number of sicknesses caused by mental disorders and behavioral issues. In 2023, there were 6,742,037 patients who received treatment services, compared to 5,727,898 in 2021. This data shows that if employees suffer from sicknesses or have chronic diseases, This may affect the employee work performance, the expenses of employees, organizations, the country, other priceless losses, and sickness.

According to the analysis of health behaviors of the working-age population conducted by the Department of Health, Ministry of Public Health in 2024, it was found that Thai people aged 18 to 59 had a tendency of decreasing physical activity, particularly in 2020 during the COVID-19 pandemic, physical activity was significantly reduced among the population, as illustrated in Figure 1-2.

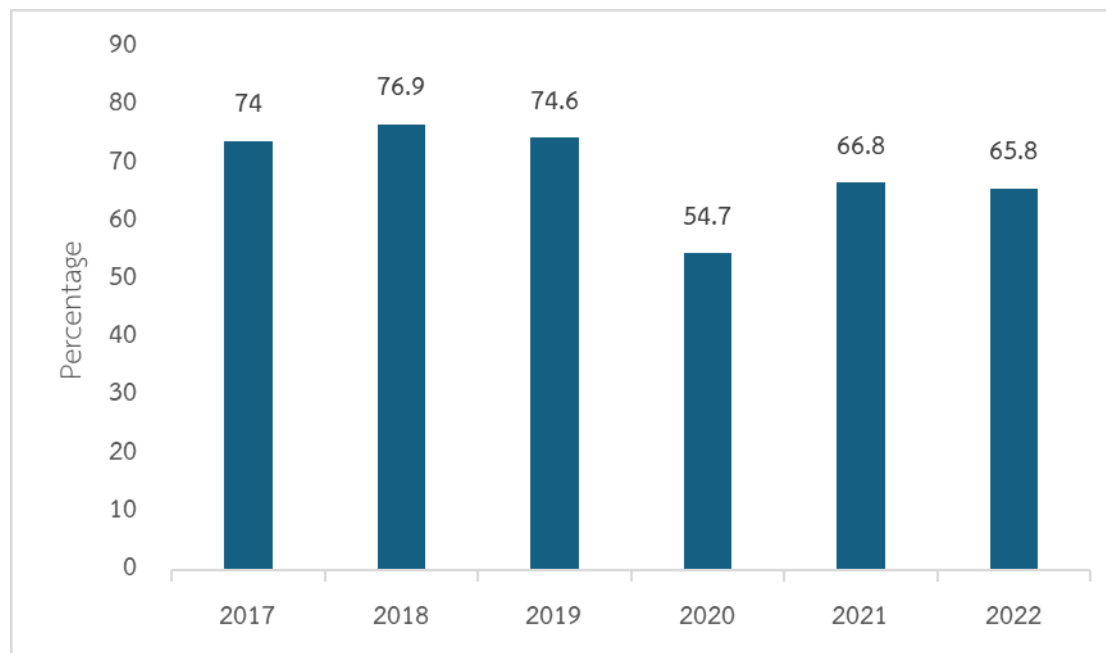


Figure 1-2 illustrates the percentage of the Thai population who have sufficient physical activity Working-age population aged 18–59 years (Department of Health Thailand, 2024)

Recreational activities are one of the initiatives that organizations can create for their employees. The benefits of creating the recreational activities can be seen in both physical and mental aspects. Physically, they promote movement of muscles and joints, improve heart function, and enhance blood circulation. Mentally, the activities help reduce stress, foster positive feelings among colleagues, and enhance interpersonal relationships. This will boost physical health, reduce stress and sickness, and lead to more happiness.

All the information mentioned above, it can be seen that the national development to increase national income through the industrial sector, various components must align and support each other. In addition, human resources play a crucial role as the driving force to success. However, if human resources or workers in the industrial sector are not properly managed, closely treated, and supported by their organizations in all aspects, it can negatively impact employee relations, job satisfaction, and overall well-being. These issues may lead to decreased work performance due to sickness, stress, and various health conditions resulting in absenteeism, income loss, property loss, or even death.

Therefore, the researcher conducted a study on “Guidelines for Enhancing Happiness at Work through Recreational Activities for Personnel in the Industrial Business Sector” seeing that the effective and well-organized recreational activities would make human resources, including employees happy and healthy both physically and mentally to be a vital force for the growth and success of the Industrial Business Sector.

## LITERATURE REVIEW

Based on previous concepts and theories regarding the enhancement of happiness at work through recreational activities for personnel in the Industrial Business Sector, the researcher can summarize the guidelines into four key components:

### 1. Data Insight

Data insight refers to the process of obtaining relevant data concerning interests in recreational activities, personal data, and other appropriate activities for the current situations. According to Frank

Lupi (2020), he studied the best approach of practices in utilizing data insights from research and experience for general recreational activities. Analysts implemented individual-level data to assess changes to access the quality of recreational destinations. The study highlighted the issues related to data collection, pre-analysis tasks, modelling, and quality assessment with an emphasis on understanding best practices when the goal is to present accurate economic valuations of the quality of accessible recreational places.

## **2. Recreation Activity**

Recreation activity refers to the process of selecting appropriate recreational activities, formats of creating the activities, and factors leading the activities to success. According to Natalya Mischenko (2024), he studied technologies innovated to support professional competencies of swimming instructors for children recreation. Initial assessments placed most coaches at “low” or “moderate” professional competency levels and the technologies didn’t meet professional standards. After the support had ended, knowledge indicators increased among the experimental group. The positive results suggested that similar approaches could be applied to improve competencies in other areas as well.

## **3. Participation Centric**

Participation centric refers to a process that encourages employees or workers at all levels to express their opinions so that they will have a good opportunity to engage in the activities that they are really interested. According to Joanne Vining (2019), he studied the attempts to assign outdoor recreational formats and preferences among Black and White households in Chicago by comparing these patterns and exploring the explanations for similarities and differences in the management and research of recreational resources. The most fundamental dimension of difference between participation in recreation and preferences among Black and White households in Chicago. The Black households have a tendency of stronger participation, especially they devote a large amount of their outdoor leisure time to create activities near their homes. Therefore, the attempts to increase opportunities of recreation for Chicago residents, especially Black residents, should pay close attention to surrounding resources. The tendency of Black people toward developed places and clearly social encounters indicates that the attempts to enhance opportunities of recreation for Black people should focus particularly on developed areas and opportunities for social interaction.

## **4. Organization Support**

Organization support refers to the organizational support for implementing recreational activities. According to Warren M. Potts (2019), he studied the effective support and supervision of fisheries for recreation to get clear recognition, including the definitions of legal policies, inclusive co-management processes, clearly defined economic and social monitoring, and efficient, transparent funding mechanisms. The policies of recognizing all sectors of the fishery and implementing adaptive plan and contingency strategies should be issued to preserve the diverse values of resources for all people effectively.

## **OBJECTIVES OF THE STUDY**

The objectives of this research were:

- 1) to study the structure and operating characteristics of industrial business focusing on enhancing happiness at work through recreational activities for personnel in Industrial Business Sector
- 2) to study the components of guidelines for enhancing happiness at work through recreational activities for personnel in Industrial Business Sector
- 3) to develop a structural equation model of guideline for enhancing happiness at work through recreational activities for personnel in Industrial Business Sector.

## RESEARCH METHODOLOGY

This is an inductive study with mixed-methodology research. The research method consisted of qualitative research by means of in-depth interview, quantitative research by means of data collection, and qualitative research by means of focus group discussion to verify the model. The mixed-methodology research included the following:

1. Qualitative research by means of in-depth interview: the population consisted of 9 experts by the purposive sampling included the experts from 3 groups: 3 experts of executives from business group, 3 experts from government sector, and 3 from educational field.
2. Quantitative research: the population were selected from 80,543 industrial business entrepreneurs with the department of human resource management (Office of the Permanent Secretary, Ministry of Commerce, 2024). The population were divided into two groups: large enterprises with more than 200 employees, and small and medium-sized enterprises (SMEs) with less than 200 employees. The researcher determined the sample size of 500 samples with the technics of analyzing the structural equation model: SEM. The researcher implemented multistage sampling (Silpcharu, 2024) including the stage of cluster sampling with the classification of two business groups: small and medium-sized enterprises and large enterprises, and the stage of probability sampling with lottery drawing method and data collection from the sample group.
3. Qualitative research by means of focus group discussion to verify the model: the population consisted of 11 experts and the purposive sampling was implemented.

## RESULTS OF THE STUDY

| Table 1                                                                                                                                           |                                    |      |                     |                   |      |                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------|---------------------|-------------------|------|---------------------|
| The significance levels of guidelines for enhancing happiness at work through recreational activities for personnel in Industrial Business Sector |                                    |      |                     |                   |      |                     |
| Components of guidelines for enhancing happiness at work through recreational activities for personnel in Industrial Business Sector              | small and medium-sized enterprises |      |                     | large enterprises |      |                     |
|                                                                                                                                                   | $\bar{X}$                          | SD.  | significance levels | $\bar{X}$         | SD.  | significance levels |
| Overall significance levels of components                                                                                                         | 4.48                               | 0.32 | high                | 4.58              | 0.32 | highest             |
| 1. Recreation Activity                                                                                                                            | 4.53                               | 0.37 | highest             | 4.62              | 0.34 | highest             |
| 2. Participation Centric                                                                                                                          | 4.51                               | 0.37 | highest             | 4.59              | 0.34 | highest             |
| 3. Organization Support                                                                                                                           | 4.45                               | 0.34 | high                | 4.56              | 0.35 | highest             |
| 4. Data Insight                                                                                                                                   | 4.42                               | 0.35 | high                | 4.55              | 0.41 | highest             |

The overall findings revealed that large-scale industrial businesses placed greater importance on guidelines for enhancing happiness at work through recreational activities for Personnel in the Industrial Business Sector than medium and small-sized enterprises. The overall findings were rated at the highest level with a mean score of 4.53. When considering each component of the guidelines for

increasing happiness at work through Recreation Activity, Participation Centric, Organization Support, and Data Insight classified by business size, it was found that there were differences in every aspect. In all components, the large enterprises gave more importance to such approaches than medium and small-sized enterprises.

The research results showed that the overall statistical values used to compare the differences in the importance levels of guidelines for enhancing happiness at work through recreational activities for personnel in the Industrial Business Sector were at statistically significant difference level of .05.

The statistical indices used to assess the model fit of the structural equation model, before and after the model modification, indicated that the probability of the chi-square statistic (CMIN-p) was 0.100, which was greater than 0.05. The relative chi-square (CMIN/DF) was 1.099, which was less than 2.00. The goodness-of-fit index (GFI) was 0.950, which exceeded the threshold of 0.90, and the root mean square error of approximation (RMSEA) was 0.014, which was less than 0.08. Therefore, the all four indices met the acceptable criteria. It can be summarized that the modified structural equation model of smart industrial estate management towards sustainable growth demonstrates a good fit with the empirical data.

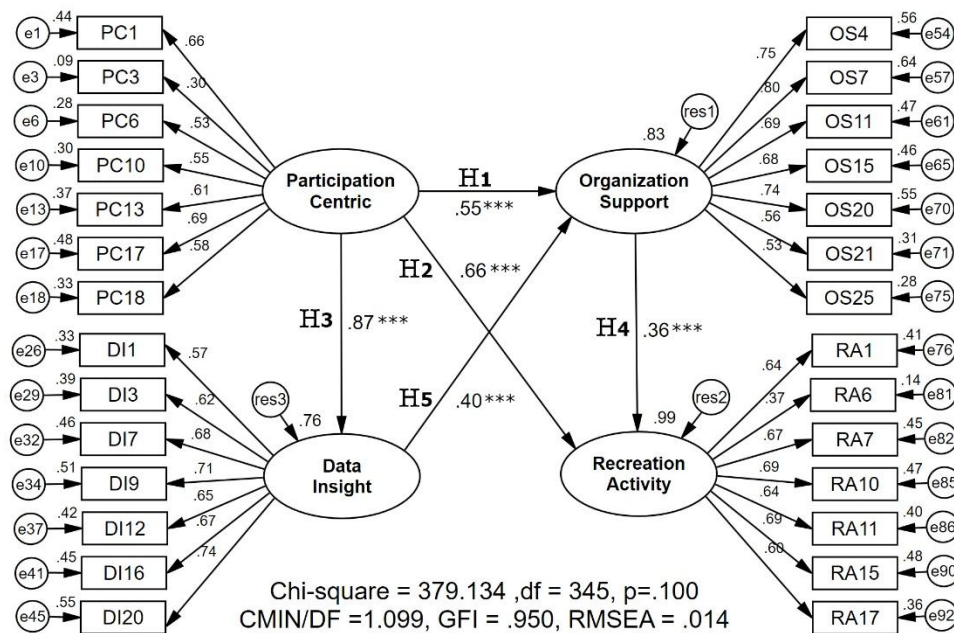


Figure 4: Structural equation model of the guidelines for enhancing happiness at work through recreational activities for personnel in the Industrial Business Sector in the standardized estimate mode after model adjustment

The hypothesis testing results were conducted to analyze the causal relationships among latent variables in the structural equation model of the guidelines for enhancing happiness at work through recreational activities for personnel in the Industrial Business Sector. A total of five hypotheses were tested: H1: The Participation Centric component directly influences the Organization Support component, with statistical significance at the level of .001 and a standardized regression weight of 0.55, supporting the research hypothesis. H2: The Participation Centric component directly influences the Recreation Activity component, with statistical significance at the level of .001 and a standardized regression weight of 0.66, supporting the research hypothesis. H3: The Participation Centric

component directly influences the Data Insight component, with statistical significance at the level of .001 and a standardized regression weight of 0.87, supporting the research hypothesis. H4: The Organization Support component directly influences the Recreation Activity component, with statistical significance at the level of .001 and a standardized regression weight of 0.36, supporting the research hypothesis. H5: The Data Insight component directly influences the Organization Support component, with statistical significance at the level of .001 and a standardized regression weight of 0.40, supporting the research hypothesis.

## DISCUSSION

The guidelines for enhancing happiness at work through recreational activities for personnel in the Industrial Business Sector both in overall terms and across the four key components: Data Insight, Recreation Activity, Participation Centric, and Organization Support revealed that three components (Recreation Activity, Participation Centric and Organization Support) were rated at the highest level of importance, while Data Insight was rated at a high level of importance.

The component with the highest average score is Recreation Activity. This empirically demonstrates that recreational activities are crucial for enhancing the happiness and job satisfaction of personnel in the industrial business sector. Participating in these activities not only helps reduce stress but also promotes the physical and mental health of employees. The impact of recreational activities on job happiness aligns with the research of Thawat, 2018

The hypothesis testing results showed that the Participation Centric component had the strongest total influence on the Recreation Activity component, with a standardized regression weight of 0.99, indicating the highest overall influence. Additionally, Participation Centric had the strongest direct influence on the Data Insight component, with a standardized regression weight of 0.87. This provides empirical evidence that employee participation contributes significantly to the development of high-quality data insights. When employees actively play an important role in providing suggestions, and planning of the recreational activities, it helps generate data that more accurately reflects the essential needs of employees, (Nadon, 2022) and Jongitjaroen, Silpcharu & Wattanakomol (2024) found that organizational support plays an important role in influencing attitude change, development methods and developing appropriate activities for personnel.

## RECOMMENDATIONS FROM THE STUDY

### 1. Government should:

1.1 integrate the recreational activities with the occupational health and safety measures; place importance on the recreational activities as a big part of the measure of occupational disease prevention, e.g., office syndrome or stress at work; assign the recreational activities as a big part of the policy of workplace health protection and promotion, such as exercise to protect chronic diseases and activities to enhance mental health

1.2 promote investment and support a budget for the recreational activities by providing customs duty incentives for the workplaces where the recreational activities and employee activities are assigned, e.g., fitness center, gymnasium, or recreational training activities.

1.3 provide guidelines for learning promotion of recreational activities at work as a fundamental subject. This would help learners/students understand the process and formats of recreation activities, enabling them to appropriately apply this knowledge when they become part of the workplace in the Industrial Business Sector.

1.4 issue policies to encourage industrial organizations to consistently set up recreational activities for their personnel and to raise awareness of the physical and mental health benefits that result from well-designed recreational activities.

2. Industrial Business Sector should:

promote recreation activity by continuously monitoring and evaluating the outcomes after implementation. They should provide external experts or trainers to help facilitate such activities and ensure that recreational programs are organized inclusively across all departments.

support participation centric by allowing employees to propose Recreation activity plans with details including activity types, responsible persons, budget, and quality assurance. The efficiency and effectiveness of the activities should be regularly evaluated to ensure they contribute to happiness at work. Employees at all levels should be encouraged to express their opinions freely, both before and after the activities.

organizational support and adjust organizational regulations to align with the formats of recreational activities, such as flexible working hours. A specific unit responsible for recreational activities should be established, and appropriate facilities, e.g., meeting rooms, internet access should be provided to support different types of recreational activities.

support data insights by linking recreational activities with organizational goals to ensure coherence with corporate policies. They should compile a list of external organizations capable of facilitating Recreation activity programs and conduct interest surveys among employees at different levels to ensure activities match their specific needs and preferences.

#### RECOMMENDATIONS FOR FURTHER STUDY

1. Although there is a piece of evidence indicating that the recreational activities help increase happiness at work, there is a lack of data insights regarding the effect of quality and quantity of employee performance and mental health in industries, and there is a lack of serious study of the recreational activities influencing employee performance and mental health in Industrial Business Sector. Therefore, it is necessary to study the influence of recreation activities affecting employee performance and mental health in Industrial Business Sector through a longitudinal study to follow the results of recreational activities on stress at work, job satisfaction and capabilities for performance, and it is necessary to compare the factories or the companies where constantly provide recreational activities for their employees with the other organizations where the recreational activities are not provided to analyze the difference of work performance, implement the psychological and physiological tools, e.g., cortisol test, or a questionnaire of mental health affecting employee performance and mental health in Industrial Business Sector. A research title on “The Influence of Recreational Activities Affecting Employee Performance and Mental Health in Industrial Business Sector” should be studied in the future.

Employees/personnel in the Industrial Business Sector are quite different in terms of age range, sex, culture, and types of jobs and some recreational activities may properly set for some but not for all of them. Therefore, a study of employee requirements of each group may design suitable recreational activities for all of them, and an analysis of the requirements of each labor group, for example, younger workers and older workers: younger workers may require sports and technology, whereas, older workers may require relaxing activities, e.g., yoga, or meditation practice; manufacturing employees and executives: manufacturing employees may require physical relaxing activities, such as massage, or outdoor activities, whereas, executives require some activities enhancing creativity. Moreover, a study of



culture and way of life should be conducted to see whether the recreational activities are suitable for them, e.g., the difference between Thai labors and migrant workers. A research title on "Types of Recreational Activities that Fit Employees in Industrial Business Sector" should be studied in the future.

Technology can help the recreational activities be more effective and accessible to employees, especially there is limitation of time and places in the age of industrial labors. Therefore, a study of the implementation of technology is important for organizations to develop the right activities and a study of possibility of online platforms should be conducted to create recreational activities, e.g., applications for virtual activities that the employees can attend, such as online yoga, games for health, or competitive activities and recreational activities within the workplaces. Moreover, there should be an analysis of the implement of AI and big data to design the right recreational activities for each employee, e.g., a system providing advice for the right activities and behavior of employees, and there should be an study of the implement of VR (virtual reality) and AR (augmented reality) for the recreational activities, e.g., meditation practice through VR or relaxing games at work. A research title on "Guidelines for Application of Technology to Enhance the Potential of Creating Recreational Activities" should be studied in the future.

#### BIBLIOGRAPHY

- Brent S. Jackson ( 2021) . [ Serial online] . Outdoor Activity Participation Improves Adolescents' Mental Health and Well-Being during the COVID-19 Pandemic. International journal of Environmental Research and Public Health. Volume 18 Issue 5, March 3, 2021
- Brightbill, C., & Meyer, D. H. (1964). Community recreation. A Guide To Its Organization, USA, (s 27).
- Chantruprakakul, Angkul, Pannarai Lata, and Thanin Silpcharu. (2023). "Factors Affecting the Development of Thai Auto Parts Manufacturing Industry for Export." Journal of Namibian Studies: History Politics Culture 34 (2023): 1853-1873.
- Chongwut Reungwatasilk. (2017). Community participation in educational management in the service area of Lomrad Wittaya School, Thoen District, Lampang. Available form. <https://cmudc.library.cmu.ac.th/frontend/Info/item/dc:107468>
- Cohen, J.M. , & Uphoff, N.T. (1981). Rural Development Participation: Concept and Measure for Project Design Implementation and Evaluation: Rural
- David. K. & Newstrom. (1985). Human Behavior at Work : Organizational Behavior. New York : McGraw- Hill.
- Davut Atilgan (2020). I[Serial online]. nvestigation of Happiness Levels of Individuals Actively Exercising for Recreational Purposes during the COVID-19 Outbreak. The Journal of Education and Recreation Patterns. Vol 1, No 1, 2020
- Department of Health, Ministry of Public Health (2024). Percentage of Thai Population with Sufficient Physical Activity by Age Group. Available from <https://anamai.moph.go.th/th>
- Department of Physical Education. (2019). Operations Manual on the Creation, Promotion, Support, and Development of Recreation Networks of the Department of Physical Education. Available from <https://www.backend2.dpe.go.th/storage/data/manual/doc/630600000005.pdf>
- Diaz, Robert MD (2019). [Serial online]. Impact of Adaptive Sports Participation on Quality of Life. Sports Medicine and Arthroscopy Review. June 2019, p 73-82
- Development Committee Center for international Studies. New York: Cornell University Press.
- Diener, E. (2003). Subjective Well-Being: The Science of Happiness and Proposal for A National Index, 34-43.
- Douglah, M. (1970). Some perspectives on the phenomenon of participation. Adult Education Quarterly, 20(2), 88-98.
- Duangnapa Srinuntawong. (2023). A model of Partivipatory Recreational Activities to Enhance the Happiness of Pupils at Junior Demonstration Schools in Nakhon Pathom Province. A Thesis for Doctor of Philosophy Recreation Tourism and Sport Management Department of Education Foundations Silpakorn University
- Eiji Ito (2019). [Serial online]. Cultural similarities and differences in the relationship between types of leisure activity and happiness in Canadian, Chinese, and Japanese university students. World Leisure Journal. Volume 61, 2019 - Issue 1
- Fangzheng Li (2020). [Serial online]. Deciphering the recreational use of urban parks: Experiments using multi-source big data for all Chinese cities. Science of The Total Environment. Volume 701, 20 January 2020

- Femke Hoekstra (2019). [Serial online]. National approaches to promote sports and physical activity in adults with disabilities: examples from the Netherlands and Canada. *Disability and Rehabilitation*. Volume 41, 2019 - Issue 10
- Franziska Komossa (2020). [Serial online]. Comparing outdoor recreation preferences in peri-urban landscapes using different data gathering methods. *Landscape and Urban Planning*. Volume 199, July 2020
- Frank Lupi (2020). [Serial online]. Best Practices for Implementing Recreation Demand Models. The University of Chicago Press Books. Volume 14, Number 2, 2020
- Fornaroff, A. (1980). *Community involvement in Health System for Primary Health Care*. Geneva: World Health Organization.
- Graham Ambrose (2020). [Serial online]. Is gardening associated with greater happiness of urban residents? A multi-activity, dynamic assessment in the Twin-Cities region, USA. *Landscape and Urban Planning*. Volume 198, June 2020, 103776
- George, J.M. and Jone, G. R. (2002). *Organizational behavior*. (3rd ed.). New Jersey: Prentice-Hall.
- Gregore I. Mielke (2020). [Serial online]. Participation in sports/recreational activities and incidence of hypertension, diabetes, and obesity in adults. *Scandinavian journal of Medicine & Science in Sports*. Volume 30, Issue 12, December 2020
- Health Promotion Fund. (2009). *Let's create a happy organization*. Private Sector Health Plan. Bangkok: available from [www.happy8workplace.thaihealth.or.th](http://www.happy8workplace.thaihealth.or.th)
- Homans, George C. (1961). *Social Behavior: Its Elementary Forms*. New York: Harcourt Brace Jovanovich.
- Huimei Liu (2020). [Serial online]. The relationships between leisure and happiness-A graphic elicitation method. *Leisure Studies*. Volume 39, 2020 - Issue 1
- Irfan, O.M. (2022). "Lean Manufacturing Structural Model for Improving Operational Performance of Diverse Industries." *International Journal of Multidisciplinary Research and Analysis*. Vol. 5 No. 11 : 3255-3266.
- Jiraporn Pooudom. (2018). *A Study of Participatory Recreational Activities and Life Skills Development of Student in Grade 6 at Wat Nong Song Hong (Saichanupthum) School Samut Sakhon Primary Education Area Office*. A Thesis for Doctor of Philosophy (DEVELOPMENT EDUCATION) Department of Education Foundations Graduate School, Silpakorn University
- Joanne Vining (2019). [Serial online]. *Outdoor Recreation Participation and Preferences by Black and White Chicago Households*. *Social Science And Natural Resource Recreation Management*. June 2019
- Jongitjaroen, M., Silpcharu, T., and Wattanakomol, S. "Guidelines for Employee Social Skill Development in the Manufacturing Industry." *Pakistan Journal of Life and Social Sciences*. Vol. 22 No. 2. 2936 - 2945.
- Kengkart Klengkeaw. (2018). *The Development of Participation Recreation Model for Development Emotional Quotient Enhancement for Lower Secondary School Student*. A Thesis for Doctor of Philosophy (DEVELOPMENT EDUCATION) Department of Education Foundations Graduate School, Silpakorn University
- Khanum, F. (2020). *Perceptual Study Regarding the Impact of Recreational Activities Upon Health Lifestyle of Youth*. *Global Educational Studies Review*, V(II), pp. 19-27
- Kim, Y. (2021). "Crisis Management Strategy for The Korean MICE Industry Using SWOT-AHP-TOWS Analysis." *Journal of Korea Trade*. Vol. 25 No. 6 : 34-56
- Kerrie A. Bethel (2020). [Serial online]. *OUT OF DOORS: RECREATIONAL THERAPISTS AND THE DUTY OF CARE*. University of Georgia ProQuest Dissertations & Theses. 2020.
- Kjerulf, & Alexander. (2007). *Praise for Happy Hour is 9 to 5*. Petersburg: Alexander.
- Latif, S. & Gulzar, A. (2012). The impact of organizational and supervisory support on survivors' organizational commitment after downsizing in telecom sector of Pakistan. *International Journal of Economics and Management Science*, 1(5), 55-61.
- Mark Janssen (2020). [Serial online]. Understanding Different Types of Recreational Runners and How They Use Running-Related Technology. *International journal of Environmental Research and Public Health*. Volume 17 Issue 7, March 27, 2020
- Martin Henry Neumeyer and Esther Sternberg Neumeyer. (1958). *Leisure and Recreation: A Study of Leisure and Recreation in Their Sociological Aspects*. Ronald Press Company.
- Max Weber. (1968). *Basic Sociological Terms*. Berkeley: University of California Press.
- Melissa D. (2017). [Serial online]. Social Participation, Flow and Situational Involvement in Recreational Physical Activity. *Journal of Leisure Research*. Volume 41, Issue 1, Dec 2017, Pages 73-91
- Mett Mettkarunjit. (2010). *Participatory educational management: people, local administrative organizations, and government agencies*. (2nd ed.). Bangkok: Bookpoint.

- Michael Sinclair (2020). [ Serial online]. Using social media to estimate visitor provenance and patterns of recreation in Germany's national parks. *Journal of Environmental Management*. Volume 263, 1 June 2020
- Miller, N. P. and Robinson, D. M. ( 1963), *Leisure Age: Its Challenge to Recreation*, Wadsworth, Belmont, CA
- Natal' Ya Mischenko ( 2024). [ Serial online]. Professional support technology for supplementary education teachers in children's recreational swimming. *Journal of Physical Education and Sport*. Vol. 24 (issue 4), Art 92, April 2024, pp. 782 - 790.
- Nadon Poodduangngern. (2022). *Organizational Support and Quality of Work Life Affecting the Organizational Commitment of Sakon Nakhon Provincial Electricity Authority's Personnel*. Thesis for The Master of Public Administration Degree in Public Administration at Sakon Nakhon Rajabhat University.
- Nash, J. B. (1960). *The Philosophy of Recreation and Leisure*. Iowa: Wm. C. Brown
- National Economic and Social Development Council. (2024). *National Income of Thailand 2023*. Available from [https://www.nesdc.go.th/ewt\\_dl\\_link.php?nid=15938](https://www.nesdc.go.th/ewt_dl_link.php?nid=15938)
- National Statistical Office. (2024). *Number of outpatients from public health service facilities, Ministry of Public Health, throughout the Kingdom, 2018 - 2023*. Available from <https://www.nso.go.th/>
- Noorpasiya Guna. (2019). *Happiness at work of personnel of sub-district administrative organizations in Mueang Pattani District, Pattani Province*. Master of Public Administration Thesis, Public Administration Program, Prince of Songkla University.
- Patchara Wisalaporn. (2021). *The Relationship between Recreation Activities Impacts on Quality of Life among Thailand National Sport University Bangkok Campus Personnel*. Thesis for Faculty of Physical Education. Srinakharinwirot University.
- Phanuphan Panthukampol and Kritsada Chiarawatthanasuk. (2019). Perception of Organizational support and employee performance. *Journal of Management Science*, Nakhon Pathom Rajabhat University, 6(1), 138-151
- Peelle, D.M. and Henry, E. (2007). "Reciprocating perceived organization support through citizenship behaviors." *Journal of Managerial Issues*, 4. 554-575.
- Pınar Güzel (2020). [ Serial online]. "Know-How" to Spend Time in Home Isolation during COVID-19; Restrictions and Recreational Activities. *International Journal of Psychology and Educational Studies*. September 2020, P. 122 - 131
- Ralf Buckley ( 2020) . [ Serial online] . Nature tourism and mental health: parks, happiness, and causation. *Journal of Sustainable Tourism*. Volume 28, 2020 - Issue 9221
- Promsri, C. (2011). *The Modern Leadership*. Bangkok: Expnernet.
- Putti. (1987). Work values and organizational commitment: A study in the Asian context. *Human Relations*, 4(2).
- Ramón Spaaij (2020). [Serial online]. We want more diversity but...": Resisting diversity in recreational sports clubs. *Sport Management Review*. Volume 23, Issue 3, June 2020, Pages 363-373
- Richmond, L. (1999). *Work as a spiritual practice*. Broadway books.
- Rhoades, L., and Eisenberger, R. (2002). Perceived organization support: A Review of the literature. *Journal of Applied Psychology*, 87, 698-714
- Rozanova Tatyana Pavlovna (2022). [ Serial online]. Information Support of the Economic Diagnostics of a Recreational Enterprise in the Digital Environment. *The Electrochemical Society*. Volume 107, Number 2022
- Robert Arlinghaus (2020). [Serial online]. Global Participation in and Public Attitudes Toward Recreational Fishing: International Perspectives and Developments. *Reviews in Fisheries Science & Aquaculture*. Volume 29, 2021 - Issue 1, Jun 2020, Pages 58-95.
- Silpcharu T. (2024). *Research and statistical data analysis with SPSS and AMOS. (20<sup>th</sup> ed.)*. Nonthaburi : S.R. Printing Mass Products Co., Ltd.
- Social Security office. (2025). *Number of Voluntary insured persons (section 39)*. Available from <https://www.sso.go.th/wpr/>
- Soria, K. M., Boettcher, B., & Hallahan, K. (2022). The Effects of Participation in Recreational Activities on Students' Resilience and Sense of Belonging. *Recreational Sports Journal*, 46(2), 184-192. <https://doi.org/10.1177/15588661221125201>
- Sombat Namburi. (2019). Theory of Participation in Public Administration. *Academic Research Journal*. 2(1), 183-197
- Steven J. Cooke (2021). [Serial online]. Technological innovations in the recreational fishing sector: implications for fisheries management and policy. *Ecotoxicology in Microplastic Research for Marine Environment*. Volume 31, February 2021, pages 253-288,