

# HUMAN BEHAVIOR, DEVELOPMENT and SOCIETY

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<b>Using Tsunesaburo Makiguchi's Value-Creating Education to Cultivate Humanistic Behaviorists: A Case Study</b> <i>Nai-Cheng Kuo &amp; Trellani Hicks</i>	8–17
<b>The Perceptions of Gender-Based Violence: A Cross-Sectional Study Among University Students at Asia-Pacific International University, Thailand</b> <i>D. Candace Perera and Maxine Newell</i>	18–26
<b>Deconstructing Stigmatisation by Heterosexuals of LGBT Against the Backdrop of Religion in Malaysia</b> <i>Sharifah Sophia Wan Ahmad, Su-Hie Ting, Collin Jerome, and Jiin-Yih Yeo</i>	27–35
<b>Gamified Instruction in Mathematics: A Meta-Synthesis</b> <i>Angelito B. Cabanilla Jr., Gaspar B. Batolbatol, Fate S. Jacaban, and Amelia Bonotan</i>	36–46
<b>Priestly Pressure: Lived Experiences of Seventh-Day Adventist Pastors During the COVID-19 Pandemic in Singapore</b> <i>Margihon Bayu Putra Kaumpungan</i>	47–57
<b>Influence of Social Intelligence and Change Readiness on Quality of Work Life</b> <i>Rona Beth S. Saban, Rowena Imelda A. Ramos, and Rosalie C. Nacar</i>	58–69
<b>The Relationship between Physical Activity in a Natural Environment and Symptoms of Anxiety and Depressive Disorders: A Cross-Sectional Study Among University Students</b> <i>Li, Yilin and Maxine Newell</i>	70–76
<b>Perceptions Towards the Flipped Approach for English Language Speaking: Preliminary Observations and Recommendations for a University Classroom in Indonesia</b> <i>Richla Sabuin</i>	77–83
<b>Mediating Role of Coping Strategies on the Symptoms of Complicated Grief and Psychological Well-Being during COVID-19 Pandemic</b> <i>Rhalf Jayson F. Guancho, Lorein Kate Y. Delgra, Urriel E. Dotimas, Kayecelyn B. Dumas, and Elly Rose D. Lumpay</i>	84–92
<b>Obscure Biblical Allusions in Robert Frost's "Mending Wall"</b> <i>Joy Kuttappan and Gauri Joy</i>	93–101

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The journal has the following objectives:

- a). To stimulate the creation and synthesis of beneficial information, as well as its broad dissemination, especially in the varied fields of the humanities and social sciences,
- b). To foster a deeper understanding regarding the impact of business policies and practices on society, and
- c). To promote the adoption of best practices in communities through education, and to aid in the resolution of community issues for the betterment of society; this represents the development aspect referred to in its name.

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### **Journal Positioning**

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The positioning of the journal means that a variety of topics is covered in most issues. These, in turn, differ in their philosophical content, academic appeal, and practical implications.

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The journal covers a broad spectrum of topics. These include, but are not limited to, anthropology, allied health focused on community issues and health education, education from the primary to the tertiary levels, literature, language use and acquisition, business, management, finance, geography, psychology, social sciences, philosophy, and theology. Review essays and seminar/forum papers are also accepted when appropriately focused. Well-executed studies that address interesting and significant topics in the areas mentioned above are particularly welcomed. All articles accepted should make significant contributions to understanding and add to the corpus of knowledge in their respective fields.

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Volume 21 No 1 March 2020	Volume 7 December 2012
Volume 20 No 4 December 2019	Volume 6 December 2011
Volume 20 No 3 September 2019	Volume 5 December 2010
Volume 20 No 2 June 2019	Volume 4 November 2009
Volume 20 No 1 March 2019	Volume 3 November 2008
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Volume 18 August 2018 ( <i>Catalyst</i> )	Volume 1 November 2006

## From the Editor

This is the first issue of *Human Behavior, Development and Society (HBDS)* for 2023. The journal is an international, open-access, and interdisciplinary peer-reviewed journal published three issues a year by Asia-Pacific International University (AIU). *HBDS* publishes academic research articles in the humanities and social sciences, including fields such as business administration, development, education, health, public administration, religion, and other social sciences areas. The journal's aim is to advance knowledge through the use of classical methods of investigation and to foster the examination of cross-cultural issues that increase mutual understanding among diverse social groups. These studies lead to improved concepts, theories, and new knowledge for developing communities and society, with a particular emphasis on Southeast Asia. All articles in the journal are indexed by the Thai-Journal Citation Index Centre (TCI), ASEAN Citation Index (ACI), and the EBSCO database.

This issue consists of 10 articles, six of which were written by authors external to the university, and four of which were authored by AIU researchers. We are delighted to see reports and findings from various disciplines including business, education, health, literature, psychology, religion, and sociology. Most articles in this issue are based on studies that were conducted in ASEAN contexts including Indonesia, Malaysia, the Philippines, Singapore, and Thailand. We hope that this issue of *HBDS* will contribute to the development of society and serve as a source of information for various academic fields and research projects.

We would like to invite readers to publish your valuable papers with us. More information may be found on our website, <https://www.tci-thaijo.org/index.php/hbds>. We would also appreciate comments or suggestions from you to help us improve the journal. Finally, we appreciate the hard work of authors, reviewers, editorial board members, executive board members, and journal staff members who have contributed to making this achievement a reality.

Assistant Professor Dr. Damrong Sattayawaksakul, Editor

*Human Behavior, Development and Society*

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## Using Tsunesaburo Makiguchi's Value-Creating Education to Cultivate Humanistic Behaviorists: A Case Study

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### Abstract

Applied behavior analysis (ABA) has gained increasing attention in many countries across education, psychology, healthcare, organizational management, and social work. ABA is a research-based approach to help individuals develop socially significant behavior and improve their lives. Different countries have organizations to provide training and certification programs locally, nationally, and internationally such as the Association for Behavior Analysis International (ABAI), the Asians and Pacific Islanders Association for Behavior Analysis (APIABA), and the Malaysia Association of Behaviour Analysis (MABA). For years, ABA has been focused on individual, egocentric, and self-oriented behavior. Because behavior changes cannot happen without one's inner breakthroughs and resolutions to be the change, it is necessary to center ABA practice on humanistic, compassionate, and socially-oriented behavior to sustain human well-being and the development of society. In this article, we use the ABA programs in higher education accredited by ABAI as a case study to explore how the value-creating education framework developed by Tsunesaburo Makiguchi can cultivate humanistic behavior analysts. ABAI verifies university programs in the United States, Canada, Australia, and the United Kingdom to fulfill the Behavior Analyst Certified Board (BACB)'s coursework requirements. This case study, emphasizing humanity in behavioral analysis, can potentially maximize the practice of ABA globally.

**Keywords:** *Applied behavior analysis, humanity, value-creating, Tsunesaburo Makiguchi*

### Introduction

Applied behavior analysis (ABA) refers to "the science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior, and experimentation is used to identify the variable responsible for behavior change" (Cooper et al., 2020, p. 20). ABA helps people understand their behavior and guides them to use scientific methods to improve behavior. ABA is deeply rooted in the influential work of individuals such as Edward Thorndike, John Watson, Ivan Pavlov, and B. F. Skinner (Leaf et al., 2017). Skinner changed the perception of ABA in 1938 and created the experimental branch of behavior analysis. Although behavior often refers to observable and measurable actions, Skinner argued that behavior includes thinking and feeling. He stated, "What is felt or introspectively observed is not some nonphysical world of consciousness, mind, or mental life but the observer's own body" (Skinner, 1974, pp. 18–19). He used artwork as an example. Although painting can be evaluated formally, the greatness of artwork can never be measured by physics or mathematics, but by one's perception and emotional state (Morris et al., 2005). Skinner (1984) introduced the concept of private events (i.e., the inner world) to human behavior studies. He stated that it would be naive to neglect the impact of one's inner world on his or her behavior just because people cannot see or measure it (Skinner, 1993). Ikeda (2002) shared a similar thought as Skinner. He stated, "if your inner reality—your life—changes, then the way you respond to your environment will also change, and the environment itself will change as well. This is what is meant by *the oneness of life and its environment*" (pp. 129–130). Ikeda argued that even a subtle change in one's inner reality could shift one's behavior 180 degrees.

The inner world of individuals plays a crucial role in shaping their behavior, making it essential to cultivate behavior analysts who can restore and revive humanity. By doing so, individuals understand how their actions affect beyond just themselves and their immediate communities. ABA is not a set of black-and-white rules that can be implemented as written. The application of ABA considers the

function of the behavior and the context. Because individual and contextual factors frequently influence the interpretation of behavior function, behavior analysts can optimize the effectiveness of ABA techniques by prioritizing the humanistic aspect of their practice and facilitating the transformation of individuals' inner reality.

### ***The Application of ABA***

Many ABA techniques are utilized in the classroom to increase desired behavior and decrease unnecessary behavior from a student (Cooper et al., 2020; Higgins et al., 2001). For example, a token economy is used in schoolwide positive behavioral interventions and supports (PBIS). In the *token economy*, teachers will first identify the target behavior they want students to develop, then use tokens to engage students in the desired behavior. Students are given choices based on their preferences (e.g., recess time, storytelling, stationaries, etc.) to redeem their tokens as reinforcers. Another common technique is shaping. *Shaping* involves a systematic and differentiated reinforcement scheduling to help students gradually develop desired behavior. Students' behavior is reinforced for progression, not perfection. *Task analysis* is similar to shaping. However, task analysis breaks a complex concept into simple steps. The sequence of the smaller steps makes learning accessible and keeps students engaged. Schools also use ABA to support students with developmental disabilities like autism. Makrygianni et al.'s (2018) findings from a meta-analysis of 831 children diagnosed with autism and pervasive developmental disorder across 29 experimental studies indicate that ABA positively impacted these children. It increased their I.Q. scores, verbal and non-verbal communication, and receptive and expressive language skills.

Embracing humanity in ABA can foster an environment that promotes equality, diversity, and inclusion for all individuals. Matsuda et al. (2020) conducted a study to raise people's awareness of their stereotypes. They started by giving participants a clear definition of racism, prejudice, and biases and how one may intentionally or unintentionally exhibit harmful behavior to others. The participants learned the previously stated behaviors through stimulus generalization. For example, one learned from watching a TV show that dehumanized one race more than another. Participants also learned when being in the presence of a friend or family member who made racial slurs or remarks. When exposed to such events, racism in one started to develop. The researchers then presented acceptance and commitment training (ACT), a combination of mindfulness and behavior-based procedures, to reduce discriminatory behavior. ACT helped participants become aware of the issues in life while deciding to alter their behavior to support their core values.

Matsuda et al. (2020) found that racism could decrease when using behavior-analytic techniques to examine and intervene in issues of multiculturalism and diversity. Hilton et al. (2021) also stressed the need to cultivate behavior analysts' humanity to resolve social issues related to diversity, equity, and inclusion. They encouraged instructors in higher education ABA programs to "continuously model, promote, and shape practice to advance equity and diversity" (Hilton et al., 2021, p. 58). The increasing research on using ABA techniques to improve human behavior and social development has led to an increase in ABA-accredited programs globally to cultivate qualified behavior analysts who possess not only knowledge and skills of ABA but also embrace cultural responsiveness and social justice in their practice.

### ***Humanity and Human Behavior***

Ikeda said, "Being born human does not make one a human being. Don't we really only become human when we make a tenacious effort to live as human beings?... That's why education is so important. We need human education to become human beings" (Ikeda, 2002, p. 139). Humanity guides and redirects one's behavior. Bhardwaj's (2016) research suggests that a holistic curriculum is needed to cultivate humanity in students. He stated that students could grow up and work in whichever profession they like after training. However, if education fails to integrate life values into the curriculum, students are unlikely to develop character, build confidence, and become global citizens who contribute to society on a large scale. Humanity lies in recognizing the

interconnectedness of all lives and promoting peaceful coexistence in society. Behavior reflects one's inner world. As a proverb says, "when the body bends, so does the shadow." By valuing one's dignity and that of others, individuals can transform self-centered interests into a broader understanding of human behavior and become the driving force in shaping society.

## Theoretical Framework

The term *value creation*, originating from Japanese *Soka* (創價; so – create, ka – value), was coined by Tsunesaburo Makiguchi (1871–1944), a Japanese educator, philosopher, and forward-thinking geographer. He founded Soka Gakkai (Society for the Creation of Value) in Japan in 1930 and has two major works: *The Geography of Human Life* and *The System of Value-Creating Pedagogy*, which remain relevant and influential in modern times (Goulah, 2021; Sharma, 2018; Takahashi, 2020). Makiguchi argued that the purpose of education is not only to meet people's basic needs and security but to help them lead fulfilled lives and become happy (Birnbaum & Bethel, 1989). He advocated education to enable students to perceive the meaning of life in the context of their communities and use their creativity to enhance their own lives and the lives of others. Makiguchi did not see study and living as separation. Instead, he believed that "study takes place while living and living takes place in the midst of study" (Birnbaum & Bethel, 1989, p. 10). In other words, education makes sense when it is useful in life, and the realities of daily life help students find meaning in education (Birnbaum & Bethel, 1989). Because of the interconnection of study and living, Makiguchi advocated the idea that education has to "take into account the entire scope of human life, but at the same time, it must consider the specific needs of the family, society, and nation" (Birnbaum & Bethel, 1989, p. 17). From his point of view, education centering on students' happiness will help students find meaning in life and guide them to transform from being egocentric to a more contributive social existence.

Makiguchi categorized human behavior into four groups: plant-like behavior, animal-like behavior, individual behavior, and social behavior. Each behavior has different modes of living and forms of behavior (see Table 1).

**Table 1** Makiguchi's Classification of Human Behavior

Classification	Mode of Living	Behavior
Plant-like Behavior	Unconscious living	Sleep Absence of self-awareness
Animal-like Behavior	Conscious living Dependent living	Undirected emotional and sensory existence Absence of self-awareness
Individual Behavior	Conscious living Independent/exchanging living Partial self-awareness	Egocentric existence Self-reflective behavior on the individual basis Pursuits of self-oriented activity and value
Social Behavior	Conscious living Contributive/moral living Total self-awareness	Humane or compassionate existence Self-reflective behavior on the social basis Pursuits of socially-oriented activity and value

Source. Modified from Birnbaum and Bethel (1989)

Human beings engage in the least active activity during sleep, which is unconscious. At this level, people behave like plants and lack self-awareness. More active than plant-like behavior is animal-like behavior, in which people continue to lack self-awareness and exhibit undirected emotional and sensory existence. Unlike plant- and animal-like behavior, human-like behavior is motivated by personal goals. Individual behavior emphasizes egocentric existence, individual self-reflection, and independence/ exchanging life. On the contrary, social behavior emphasizes a compassionate existence, social self-reflection, and moral/contributive living. The ultimate goal of education is to

nurture students' virtue, benefit, and beauty in the socially-oriented context, leading them to coexistent, moral, and constructive lives, which is the highest level of human behavior (Birnbaum & Bethel, 1989).

Makiguchi stressed that being human is *a process* of creating value, and the awareness of human dignity arises from that process (Birnbaum & Bethel, 1989). Daisaku Ikeda (1928–), a disciple of Tsunesaburo Makiguchi (1871–1944) and Jose Toda (1900–1958), continues to expand value-creating education and highlights the necessity of human beings' earthly desire to become happy. He states, "If wealth were not attractive, economic growth would not take place. If humans had not struggled to overcome the natural elements, science could not have flourished" (Ikeda Center, 2011). According to Ikeda, when the lesser self is correctly-oriented and operates within the framework of the greater self, not only will the individuals fulfill their lives, but also will they promote the greatest good for all. To understand the actual cause of individuals' challenging behavior, behavior analysts need to recognize human life and intensify their efforts to connect with the individuals they serve.

## **Research Method**

### **Case Study**

The present study employs a case study method to investigate a specific context, allowing for a deeper exploration of relevant theories and ideas (Yin, 2018). The selected case is ABA programs accredited by ABAI to explore how the value-creating education framework that Tsunesaburo Makiguchi developed can foster humanistic behavior analysts. ABAI verifies university programs in the United States, Canada, Australia, and the United Kingdom to fulfill the Behavior Analyst Certified Board (BACB)'s coursework requirements.

There are several reasons why the ABA programs accredited by ABAI were selected. First, BACB is a highly regarded organization, providing rigorous training and ethical guidelines for behavior analysts in several countries. Take the United States as an example; "since 2009, the applied behavior analysis profession has rapidly become regulated" (BACB, 2023a). As for 2023, over 33 states in the U.S. "have passed legislation to license or otherwise regulate behavior analysts." (BACB, 2023a). Although different states have different licensure requirements to become licensed behavior analysts, behavior analysts are qualified for exemption from state licensure if they are certified by BACB. Second, due to the limited research studies on applying Tsunesaburo Makiguchi's value-creating education in ABA programs, conducting a case study is an appropriate approach to exploring strategies for cultivating humanistic behavior analysts through this framework. Finally, as many countries strive to improve the rigor of their standards for behavior analysts, this case study can provide insights to other countries on better developing high-quality, ethical, and humanistic ABA programs.

### **ABA Coursework Requirements**

The Behavior Analyst Certification Board (BACB) requires that students complete a sequence of specific coursework to be eligible for certification as a Board Certified Behavior Analyst (BCBA) or a Board Certified Assistant Behavior Analyst (BCaBA). The coursework requirements include principles of behavior, measurement, experimental research design, behavior change procedures, ethical conduct, intervention development, and supervised fieldwork. Upon completing the coursework, students have to pass a comprehensive qualification exam. After certification, behavior analysts have to complete ongoing continuing education to maintain their certification (BACB, 2023b).

### **Makiguchi's Guided Questions**

We review the key aspects and guided questions in Makiguchi's value-creating education, published in the book *Education for Creative Living*, translated by Alfred Birnbaum and edited by Dayle M. Bethel. Makiguchi suggested three aspects to formulate a comprehensive plan for bringing value-creating education to life: analyzing the teaching materials, examining instructional methods, and evaluating social support (Birnbaum & Bethel, 1989). We use these aspects and modify Makiguchi's guided questions to analyze: (a) the ABA coursework requirements, (b) instructional methods, and (c) social support for ABA programs (see Table 2).

**Table 2** *Questions for Examining Humanity in ABA Programs*

Aspect	Question
ABA Coursework Requirements	<ul style="list-style-type: none"> <li>• What is the approved course sequence for training behavior analysts in ABA programs?</li> <li>• How are these courses chosen, and by what criteria?</li> <li>• What unifies the courses?</li> <li>• What other components are used to organize the courses?</li> </ul>
Instructional Methods	<ul style="list-style-type: none"> <li>• What are the instructor's roles concerning the historical evolution of teaching methods?</li> <li>• How does teaching take cognitive development into account?</li> <li>• How is teacher quality evaluated?</li> <li>• How is value creation embraced in teaching?</li> <li>• How does research influence teaching?</li> <li>• Are there any potential misconceptions about the delivery of the materials?</li> </ul>
Social Support	<ul style="list-style-type: none"> <li>• What are the supports provided for ABA programs at the university level?</li> <li>• What are the supports available for ABA programs at the government level?</li> </ul>

## Results

Applied behavior analysis (ABA) has gained increasing attention in various fields, including education, psychology, healthcare, organizational management, and social work. This research-based approach aims to help individuals develop socially significant behavior and improve their quality of life. Several organizations, such as the Association for Behavior Analysis International (ABAI), the Asians and Pacific Islanders Association for Behavior Analysis (APIABA), and the Malaysia Association of Behaviour Analysis (MABA), offer local, national, and international training and certification programs.

Historically, ABA has focused on individualistic and self-centered behavior. However, to achieve sustainable development of human well-being and society, it is necessary to shift ABA practice towards a more compassionate and socially-oriented approach. ABA programs accredited by ABAI are used as a case study in the present study to explore how the value-creating education framework can be applied to cultivate humanistic behavior analysts. This framework offers a comprehensive approach to ABA programs that prioritizes the development of the whole person and their commitment to society. In the face of global conflicts and violence, individuals need a deep sense of compassion and respect for the inherent dignity of all people. Makiguchi's framework highlights the importance of focusing on the inner world of individuals when seeking to effect behavior change. After all, behavior is an outward reflection of an individual's inner state. Lasting behavior change is best achieved using a human-centered approach instead of a strategy-centered one. Value-creating education encourages individuals to take responsibility for their behavior and work towards creating a harmonious coexistence among all members of society.

The Association for Behavior Analysis International (ABAI) is a professional organization that verifies university programs across several countries to ensure that individuals who hold certification underwent rigorous training, have achieved a high level of professional competence in ABA, and commit to ethical practices. Given the rigorous standards that ABAI and BACB maintain, the case study on value-creating education and its application in behavior analysis can contribute insights to the advancement of ABA globally. By infusing ABA programs with the principles of value-creating education, preparation organizations for behavior analysts can promote a more human-centered approach to training, resulting in better outcomes for ABA practitioners and the people they serve. The following presents the findings of our investigation of value-creating education within ABA programs accredited by ABAI.

### ***ABA Coursework Requirements***

According to the credentials and coursework requirements for Board Certified Assistant Behavior Analysts (BCaBAs), Board Certified Behavior Analysts (BCBAs), and Board Certified Behavior Analysts-Doctoral (BCBAs-D), published by the Behavior Analyst Certification Board (BACB), courses in higher education ABA programs cover (a) ethics, code-enforcement system, and professionalism, (b) philosophical underpinnings, concepts, and principles, (c) measurement, data display, interpretation, and experimental design, (d) behavior assessment, (e) intervention and behavior-change procedures, and (f) field experience (BACB, 2023b). The courses are aligned with the standards established by ABAI to ensure that higher education ABA programs prepare high-quality behavior analysts. Specifically, ethics helps students in the programs understand legal regulations and ethical practices to develop competence in applying the principles of human behavior. Involving in research will further assist students in collecting and analyzing data, developing interventions, and evaluating the effectiveness of those interventions.

The courses are structured and arranged into various curricular subjects at the bachelor's, master's, and doctoral levels. Every level has a distinct purpose yet remains interconnected. Through their bachelor's degree program, students acquire the fundamental knowledge and essential skills to become BCaBAs. At the master's level, students enhance their competencies to qualify as BCBAs. Pursuing doctoral-level ABA programs enables them to qualify as BCBAs-D. All courses are unified to support the development of scientist-practitioners who ground behavioral interventions in ethical and evidence-based practices. Overall, the standards clarify what higher education ABA programs entail. Materials used in ABA programs are consistently enhanced and evolved with the latest research endeavors and the updates of board task lists. The course materials and field experiences align with the standards to achieve the anticipated learning outcomes.

### ***Instructional Methods***

Qualified ABA instructors have documented expertise and knowledge in teaching ABA courses. Instructors are expected to assess students' knowledge to ensure that they are making sufficient progress toward achieving the ABAI standards. Progress monitoring over a long period allows instructors to determine if students meet the standards and can apply what they have learned. Instructors need to model the implementation of the materials for students in ABA programs. Their self-initiatives provide their students with valuable examples of how they advocate behavior support in society. By seeing concrete examples, students know how to practice the knowledge and skills in their practicums. When students constantly reflect on their roles in using research-based strategies to help individuals develop socially-significant behavior, they develop character and needed skills to provide quality behavioral interventions.

Instructors frequently seek students' feedback to improve instruction. Surveys are often used to gather student feedback and ask about their viewpoints on course activities, materials, and experiences in classroom settings. Based on the feedback, instructors adjust their instructional activities to meet students' learning needs, aiming to enhance human behavior and promote the advancement of society through ABA practice. At any rate, instructors need to help students understand the principles and designs behind the coursework and activities. When students understand the purpose of each course and its tasks, they are more likely to complete course requirements with fidelity and quality. Evidence-based practices, such as backward design, active learning activities, and inclusive teaching, are incorporated into teaching. Instructors understand their students' prior knowledge and mental models to help students organize information within and across courses more effectively. They give students sufficient opportunities to apply knowledge, provide timely feedback, and motivate them to become critical thinkers, ethical practitioners, and competent behavior analysts.



### ***Social Support for ABA Programs***

Universities are responsible for hiring qualified instructors to teach coursework and developing a plan for coordinating on- and off-campus activities to ensure that students meet the credentials and course requirements to become certified behavior analysts. The supervisor and supervisee sign a written contract detailing roles, responsibilities, and expectations before starting field experience. Unacceptable activities for field experience need to be made clear out front to avoid misunderstanding and conflicts. Furthermore, official transcripts that include all courses required to meet the entry requirements for the behavior analyst certificate must be managed carefully. Universities in different countries may need to meet their respective countries' regulations to confer legitimate degrees to students. Universities continue building a social network with schools and communities to create opportunities for students to observe and apply ABA techniques in the real world. Establishing research and clinical centers on ABA will benefit students in ABA programs and people in communities who need behavioral support.

The national and international licensure of behavior analysts ensures that prospective behavior analysts are highly-trained and competent in developing and implementing interventions to address the behavioral needs of individuals. These licensure requirements should be monitored and incorporated into higher education ABA programs.

### **Discussion**

Makiguchi's educational philosophy centered on three main areas: "human geography, community studies, and value-creating pedagogy" (Goulah & Gebert, 2009, p. 115). He emphasized the importance of human agency in creating value to improve one's life and helping others do the same. Makiguchi argued that the ultimate goal of education is to help students develop lifelong happiness and become contributing citizens (Gebert & Joffee, 2007). He encouraged educators to find ways to create value out of any circumstance and provided concrete suggestions on including humanity in the curriculum. We utilize Makiguchi's value-creating education framework to analyze the ABA coursework requirements, examine instructional methods, and evaluate social support.

Understanding the existing structure of ABA programs allows instructors to cultivate humanistic behavior analysts. The connectedness between the principles of ABA and the impacts of humanity on behavior is essential. When dealing with children's challenging behavior from a lack of self-awareness or undirected emotional and sensory existence, adults often want to know the quickest way to fix the behavior. When behavior analysts overlook the importance of humanity, they may stop one problem but create another. Restoration of humanity extends beyond a pattern of individual acts and perspectives but, through educational endeavors, directs how individuals perceive and make meaning of what they do. Non-aversive behavioral support, such as gentle teaching (Steele, 1995), has shown positive and lasting impacts on redirecting challenging behavior. Value-creating education, grounded in humanity, is important in behavior analysis to focus behavior intervention beyond individual actions, but the need to perceive the interconnectedness of human behavior. In redirecting challenging behavior, interventions designed and implemented based on humanity will lead to positive and lasting outcomes. When behavior analysts see their shared humanity with the individuals they serve and fundamentally respect human dignity, they will likely establish good relationships with people, co-participate in tasks, and reduce unnecessary conflicts.

In terms of instructional methods, Makiguchi argued that while objective truth grounded in science matters, "it is not in and of itself the source of value or meaning in our lives. Rather, value is derived from the subjective and contingent meaning we create from that truth" (Goulah, 2021). In other words, it is essential to help behavior analysts understand the fundamental purpose of their role as behavior analysts. The purpose defined by the accredited organization can only satisfy basic needs. No behavior technique will work if behavior analysts cannot stimulate people to engage with their environments. To transform human behavior and the development of society, instructional methods should include awareness-raising on humanity. Instructors can help students develop character as humanistic behavior analysts by modeling respect for the dignity of all lives in ABA practice and

consistently assisting people in developing conscious and moral behavior for the public good.

Concerning social support, society has an obligation to serve the essential needs of education and cultivate professionals with big hearts (Ikeda, 2000). Makiguchi's value-creating education is based on the idea that "people can become happy in society as it exists, not that they must change society to become happy. That is, people can become happy within the context of present circumstances, and in that process transform those circumstances" (Goulah, 2009, p. 198). Universities and governments aiming to cultivate high-quality behavior analysts should focus on humanity. Individuals needing behavioral interventions are no less capable than those who do not. Like everyone else, they desire to become happy. Humanistic behavior analysts understand that these individuals require different learning methods to catch up with peers and meaningfully participate in society. When universities and governments value humanity in ABA programs and offer opportunities for behavior analysts to experience the power of humanity, such as genuine dialogue and caring, it will enhance the quality and effectiveness of ABA techniques. Achieving this requires a learning environment where highly-qualified instructors, well-structured programs, and holistic training are all in place to awaken the humanity in each person's life.

### **Implications**

There are several implications in the present study. First, this study addresses the lack of humanity in current ABA programs. Makiguchi's value-creating education reminds behavior analysts that ABA techniques are not just focused on an individual's behavior but should be extended to social behavior that will help the individual lead a contributive life in society. With more research studies dedicated to humanity in behavioral interventions, humanity-based approaches are highly recommended in the ABA coursework requirements to address how changes in one's inner world can influence behavior and society.

Second, ABA programs adhere to coursework requirements to ensure that behavior analysts implement evidence-based practices to help individuals develop socially significant behavior. However, different universities are resourced differently, affecting the teaching and learning opportunities. For example, universities located in rural areas encounter challenges in establishing sustainable ABA programs due to their limited access to resources and community connections (Bethune & Kiser, 2017). As competitive ABA programs continue to grow (Deochand & Fuqua, 2016; Dickson et al., 2022), it is crucial for instructors to cultivate capable behavior analysts under any circumstance. Fostering humanity that values and respects human dignity and diversity will further the development of cultural awareness and competency in behavior-analytic training (Fong et al., 2017).

Third, Makiguchi's value-creating education framework offers educators one way to consider incorporating humanity into ABA programs, from examining course materials, instructional methods, to social support. To foster compassionate behavior analysts who value humanity in their practice, ABA programs should offer students more than just behavior techniques. Behavior analysts who possess genuine character and the ability to reach people's hearts will maintain a positive attitude in handling challenging behavior and develop trustful relationships with individuals who need behavioral support.

### **Conclusion**

Makiguchi's practical insights on humanity and human behavior help cultivate humanistic behavior analysts. Humanity does not separate from ABA programs. It is everything behavior analysts do to enhance individuals' well-being and the development of society. By constantly seeking meaning in life, behavior analysts understand the interdependence of life. Their behavior as human beings is the heart that makes ABA techniques work. Society is woven of multiple layers of self and social behavior. To enhance one's own existence and improve the well-being of others, individual behavior must be redirected to create a compassionate society. A self-centered society where people only seek selfish interests can never be prosperous and peaceful (Ikeda, 2000). Changes in behavior require an inner breakthrough and resolution to be the change. Behavior analysts who value humanity will assist individuals in overcoming their limitations and enable them to navigate behavior change.



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# The Perceptions of Gender-Based Violence: A Cross-Sectional Study Among University Students at Asia-Pacific International University, Thailand<sup>1</sup>

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## Abstract

Gender-based violence (GBV), which primarily affects women's health, is predicted by attitudes conducive to the acceptance of such violence. While there are extensive studies on the perception of GBV and its correlation with gender, only a few studies have analyzed the attitudes toward GBV in a predominantly Christian, Asian university, and how religion correlates with GBV. This cross-sectional study empirically compared the difference in perception of GBV between genders and religions, using survey data collected from 182 students at Asia-Pacific International University, Thailand; female respondents comprised 54% of this number. The predictive factors of acceptance of GBV were assessed through an online questionnaire that included demographic data, attitudes toward gender norms and justification of GBV. The results showed that gender and gender role beliefs were significantly positively correlated, and that religion had a significant effect on the justification of GBV as shown by a one-way ANOVA. This study demonstrated that gender, religion, gender role beliefs, and justification of GBV had a significant effect on the attitudes toward acceptance of GBV.

**Keywords:** *Gender-based violence, university students, perceptions gender-based violence*

## Introduction

The definition of Gender-based Violence (GBV), according to the United Nations High Commissioner for Refugees (UNHCR, 2023), is harmful acts directed at an individual based on their gender. The majority of the burden of GBV falls on women, and it is estimated that one in three women will experience GBV in her lifetime. GBV includes but is not limited to sexual, physical, mental, and economic harm. GBV can be inflicted by strangers, family, institutions, and intimate partners. Physical violence involves using physical force, strength, or weapons to harm or injure a woman. Sexual violence includes abusive sexual contact, making a woman engage in a sexual act without her consent, and attempted or completed sex acts with a woman who is ill, under pressure, or under the influence of alcohol or other drugs (WHO, 2012). Addressing GBV as a pressing public health issue will contribute to the United Nations Sustainable Development Goals in achieving gender equality; therefore, it is an important issue to be researched, analyzed, and resolved (United Nations, 2015).

## Literature Review

Gender-based violence, a prevalent problem that affects the health of women, is mainly predicted by attitudes conducive toward the acceptance of GBV. These attitudes differ across the three predictive factors addressed in this paper: gender, beliefs in gender roles, and religion.

## Prevalence and Effects

Gender-based violence affects not only adult women, but also young girls. An estimated 83 to 102 million women in 28 European Union member states have experienced at least one form of sexual harassment since the age of 15 (Latcheva, 2017). Gender-based violence can be inflicted by both intimate and non-intimate partners. Globally, 27% of women ages 15 to 49 have been subjected to Intimate Partner Violence (IPV) (Kalra, 2021). Gross (2006) found that 27% of college women had experienced unwanted sexual contact. Cultures that tolerate violence against women and actively victim-blame also exhibit low rates of reporting violence (Kalra, 2021).

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Gender-based violence affects the physical, mental, and emotional health of women. Physical and sexual violence can lead to issues such as bruises, bone fractures, hemorrhaging, pelvic pain, sexually transmitted infections such as HIV, unwanted pregnancies, unsafe abortions, gynecological disorders, chronic diseases, and even death (Kalra, 2021). In a study conducted by Gurung in Nepal in 2016, 91% of pregnant women reported experiencing gender-based violence, of which 41.8% was sexual. Beyond the victim herself, the violence frequently extended to causing deformities or broken bones in the fetus, and even to miscarriage. Additionally, GBV affects the psychological health of women, leading to an assortment of issues such as substance abuse, depression, post-traumatic stress disorder, and anxiety disorders (Kalra, 2021). Women who have experienced abuse had a significantly higher rate of post-traumatic stress disorder related symptoms than women who were not abused (Pico-Alfonso, 2005).

### **Attitudes**

One of the defining factors that exacerbate GBV is the societal attitudes associated with it. The perceptions around GBV seem to be sympathetic towards the abuser. Society rationalizes perpetrating or tolerating GBV because of belief in strict gender roles such as the acceptance for men to discipline, own, and control their female partners and emphasize their authority, or that violence is an important factor which defines manhood (Darj, 2017; Sikweyiya et al., 2020). These perceptions are exhibited across genders, and sadly the women who justify physical and sexual violence are those who are most likely to have experienced either physical or sexual violence. Additionally, the justification of GBV and like-minded perceptions stem from the false belief that women are somehow inferior to men (Hayati, 2011). Keller et al. (2017) found that more positive attitudes shown toward women influenced school-aged boys to intervene when witnessing GBV. Moreover, male adolescents with more equitable gender attitudes had less self-reported violence perpetration, including dating abuse and sexual harassment (Miller, 2020).

Attitudes regarding GBV include, but are not limited to, the acceptability of violence against women, community responses to women experiencing violence, and how acceptable it is for women to refuse to have sex or engage in sexual activity (Abramsky et al., 2012). Societal attitudes affect how women are treated when they are victims of GBV. Li (2020) found that in college students, the tolerance for intimate partner violence was affected primarily by their attitudes towards GBV. In a study of Taiwanese university students, the intention to commit violent behaviors against women was significantly predicted by their behavioral beliefs regarding GBV; students who had tolerant attitudes towards GBV were more likely to intentionally perpetrate GBV themselves (Lin, 2021). In a study of medical and nursing students by Majumdar (2004), it was evident that attitudes towards GBV can affect victims seeking medical support since the responses of healthcare staff might differ if they believe that the abuse was justified. Noticeably, attitudes in which GBV was justified led to worse outcomes for women, ranging from lack of community and medical support, to enduring and engaging in violence. Perceptions about GBV may therefore lead to the pervasive spread of certain behaviors such as a decrease in victims seeking support, reduced assistance to victims, and an increase in assaultive behaviors.

In a study conducted by Abramsky et al. (2014), it was discovered that community interventions for violence prevention were associated with lower social acceptance of IPV among women and men, a significantly greater acceptance that women can refuse sex, more supportive community responses, and lower levels of both physical and sexual IPV directed towards women. There was a clear correlation between attitudes and behaviors, with attitudes affecting the behaviors of perpetrators, victims, and social workers or healthcare providers. This calls attention to the fact that attitudes can change with intervention, and accordingly so can behaviors, which demonstrates why analyzing attitudes is important in addressing issues regarding women's rights and their health.

Attitudes differ across demographics and cultures. Some predictive factors of attitudes include gender, beliefs in strict gender roles, justification of GBV, and religion. These are discussed below.

## ***Gender***

Gender is a statistically significant predictive factor of attitudes towards gender-based violence (Yilmaz & Taplak, 2021). Attitudes that condone GBV are more prevalent in men than in women. For example, undergraduate male students were more tolerant of instances of females being raped than were females (Talbot, 2010). As seen in multiple studies, men exhibited higher levels of victim-blaming, were more tolerant of GBV, and were more accepting of rape myths than women (Caron, 1997; Johnson, 1997; Kamal et al., 2010).

Female medical students had stronger convictions against GBV than their male counterparts (Majumdar, 2004). According to a study by De Vries (2014), adolescent boys had more positive views of forced sex than girls; they associated it with signs of love, and even regarded it as an acceptable punishment for girls. Even among the youth of indigenous tribes, victim-blaming attitudes were shown to be rampant among males (War, 2013). Permissive attitudes toward GBV in men are seemingly ubiquitous across cultures, ages, and continents.

## ***Gender Role Beliefs and Justification of GBV***

Different beliefs concerning gender roles also play a role in GBV. Individuals who had more traditional and conservative beliefs about gender roles were more accepting of rape than individuals who believed in more egalitarian gender roles (Talbot, 2010). Johnson et al. (1997) confirmed that those who maintained conservative views of gender roles believed in rape myths to a greater extent than those who held liberal views. They also indicated that traditional and rigid gender roles were associated with tolerant attitudes toward domestic violence. Little has changed since 1997; Chilanga (2020) reported that the presence of strict gender roles oftentimes led to gender-based power imbalances, which increased the risk of women experiencing IPV due to beliefs in male superiority and dominance. Those who hold conservative views of gender roles expect women to be submissive, controllable, and passive about their experiences and wishes (Johnson & Johnson, 2021). The existence of traditional gender roles need not be problematic, but because such views of gender roles are based in cultures with higher levels of sexism, there is a more accepting stance toward sexual violence when they are held.

## ***Religion***

Religious fundamentalism refers to religious groups that believe in the superiority of their religious teachings, and believe that they must be applied to all social, economic, and political issues (Kossowska, 2018; Razaghi et al., 2022). Seventh-day Adventists (SDAs) are not typically fundamentalist, but they do share some beliefs with fundamentalist Christians (Lawson, 2001). They represent the majority of the Christians at Asia-Pacific International University, the location where this study took place.

A recent study done in a religiously affiliated university indicated that religious fundamentalism had a positive association with rape myth acceptance: as religious fundamentalism increased, so did rape myth acceptance (Ensz, 2020). An extreme internalization of religious fundamental values, such as preserving a stereotypical patriarchal society, can set the stage for GBV by heterosexual men towards women, especially lesbians and queer women, and increase the risk of violence towards these already marginalized, vulnerable groups (Vincent et al., 2011).

On Christian campuses, limited research indicates that fewer acts of sexual violence are committed, and communities were more willing to intervene in sexual violence prevention than on secular campuses (Foubert et al. 2021). On the contrary, a study by Vanderwoerd and Lankhof (2020), found that 23% of women in Christian colleges reported having experienced stalking behaviors, which are a form of GBV, more than five times since turning 18 years of age. This study affirmed that women were at a greater risk of experiencing sexual violence than men, and that acts of sexual violence did occur at Christian colleges.

While most predictive factors of attitudes toward GBV were analyzed in separate studies, in this research, the intention was to fill this gap by analyzing the perceptions of GBV in a single study by exploring potential predictive factors, namely: gender, religion, and justification of GBV. Considering

all the information discussed, it was evident that most predictive factors of attitudes had been analyzed in separate studies. Thus, it was decided to assess the three attitudinal predictive factors in one study.

### **Research Objectives**

Gender-based violence is a highly prevalent problem that affects the health of women, and is mainly predicted by attitudes towards GBV, with these attitudes differing depending on gender, religion, and beliefs in gender roles. This study will contribute to the body of knowledge about GBV and assess the perceptions of students on a faith-based Asian college campus.

### **Research Questions and Hypotheses**

Question 1: Is there a significant correlation between gender and perceptions of GBV among students at Asia-Pacific International University (AIU)?

Null hypothesis 1: There is no significant correlation between gender and perceptions of GBV.

Question 2: Are there significant differences in perceptions of GBV among AIU students of different religious beliefs, i.e., Seventh-day Adventist Christians, and adherents of other religions?

Null hypothesis 2: There are no significant differences in perceptions of GBV among different religions.

### **Methods**

#### ***Study Design***

The research was designed as a quantitative, observational cross-sectional study using gender and religion as the independent variables, and perceptions regarding GBV as the dependent variable.

#### ***Population and Sample***

The population studied involved students enrolled at AIU during the academic year of 2021–2022. A convenience sampling technique was selected, and participants were reached through Teams and Messenger (online platforms), and chose whether or not to be part of the study. Using a confidence level of 95% and a margin of error of 5% for 900 students, the ideal sample size was determined to be about 270 participants.

#### ***Ethical Considerations***

Institutional Review Board approval was sought and given. Information about the study, procedures, benefits, confidentiality, and risks were explained to the participants in a consent form, which they voluntarily signed when agreeing to participate. All participants retained the right to refuse or withdraw from participation at any time during the study. Participants' responses were anonymous, and no identifying information accompanied the data.

#### ***Instrumentation***

The 20 questions in the questionnaire were adapted from two sources:

1. The Social Norms and Beliefs about Gender-Based Violence Scale was used, which was found in the public domain (Perrin et al., 2019); and
2. A questionnaire on GBV in Myanmar conducted by UKAID was used, which was found in the public domain (UKAID, 2016).

The structure of the survey addressed perceptions on gender roles as well as the justification, tolerance for and acceptability of GBV. A five-point Likert scale was used. Within the sections of the survey, average scores were taken. Lower scores in the sections of gender roles and justification of GBV would specify more conducive views toward GBV. Data collection began after Institutional Review Board approval was received, and online survey questionnaires were distributed through Teams and Facebook Messenger to AIU students in the form of a Google Form link.

### Data Analysis

Data analysis was performed using a statistical software package. A 95% confidence interval, and  $\alpha < .05$  was used. The study sample was described using descriptive statistics. The statistical analyses used were Pearson's Coefficient and One-way Analysis of Variance (ANOVA). A bivariate correlation of Pearson's Coefficient was applied to assess the relationship between gender and perceptions. The analysis of variance was used to determine if there were any statistically significant differences between the scores for perceptions and religion of the respondents.

### Results

A total of 182 participants voluntarily attempted the online questionnaire. Of the surveys distributed, 170 (93.4%) questionnaires were valid after removing incomplete questionnaires. The ages of the participants ranged from 16 and above. Further, 93 (54.1%) participants were female and 75 (43.6%) were male. The respondents were mostly 139 (81.3%) from the International program, while 28 (16.4%) were from the Thai program. Of the students, 130 (76.4%) were Seventh-day Adventist Christians, 24 (14.11%) were Buddhists, seven were (4.1%) atheists/agnostics, and 5.2% were other Christians. With regards to the year of study, 63 (37%) of participants were senior students, 38 (22.3%) were juniors, 39 (22.9%) were sophomores, and 32 (18.8%) were freshmen.

The data obtained indicated that the average score of gender role beliefs for males ( $M = 4.0$ ,  $SD = 0.8$ ) was lower than the average score for females ( $M = 4.2$ ,  $SD = 0.81$ ). A one-way ANOVA (Table 1) assessed that the effect of gender on gender role beliefs was statistically significant [ $F(1,166) = 4.06$ ,  $p = .046$ ].

**Table 1** ANOVA of Mean Scores of Gender Role Beliefs by Gender

Comparison	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.696	1	2.696	4.060	.046
Within Groups	110.250	166	0.664		
Total	112.947	167			

*Note.* Three respondents did not answer the questions in this analysis.

Male participants ( $N = 75$ ) had average justification scores of 4.28 ( $SD = 0.76$ ), while the female participants ( $N = 93$ ) had average scores of 4.32 ( $SD = 0.81$ ). Table 2 shows that there was no statistically significant difference in the mean score of justification of GBV between males and females.

**Table 2** ANOVA of Mean Scores of GBV Justification by Gender

Comparison	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.059	1	0.059	0.093	.761
Within Groups	104.715	166	0.631		
Total	104.774	167			

*Note.* Three respondents did not answer the questions in this analysis.

The respondents who self-identified as SDA Christians ( $N = 130$ ) had an average gender role belief score of 4.19 ( $SD = 0.79$ ), while the other respondents ( $N = 40$ ) had an average score of 4.08 ( $SD = 0.96$ ). Table 3 indicates that there was no statistically significant difference in the mean scores of gender role beliefs between SDA and all other non-SDA religions analyzed, as demonstrated by a one-way ANOVA [ $F(1,166) = .496$ ,  $p = .482$ ].

**Table 3** ANOVA of Mean Scores of Gender Roles by Religion

Comparison	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.346	1	.346	0.496	.482
Within Groups	117.099	168	.697		
Total	117.445	169			

Note. One respondent did not answer the questions in this analysis.

The respondents who self-identified as SDA Christians ( $N = 130$ ) had an average justification of GBV score of 4.38 ( $SD = 0.70$ ), while the other non-SDA respondents ( $N = 40$ ) had an average score of 4.10 ( $SD = 0.99$ ). Table 4 shows ( $p = .049$ ) that there was a statistically significant difference in the mean score of justification of GBV between Adventists and all other non-SDA religions.

**Table 4** ANOVA of Mean Scores of GBV Justification by Religion

Comparison	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.411	1	2.41	3.915	.049
Within Groups	103.471	168	0.616		
Total	105.881	169			

Note. One respondent did not answer the questions in this analysis.

From the data presented in Table 5, a weak negative correlation was reaffirmed between both beliefs in gender roles, [ $r(170) = -.054$ ,  $p = .482$ ] and justification, [ $r(170) = -.151$ ,  $p = .049$ ], with religion. However, only the justification figure was statistically significant. The data also indicated a very strong positive correlation ( $r(170) = .706$ ) between gender role scores and justification, which was statistically significant ( $p < .001$ ).

**Table 5** Correlations between Religion, Gender Role Scores, and Justification Scores

Factor	Statistical Information	Religion	Mean Score of Gender Roles	Mean Score of Justification
Religion	Pearson Correlation	1	-.054	-.151
	Sig. (2-tailed)		.482	.049*
	N	170	170	170
Mean Score of Gender Roles	Pearson Correlation		1	.706
	Sig. (2-tailed)			.000**
	N		170	170

\* Correlation is significant at the .05 level (2-tailed); \*\* correlation is significant at the .001 level (2-tailed).

## Discussion

In this study, university students' perceptions of GBV were explored together with predictive factors such as beliefs in gender roles. The results showed a slightly significant ( $p = .05$ ) positive correlation between the predictive factors of acceptance of GBV. Lower mean scores indicated views conducive toward GBV acceptance. The correlation matrix showed that stricter and more conservative respondents had lower scores for beliefs in gender roles, and the respondents who were more inclined to disregard the experiences of GBV victims had lower scores for the justification of GBV.

The bivariate correlation coefficients of gender and beliefs in gender roles established that the relationship had a significant, positive correlation. Based on the data analysis, we can conclude that there is evidence that gender had a relationship to perceptions of GBV: namely, that male students had a greater acceptance of GBV than female students ( $r = .155$ ,  $p < .05$ ) as was hypothesized and



reported in the literature. However, for the justification of GBV, the correlation with gender was not significant, indicating that both males and females had similar views toward the justification of GBV.

The ANOVA analysis indicated that religion did not have a significant effect on gender role beliefs among these participants. This result was somewhat surprising because, according to the literature, fundamentalist religions influence beliefs about gender roles. This could be explained by SDA Christians not embracing all fundamentalist beliefs. However, the analysis indicated that religion significantly affected the justification of GBV.

Pearson's correlation analysis was carried out for religion to verify the ANOVA results. It was found that religion had an overall negative correlation with perceptions of GBV. SDA Christians displayed a significant negative correlation with justifying GBV, inferring that SDA Christians have fewer beliefs that GBV can be justified compared to the other religions included in the study.

## Conclusion

In this study, the correlations between gender, religion, and perceptions of GBV were examined. Some predictive factors for GBV were analyzed, including beliefs in gender roles and justification of GBV. For all predictive factors, the positive correlation in males was stronger than in females. Additionally, for all predictive factors, the significant effect of religion was positive, with the fundamentalist-leaning SDA religion less acceding to acceptance of GBV, which contradicted previous findings in the literature.

Overall, these results are important because they lend insights into the population of students at AIU and their beliefs. Although these results are strongly corroborated by previous findings which verify the disparity of acceptance between males and females, this study differed in that it incorporated both gender and religion as predictive factors of GBV acceptance at a Christian university in an Asian country.

Future researchers could consider investigating the effects of culture, educational status, or other potentially significant factors on the acceptance of GBV by other demographic groups in Asian settings.

## Limitations

While interpreting the findings of the study, there are some limitations that need to be considered. The target number of respondents indicated as being necessary for high confidence in the results obtained was not achieved. The highest percentage of the study respondents were senior students (36.6%), which means that most of the respondents were more educated compared to the rest which could influence their perceptions. Also, there were more female participants (54.1%) than males (43.6%), which might have skewed the overall results. Since AIU is a Christian university, the overwhelming number of respondents were SDA Christians, leaving only a few other religions, which would affect the validity of the ANOVA analysis of religion. No considerations were given toward culture in the demographic questions of the survey, which could be a limitation because there are differences in perceptions beyond gender and religion, accounted for by cultural norms. However, the target population at AIU was multicultural and the multiplicity of cultures is assumed to have neutralized the overall effect of culture. Since this study was conducted in English and was not translated into Thai, the number of Thai respondents was few.

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## **Deconstructing Stigmatisation by Heterosexuals of LGBT Against the Backdrop of Religion in Malaysia**

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### **Abstract**

The study focussed on deconstructing heterosexuals' stigmatisation of LGBT in the context of religion in Malaysia. The qualitative study involved semi-structured interviews with 21 heterosexuals (Buddhist, Christian, Muslim). The interview questions focussed on societal and personal views of LGBT. Thematic analysis of interview transcripts totalling 30,488 words showed the lay perspective on the construction of homosexuality in terms of personal choice, situational factors, and ideologies of stigma. The participants were able to empathize with personal choice only because they perceived the LGBT individuals had no chance of reverting to a so-called normal identity. The participants re-animated, rehearsed and re-presented the ideological defence of heterosexuality through repeated stigmatisation of difference and non-conformity in the context of the normative religious beliefs. They also perceived homosexuals as a potential threat to the morality of the norm-compliant population, prone to emotional and psychological instability, and a threat to the veneer of normalcy. The study showed that such popular theorising is not a neutral instrument of knowledge but one that carries ideological power in normalizing stigma towards LGBT.

**Keywords:** *LGBT, homosexual, heterosexual, stigma, social construction, ideologies*

### **Introduction**

In Malaysia, lesbian, gay, bisexual and transgender (LGBT) people experience state-backed discrimination which threatens their rights (Human Rights Watch, 2022). Research indicates that LGBT individuals in Malaysia face discrimination from both the legal and religious quarters, not to mention social rejection by heterosexuals. Zainon et al.'s (2018) interviews showed that the LGBT participants struggled between complying with the dominant heterosexual ideology and their desire to come out as homosexuals. The four Muslim LGBT participants interviewed by Shamsudin and Ghazali (2011) constructed themselves ("us") versus heterosexuals ("them") who considered them as having gone astray from their religion. Similarly, the four LGBT participants in Zulkffli and Ab Rashid's (2019) study tried to undermine the mainstream interpretation that the homosexual sexual act is sinful in Islam.

LGBT activity is criminalized in Malaysia because of religious and civil laws that ban crossdressing and same-sex relations (Human Rights Watch, 2022). The Syariah (Shariah) law is an Islamic religious law that can be used to apprehend LGBT individuals: Section 25 and Section 26 of Syariah Criminal Offences (Federal Territories) Act 1997 covers sexual intercourse between a man and a woman out of wedlock and same-sex relations (Lee, 2012, p. 172). Section 28 can be used to charge transvestites who are caught wearing women's attire or posing as a woman for "immoral purposes" in public. The caning sentence has been meted two times in Malaysia, once by the Terengganu State in 2018 and the second time by the Selangor Sharia (Syariah) Court in 2019 (Human Rights Watch, 2021). In view of the religious sanctions of the dominant religion in Malaysia against LGBT, it is important to study how heterosexuals bring in the religious argument to stigmatize LGBT individuals.

Malaysian civil law does not mention LGBT, although homosexual practice "is codified under the heading of Unnatural Offence of the Penal Code Act 574" (Mallow & Yeoh, 2019, p. 83). In fact, same-sex relations are punishable under Penal Code Section 377A, 377B and 377C and cross-dressing is punishable under the Minor Offences Act 1955. "In Islam, only khunsa, or hermaphrodites, are allowed

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to undergo sex-change operations ... Islam does not recognize the western category of transsexual, therefore, transsexuals are regarded as nonentities” (Teh, 2008, p. 85).

In the Western context, where discrimination is structurally measured and defined, it is possible to identify stigma as an objective reality. Hence, research on LGBT in Western scholarship has moved on from the aspects of social knowledge and perception to the examination of institutional, policies and legal frameworks that sustain discrimination on the basis of sexual orientation. Hasenbush et al. (2014) found that in states in the Midwest, Mountains, and South, which do not offer legal protection for LGBT persons, LGBT individuals experience greater employment vulnerability. Hasenbush et al. (2014) also found that the social acceptance towards LGBT is lower, thus, reducing the pressure to address inequality and disparity between heterosexuals and the LGBT individuals. By addressing the “structural stigma,” defined as “societal-level conditions, cultural norms and institutional practices that constrain the opportunities, resources and well-being for stigmatised population,” the collective struggle for LGBT recognition is moved into political arena, where laws, policies, and resources are brought to bear to address discrimination objectively (Hasenbush et al., 2014, p. 5).

In Malaysia, the legal and religious sanctions against LGBT are interconnected because Islam is the official religion in Malaysia. The Quran decries the lewdness of same-sex relations in Surah 26:165 and Surah 7:80–81. Therefore, the civil and religious law penalize same-sex relations. Christianity also has explicit teachings against same-sex relations, and some of the Bible verses are found in Genesis 5:2, Leviticus 18:22, Leviticus 20: 13, and Romans 1:26–27. The main biblical exhortation is that God created human beings male and female and same-sex relations are described as detestable. The Bible records God punishing the men of Sodom and Gomorrah for practising homosexuality. Early Buddhism did not place any stigma on homosexual relations, and this is inferred from the silence on it (Coleman, 2002). Later some Buddhist texts, such as the Abhidharma, consider non-vaginal sex as sexual misconduct but this view is not based on what Buddha said (Chodron, 2008). Sikhism has no definite teachings on homosexuality and the Sikh scripture makes no explicit mention of homosexuality. The existence of LGBT practices has been attributed by some to western influences (“PM [Prime Minister] slams West for erosion of values, same-sex marriage,” Ramlan, 2019). Given multiple contexts in Malaysia that are against LGBT, it is important to find out whether heterosexuals stigmatize LGBT and, if they do, how they justify their stigmatization.

In this study deconstruction of heterosexuals’ stigmatisation of LGBT was undertaken in the context of religion in Malaysia. The aspects focussed on were personal choice, situational factors, and ideologies of stigma. The process of deconstruction is needed to reveal the obvious and subtle stigmatization of LGBT individuals because they suffer harm in a country where there are religious and legal laws to punish homosexual practices. The study will provide insights into societal prejudice against differences in sexual orientation, which is an important step towards recognition of LGBT rights.

## **Literature Review**

### ***Social Construction of Homosexuality***

The problematics of social construction illuminate the dichotomy between the freedom of will and determinism in philosophy and social theory. Taking the extreme side of the argument, gender is chosen by individuals willy-nilly, uprooted from social necessity. Butler’s (2006) version of social construction, however, disputes the stereotypes, and proposes instead that gender, either “fixed or constructed,” is a function of discourse, “which seeks to set certain limits to analysis or to safeguard certain tenets of humanism as presuppositional to any analysis of gender” (p. 12). Butler further explained that every discourse is a product of a “socially instituted gender asymmetry,” hence, universalising inequality as a fact in gender relations. Kamano (1990) studied the representation of homosexuality, and found rigidity in how people categorize gender, that is, gay men tended to be stereotyped as having feminine characteristics, and lesbian women as having masculine characteristics. It suggests their inclination for an “ideology” that naturalizes gender and dichotomizes the sexual world.

The theorising of homosexuality is not just the debate between scholars and theorists. The common people, too, have a knack for theorising. This popular theorizing is especially pertinent because ordinary people think and perceive the “real.” Berger and Luckmann (1991) reminded theorists to pay attention to the thinking of ordinary people, because the focus of their attention is on “here and now,” the “intersubjective world” that they inhabit and share with others, and in their mundane, yet “compelling reality.” For common people, “theorising” is a pedestrian way in actualizing their thought through an appeal to some universal constructs that carry a notion of generalized, known “truth.” Ordinary people do have the knowledge and skill necessary to become effective players in the social situation and for which they could optimize their material and symbolic advantage.

### ***The Moral Ideology of Homosexuality***

In this paper, the theorizing on gender non-conformity is explored from the vantage of gender conformists. There are two objectives for privileging the majority view. First, to make obvious the legitimization of stigma derived from the moral theory pertaining to homosexuality. Second, to make apparent the consequence of moral theory in affecting stigma. By drawing upon the perspective of the “social,” one is cognizant of the worldview of stigmatized persons that are excluded from the analysis.

Goffman (1968) coined the term “virtual identity,” to describe the identity assumed by stigmatized people in the encounter with the so-called normal, as they vacillated between behaving defensively (“defensive cowering”) by avoiding contact or exaggerating distinction (“hostile bravado”). The uncertain reaction continues as long as they feel uncertain about what the others are “really” thinking about (Goffman, 1968, p. 25). Until then, the maintenance of their virtual identity is important for the suffered who are aware that any slippage in the appearance or the situation where they are found out is a crisis for both parties. Goffman (1968, p. 31) states that the crisis “has the effect of cutting him off from society and from himself so that he stands discredited person facing an unaccepting world.” As such, to the normal people who are looking and theorizing about LGBT are most likely oblivious that the subject of their curiosity appears only in their secondary, non-fundamental characteristics. And so, the knowledge built on this appearance must also be taken as phenomenological knowledge true for the observers in question.

### **Method of Study**

The qualitative descriptive study involved interviews with 21 participants (P21 to P33 in this paper). Qualitative methods are appropriate for understanding the complexity of family issues and close relationships, particularly in understanding unique needs and concerns of LGBT individuals across multiple domains of social life instead of in isolation (Orel, 2014). The sample size exceeded the minimum number of participants recommended by researchers for reaching data saturation such as 12 for a homogenous group (Guest et al., 2016) and 20–30 for qualitative interviews (Creswell, 1998; Vasileiou, 2018).

Table 1 shows the participants’ demographic information. A majority of the participants were below 30 years old, Muslim, and not working at the time of the study. The selection criteria were Malaysians above the age of 18 so that participation in the study did not require parental consent.

The semi-structured interview guide consisted of questions on societal and personal views of LGBT, and influences on their views. So as not to lead participants, they were not directly asked about how religion influenced their attitudes towards LGBT.

For the interviews, the third researcher asked her social contacts who might participate in the study. She explained the purpose of the study, assured them of the confidentiality of their responses and their anonymity as subjects. She also informed them that the interview sessions would be audio recorded. For individuals who agreed to participate in the study, an appointment was fixed for the interview. The interviews were conducted in English, with the occasional use of Malay.

**Table 1** *Demographic Information on Participants (N = 21)*

Category	Sub-category	Frequency
<b>Gender</b>	Female	9
	Male	12
<b>Ethnic Group</b>	Chinese	3
	Malay	9
	Indigenous	8
	Others	1
<b>Age</b>	18–20 years old	8
	21–30 years old	8
	31–40 years old	3
	41–50 years old	1
	51–60 years old	1
<b>Educational Background</b>	Form 5	1
	Form 6/ Diploma	5
	Degree or higher	15
<b>Monthly Income</b>	Not working	13
	RM2000–RM3999	3
	RM4000–RM5999	3
	RM6000–RM7999	0
	RM8000–RM9999	1
	RM10000 and more	1
<b>Religion</b>	Buddhist	2
	Christian	5
	Muslim	13
	Other religions	1

The 21 audio-recorded interviews were transcribed. The 30,488-word transcripts were analysed thematically, guided by Caulfield's (2019) thematic analysis. The researchers reread the transcripts to identify initial themes on ideologies of stigma. Later readings focussed on identifying themes on situational and personal reasons for individuals to break away from the normative heterosexual orientation. Finally, recurring themes and relationships among themes were analysed by referring to contextual influences such as values, media, family, and friends.

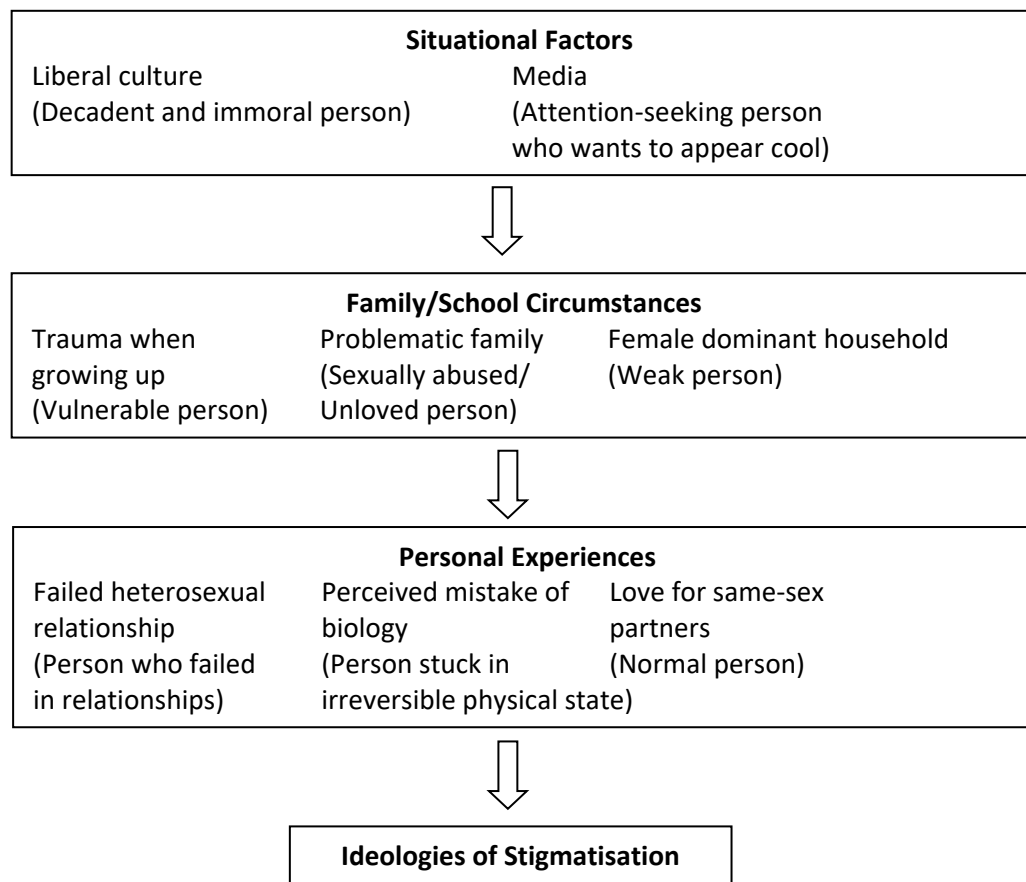
## Results

This section describes the different layers in the stigmatization of LGBT individuals based on the heterosexuals' construction of homosexuality in terms of personal choice and situational factors and ideologies of stigma in the context of their religious beliefs (Figure 1). Due to the word limit, only some extended excerpts can be included.

### *Personal Choice*

The analysis revealed that the heterosexual participants believed that non-gender conformist persons made a conscious personal choice due to personal experiences that were sometimes influenced by their family circumstances and wider situational factors. A Chinese Christian, AL (P13), said that one chooses to become homosexual because one seeks attention and wishes to appear "cool," possibly due to media influence. In contrast, some participants like AF (P33, a Malay Muslim) believed that the personal choice to come out as an LGBT individual is driven by a mistake in biology. They have no choice because they are stuck in an irreversible physical state. AL conceptualized homosexuality and transgenderism as instances of "gender dysphoria."

**Figure 1** *Schematic Representation of Different Layers of Stigmatisation of LGBT by Heterosexuals Derived From Analysis of Interview Data*



Unlike AL and AF, who expressed clear opinions about choice, other participants like OB (P18, a Melanau Christian) expressed ambiguous opinions about choice. Based on his acquaintance with a gay, OB learnt that sometimes LGBT individuals go through an extended phase of exploring their sexuality and they may not have reached a conclusive sexual orientation. Equally sympathetic was AJ (P22), a Malay Muslim, who said that individuals who are not clear about their sexuality may suffer from a feeling of “isolation,” “confusion,” and “loneliness.” AJ speculated that the LGBT individuals’ confusion could have a biological basis, besides family and personal experiences.

To me, they are just lonely, confused with their sexuality. They don’t know who they’re with, or to be paired with, or partnered with. Or probably because of, I don’t know, home background? Or maybe not enough friends? Maybe some, scientifically, I don’t know, re-genetic ... chromosomes, X, Y. (AJ)

Finally, “love” is seen as motivation for homosexual practices. SS (P29), a Melanau Muslim learned from her gay friends that they experienced heartbreak in a prior, heterosexual relationship. AT (P17), a Chinese Buddhist, was told by his gay friends that they felt real love towards their same-sex partner. In both cases, homosexuality was a rational choice driven by affection. The heterosexual participants could empathize with the compelling love, and this enabled them to go against the official stance of their religion and be tolerant towards LGBT.

Knowing that homosexuality is a choice does not entail unqualified acceptance. The heterosexual participants tried hard to be open about it. A Chinese Buddhist, AT (P17), stated that since sexuality is a personal affair, one should not impose one’s values over the other. Buddhist scriptures are not known to make explicit prohibitive stance against same-sex relationships. However, other participants put aside religious teachings and related to LGBT individuals as persons. A Melanau Christian, SR (P24) recognized that the non-conformist choice for being different is not an easy, inconsequential one. She



said, “they actually really struggle with their own identity. They struggle on their feeling of guilt, religion ....” The inner struggle for many LGBT individuals was not resolved, which is why they kept their identity a secret from people around them for fear of rejection, but it made them feel depressed.

Knowing that homosexuality is a choice forms a basis for its rejection and in some instance, its management. (P22) claimed that the “sex dilemma” may best be resolved in a non-surgical manner such as counselling and correct peer example instead of “transformative surgery.” Similarly, AT (P17, a Chinese Buddhist) talked about a gay friend who was referred to a psychologist by his mother. In another instance, Na (P30), a Malay Muslim said that gay people can get help from “psychiatrists” and “reform institutions” to be rehabilitated. The views on the need to correct the sexual orientation of LGBT individuals could stem from the religious labelling of same-sex relationships as sinful in Christianity and Islam.

### ***Family/School Circumstances***

The participants expressed knowledge of social causes of gender non-conformity. They attributed homosexuality to family and school circumstances where one is driven to a particular sexual identity rather than being born as homosexuals.

Growing up in a female-dominant household could condition some males to be non-conforming in their sexual orientation. AF (P33, a Malay Muslim) believed that being close to sisters can make boys feminine, prone to psychological disruption, and predispose them to turn gay. An example of a feminine behaviour given by FF (P20, a Malay Muslim) was following the girls in the family in using cosmetics. In addition, NH (P32), a Malay male, said that an effeminate friend he knew at school lacked confidence to befriend fellow boys. These participants believed that insufficient learning of masculinity at home could make a male person effeminate, prone to emotional and psychological instability, and lead to the development of a weak and easily suggestible personality.

Some participants believed that trauma, such as sexual abuse and disciplinary problems could cause an individual to turn homosexual. A researcher BJ (P19, a Punjabi Sikh) talked about his encounter with gay persons in the course of his research. A subject in BJ’s research claimed to have accepted repeated sexual abuse by a male relative.

When I met him, he was already like, 30 years old. He told me this is what happened. He was raped by a random relative when he was on a trip to India, more than one time. And he accepted it as a normal thing. This guy is no more around. He died of it [AIDS]. 50 years ago, they don’t have Internet. He was influenced by his surroundings. Move forward to now. Now people Google for pornography. And, you’ll find all sorts of sex, anal sex, and that becomes normal. It’s taboo. Yet it’s normal. So people start doing it because of that. So I can draw a conclusion that 80% of them are actually, really not truly gay because of their hormones. It’s not inborn in other words. They are influenced by friends, by role models, and also by the environment. Role models like Elton John, Ellen DeGeneres. So when they start proclaiming, people believe it’s normal. Once it’s normal, oh I can do it. It’s okay. So, and all they need is a trigger, somebody who is like that, to come closer to them and encourage them. And then they accept it. (BJ)

BJ’s rendition of gender non-conformity was triggered by family circumstances because fifty years ago, the terms “gay” and “transvestite” did not even exist but in the present digital era, it is the media that popularizes LGBT.

### ***Situational Factors***

From the perspective of the heterosexual participants, the two situational factors that propagate gender non-conformity are the liberal culture and the influence of the media. The “liberal culture” is often associated with western countries. A Malay Muslim AF (P33) cited an instance of an acquaintance who said she was a “non-binary.” AF said that her friend grew up in Australia and the permissive environment there “eventually shaped her mindset and her point of view” to accept LGBT practices as acceptable. AF (P33) believed that heterosexuals should engage more with gays, rather than avoid them, to enable them to revert to the “normal” gender.

However, other participants were of the view that the influence of the media was the stronger factor in popularizing LGBT. NH (P32, a Malay Muslim) believed that one does not have to live in a foreign country but can be influenced by the globalized media and social network.

I have one friend. She likes to watch K-pop. She is like bisexual. She likes to watch boys group, and then you know usually, they will have one boy interact romantically with another boy, I think. And then, she will go, "woo so cute." She will be interested in that kind of way. Like, in Japan they have this kind of genre for boys on boys. Like, I think is C-R-O-A, probably means the Boy's Love culture exists in Japanese manga or anime. And then, when it comes to the girls group. She will talk a lot, "oh, she is so cute." She wants to be with her and she doesn't want anyone to take, to take her. (NH)

Boys' Love is a genre of manga and novels aimed at a female readership, and originated from Japan. NH believed that homoerotic manga, novels and other media can glorify male-male love relationships. Boy's Love culture is believed to prompt social change in the form of greater acceptance for sexual minorities (Fukari, 2020). In an excerpt cited earlier, BJ also said that when celebrities like Elton John and Ellen DeGeneres came out, this induced people to believe that being LGBT is normal.

### ***Ideologies of Stigma***

The heterosexual participants were aware that homosexuality is socially constructed, real, and grounded in reality. They recognized the existence of LGBT individuals, contrary to the Islamic teaching that considers them as non-entities (Teh, 2008). Their knowledge-content of homosexuality was, indeed, sociologically useful, for it pares down the theoretical, scholarly understanding of gender construction to the phenomenology of ordinary life. Another possible reading of the construction is the function it plays within the wider, fundamentally heterosexual gender relation. The participants reanimate, rehearse, and re-present the ideological defence of heterosexuality through repeated stigmatization of difference and non-conformity at the thought level. Through ideological reproduction of heterosexuality, the binary structure of male/female is reinforced. The popular, non-elitist construction of gender ideology illustrates how stigma is naturalized at the level of ideas; hence, it demands scrutiny.

First, the ideology of stigma pertaining to explaining inferiority will be commented on. On the subject of personal choice, the participants were able to empathize with the choice only because they perceived the non-conformists had no chance of reverting to a so-called normal identity. The abnormality of nurture became an object of both derision and sympathy. Their moral regression is thought to be fated, a consequence of adopting a sexuality contrary to nature and against evolution, both religiously and scientifically.

Second, the ideology of stigma pertaining to elaborating danger will be considered. The homosexuals are described as people who are unable to control their desire, and prone to self-harming behaviour like drinking and unsafe sex as well as pornography. This generates the perception that the homosexuals potentially threaten the morality of the norm-compliant population.

The participants also constructed homosexuals as a threat to the veneer of normalcy. Gays should not socialize together among themselves and with the so-called normal because the heterosexuals find it disconcerting to watch their open display of affection. Ya (P27, a Melanau Muslim) said, "I don't like seeing them in public actually, especially if I know that they are part of community." The homosexuals are also typified as a group who are the most likely to consume illicit aspects of foreign culture, such as having an open discussion about gay identity, talking about same-sex partnership, and showcasing their lifestyle. The participants were eager to share some critical aspects of western culture, making LGBT agents, or becoming guilty purveyors of western immorality. Kheng (P16) thought that gay parenting is more of a "western" culture that can soon be adopted by homosexuals as they are unable to comply with the Chinese custom ("Chinese must have their own generation"). The attribution of LGBT to western influence echoes the views of politicians expressed in the media (Mohamad, 2015; Ramlan, 2019).

## Discussion

The study on deconstructing heterosexuals' stigmatization of LGBT in the context of religion in Malaysia showed that in the minds of the ordinary people, homosexuality is perceived as an anomaly. To the heterosexual participants, homosexuality is a belligerent, conscious act of choice pertaining to one's body and sexuality. The choice to have same-sex relationships is borne out of either negative sexual encounters earlier in life or the influence of celebrities who are openly proud about being LGBT. Such views reveal the perception of homosexuality as a social construction, and ironically this is used to reject homosexuality. The heterosexual participants believed that LGBT individuals do not have the right to choose their sexual orientation at all. They often reject homosexuality on the grounds of religion and socially recognized gender norms. Understanding the social construction of homosexuality from the viewpoint of lay persons is crucial to show how discrimination is rendered legitimate in a system where the interest of society precedes that of the individual.

In the context of Malaysia, heterosexuals interviewed in the present study were generally non-accommodating and non-accepting. They saw gender as fixed, and this appeared to cut across religious, age, and education groups. Social construction normalizes ambiguity, but the participants viewed gender identity as "black or white," with no shades of grey in between. The non-accommodating stance on LGBT can be summed up as "Malaysia is a Muslim country, and homosexuality goes against Islamic (or Christian) teachings." The overall tenor of the opinion appears consistently discriminative, but the fineness and the subtlety of the opinions demonstrated multiple shades of permissiveness within the dominant ideology.

Based on the findings of this study, Malaysians use "LGBT" in the same language game as the West, assuming that the sexual non-conformists in Malaysia are in some shifty, murky coalition with their western counterpart. This false impression mobilizes a collective moral panic that soon LGBT would be normalized in Malaysia like in the West. Such a distortion disregards the continuing struggle for recognition of the group in many parts of the world, which includes the western developed countries. Nevertheless, the difference in context does not make discrimination any less pressing.

The stigma on LGBT in Malaysia is known to occur socially, it is evident by overt expression of hostility, stereotyping, and harassment by religious and legal authorities. Given the hostile social environment, the gender non-conformists tend to keep their identity and sexuality private. Thus, the empirical evidence of structural discrimination is not widely available, most likely due to under-reporting. Yet, the study of stigma in its non-structural form remains pertinent because it reveals how stigma is ideologized, that is, a taken-for-granted socialized truth that masks discrimination into elusive art. Stigmatization of LGBT is felt and known, but stays unchallenged for now.

## Study Limitation

A limitation of the study is the focus on heterosexuals, and this restricts understanding of how they theorize what it means to be not conforming to the heterosexual norm. Future studies on the perspective of LGBT individuals on ideologies of stigma will provide insights on how gender and sexual non-conformists confront the hegemony of male-female binary.

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## Gamified Instruction in Mathematics: A Meta-Synthesis

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### Abstract

Gamified instruction refers to utilizing game design elements for non-game activities and applying them in education. In this study, a meta-synthesis research design was utilized to synthesize findings on gamified instruction. Harzing's Publish or Perish software was used to collect articles on gamified instruction from the Google Scholar and Scopus databases that were published from 2015–2022. A review protocol in the form of inclusion and exclusion criteria was established to screen possible articles for meta-synthesis, and 32 out of 134 articles were selected as part of this systematic review. Preferred Reporting Items for the Systematic Review and a Meta-Analysis flow diagram were used to organize the extracted data. Braun and Clarke's protocol on thematic analysis was used to analyze the collected data from the included studies. Eleven themes emerged that were clustered into three meta-themes, consisting of positive experiences, negative experiences, and addressing these challenges. Students' experiences enabled them to learn mathematics engagingly without trying hard to learn, while enhancing and creating meaningful learning. It is recommended that teachers should test the effectiveness of gamified instruction to assess students' mathematical achievements.

**Keywords:** *Gamified instruction, mathematics, systematic review, meta-synthesis*

### Introduction

Gamified instruction refers to utilizing game design elements for non-game activities and applying them in education (Nah et al., 2014). Several published papers have noted that it has become one of the most notable technological developments for human engagement (Majuri et al., 2018), that it can positively impact learning (Stott & Neustaedter, 2013), and that it increases attendance and participation (Barata et al., 2013 as cited in Dicheva et al., 2015). However, one published systematic review noted that gamified instruction also may have negative impacts (Toda et al., 2017). Several systematic reviews of gamified instruction have been conducted, yet they have not been focused on mathematics instruction alone. An effort to address this research gap was undertaken in the present study.

According to Ming (2020), Minecraft gamification can help low-achieving students understand probability concepts successfully. This is in line with other research findings which have indicated that gamification is useful. This finding is also supported by Zaharin et al. (2021), who showed that gamification is beneficial in teaching and learning since this method arouses student interest in learning, facilitates acquisition of soft skills, stimulates self-improvement, and improves academic performance. A study by Darnasta et al. (2020) indicated that when learning guide media are utilized, student concentration and focus improved, further aiding their academic learning. Furthermore, a gamified learning environment lessens monotony in the learning process because this new setting makes it more engaging and instructive, and encourages individuals to engage in class activities (Ariffin et al., 2022).

Additionally, by adapting gamification concepts to school mathematics, it is possible to show how the activation of cognitive and motivational structures and—in particular—how a probabilistic way of thinking is effectively developed during the process of learning complicated mathematical concepts (Dvoryatkina et al., 2021). In Lanuza's (2020) investigation, respondents generally were able to incorporate gamification techniques and gamification related topics into their repertoires; such matters included increasing academic performance, cooperative behavior, and familiarizing

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customized Filipino games. In another study, it was demonstrated that playing GeoGebra games increased students' drive to learn mathematics and prevented them from giving up too quickly (Lim & Leong, 2017).

The use of gamification in teaching helps teachers to observe students' mathematical comprehension, which in turn enables students to reach greater levels of cognitive function (Zabala-Vargas, 2021). Studies have shown that shifting from traditional learning to gamification of math education has been successful, with many advantages for both students and teachers (StudyPug, 2015). Deng et al. (2020) researched the effect of game-based learning in Shanghai, and found that digital gaming increased student interest and engagement in studying when played every day for six days. Ke (2008) discovered that elementary students' math achievement increased when computer games were employed, particularly when combined with a cooperative learning strategy. Electronic gaming applications help students learn math ideas, retain and apply rules, overcome topic challenges, manage individual disparities with classmates, and develop positive motivation through competition to increase their abilities (Babeer, 2021).

Although gamification has shown great potential as a means of education, it is not a universal remedy for every learning issue. Even those who advocate using games in the classroom recognize the challenges they might create (Sillaots, 2014). Xiao (2022) noted that when gamification is used in a class, the game's flexibility is limited, personalization is complex, and not everyone can be accommodated. According to a study conducted by Kimble (2020), just two of the 10 grade-level competencies were mastered by fourth-grade pupils utilizing gamification. The notion that students master more grade-level math abilities with the application of gamification was not supported by this evidence.

To grasp the idea of conducting gamified instruction in mathematics, a systematic review was conducted to answer the following questions:

1. What are the positive experiences of teachers and students in gamification?
2. What were teachers' and students' negative experiences or challenges in gamification?
3. How do teachers or students address their negative experiences?
4. What can be recommended to teachers before implementing gamified instruction?

## **Methodology**

### ***Research Design***

Meta-synthesis is a technique for reinterpreting and altering previous qualitative data on gamified mathematics teaching (McClean & Shaw, 2005). The idea is to advance conceptual knowledge by developing an interpretation of an occurrence or process supported by the evidence. In this approach, qualitative findings from mixed-method studies and isolated findings from qualitative research studies on thematically related topics have been synthesized and presented as gamified instructions.

### ***Search Strategy***

Scholarly electronic databases were used to identify published research articles in English language journals related to gamified instruction in mathematics. Google Scholar and Scopus academic databases were utilized in selecting published articles: Studies relevant to gamified instruction in mathematics published from 2015–2022 were downloaded and synthesized. Publish or Perish software (Harzing, 2007) was used to select these published articles. Keywords used to select studies were: (a) gamified instruction, (b) mathematics instruction, and (c) qualitative study. These terms were purposively selected to extract data to aggregate information needed for meta-synthesis. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram was used to organize the extracted data.

### ***Inclusion and Exclusion Criteria***

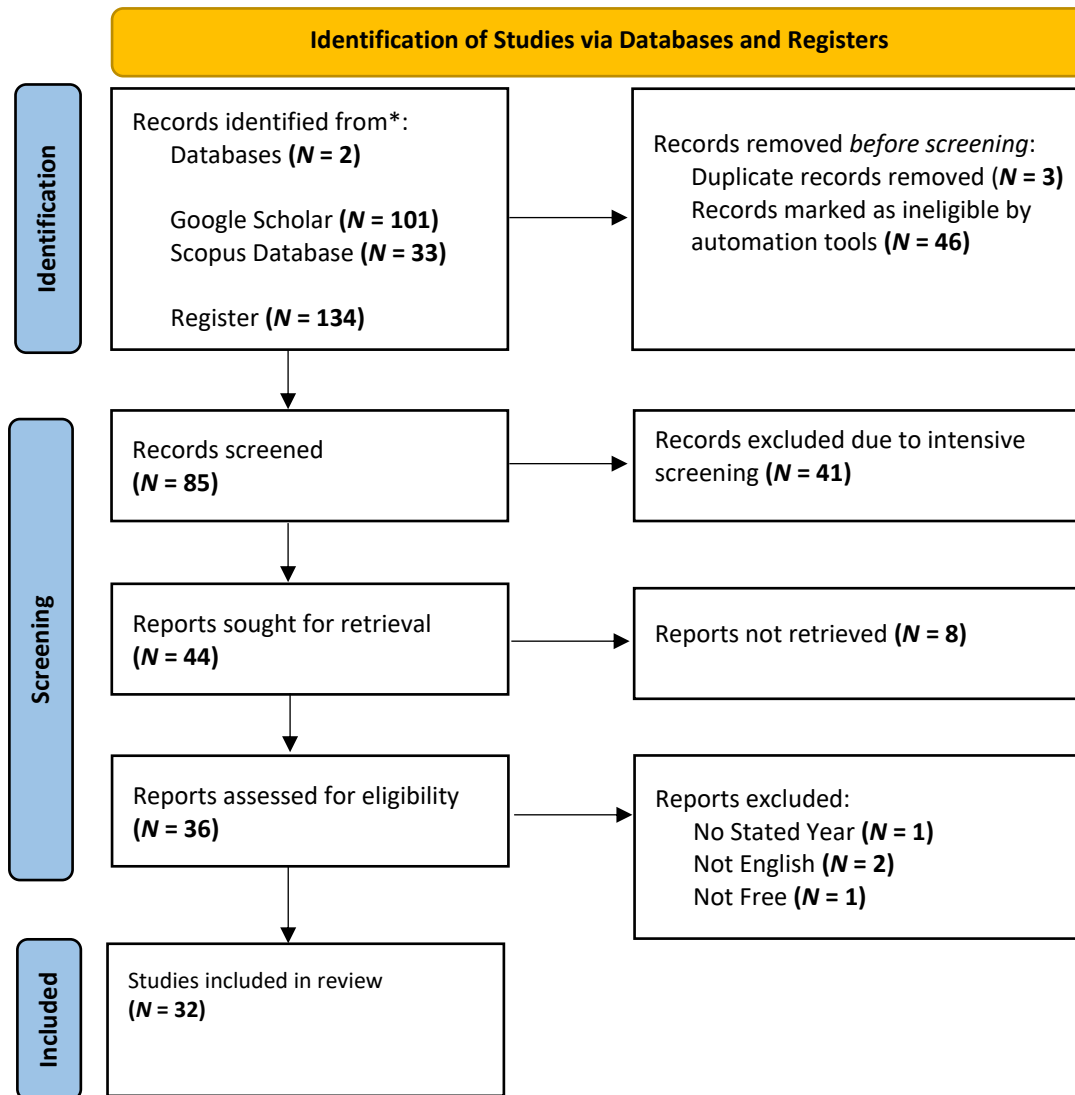
Studies included in this review were selected based on the following criteria: (a) gamified instruction, (b) mathematics instruction, (c) qualitative research output, (d) published articles, (e) peer-reviewed, (f) 2015–2022 studies, (g) written in the English language, and (h) cited at least once.

## Results and Discussion

### Search Results

Figure 1 shows the search result in identifying themes included in the meta-synthesis and organized using the PRISMA 2020 Flow Diagram.

**Figure 1** PRISMA Flow Diagram in the Inclusion of Studies



Articles were collected from two academic databases: Google Scholar and Scopus. From the Google Scholar database, 101 studies were identified, while 33 studies came from the Scopus database, yielding a total of 134 studies collected. A total of 102 studies were removed due to the following reasons: duplication; ineligibility by using automation tool; intensive screening; not retrieved; no year stated; not English; and not free. Thirty-two (32) studies were included in the meta-synthesis after thoroughly checking the available relevant studies.

### Included Studies

The definitive collection of 32 studies utilized various games in their instruction, as indicated in Table 1. The authors were affiliated with institutes located in Asia (18 studies), Europe (10 studies), North America (2 studies), and South America (2 studies). From the studies selected, 11 themes and three meta-themes were identified. Table 1 below provides the overview and characterization of the final collection of studies included in the meta-synthesis.

**Table 1** *Overview of the 32 Studies Included in the Meta-Synthesis*

No.	Authors	Year	Setting	Games
1	Udjaja et al.	2018	Indonesia	Game-Based Instruction
2	Lo & Hew	2020	Hong Kong	Game-Based Instruction
3	Gurjanow et al.	2019	Germany	MathCityMap
4	Su	2017	Taiwan	Adaptive learning system
5	Cunha et al.	2018	Brazil	Game-Based Instruction
6	Hosseind-Mohand et al.	2021	Spain	Moodle, etc.
7	Türkmen & Soybaş	2018	Turkey	EBA Games
8	Lameras & Moumoutzis	2015	UK	GamifyMaths
9	Stoyanova et al.	2017	Bulgaria	Kahoot
10	Putra & Yasin	2021	Indonesia	Game using the MDA Framework
11	Chu & Fowler	2020	Canada	Game-based formative feedback system
12	Sakai & Shiota	2016	Japan	Football
13	Malvasi et al.	2022	Italy	Chess
14	Saleh & Sulaiman	2019	Malaysia	Quizizz
15	Dvoryatkina et al.	2021	Russia	Game-Based Instruction
16	Lanuza	2020	Philippines	Filipino Game
17	Jablonka	2017	Germany	Surveillance Gamification
18	Karamert & Vardar	2021	Turkey	Progress Map
19	Lim & Leong	2017	Malaysia	Geogebra
20	Lantarón et al.	2018	Spain	Gamification and manipulative tools
21	Zaharin et al.	2021	Malaysia	Game-Based Instruction
22	Ariffin et al.	2022	Malaysia	Game-Based Instruction
23	Ming	2020	Malaysia	Minecraft Gamification
24	Darnanta, et al.	2020	Indonesia	Game-Based Instruction
25	Zsoldos-Marchis	2019	Romania	Gamification system
26	García-Hernández & González-Ramírez	2021	Spain	Discrete mathematics through gamification
27	Maulidya et al.	2022	Indonesia	Quizzis
28	Yung et al.	2020	Malaysia	1 Slash 100%
29	Ortiz et al.	2022	Peru	MathyFight



No.	Authors	Year	Setting	Games
30	Lai	2017	USA	Eyewire
31	Nebril et al	2020	Spain	Augmented Reality (Break-Out)
32	Vitabar et al.	2019	Uruguay	Teacher Training Program

### **Data Analysis**

The fundamental or recurring topics in the gamified mathematics training were found using thematic data analysis. The results were condensed into a number of themes. Thematic analysis utilizing Clarke and Braune's (2013) procedure was chosen to examine the data. According to Windle et al. (2020), thematic analysis is a technique for locating, examining, and deciphering themes within qualitative data. The six steps of thematic analysis include familiarization, creation of preliminary codes, topic search, theme review, definition and naming of themes, and report creation.

Ninety-five codes were determined based on the significant findings of the studies that were thematically analyzed. These codes were clustered into three categories: four themes involved positive experiences, four themes dealt with negative experiences, and three themes addressed the challenges. The themes and meta-themes are discussed below.

### **Meta-theme 1: Positive Experiences in Gamified Instruction in Mathematics**

Gamification as a teaching tool gives benefits and positive experiences to learners (Lai, 2016). It fosters and integrates students into a collaborative environment of teamwork, promotes learning on one's own initiative, encourages creative conjecture-making, fosters learning beyond the book, recognizes the strengths of the team, and aids in understanding how each individual fits into the whole. Students employ a variety of forms of learning media as learning guides, which can boost their focus and levels of concentration, which in turn helps them learn more efficiently in the classroom (Darnanta. et al., 2020). Students also reportedly attended more classes and participated more actively in problem-solving processes when gamification was used (Zsoldos-Marchis, 2015). Gamification techniques, in general, were well received by the students who were allowed to experience them (Lanuza, 2020).

Furthermore, the positive experiences of students and teachers were described in the utilization of gamified instruction in mathematics. Twenty-three out of 32 studies from Bulgaria, Canada, Germany, Hong Kong, Indonesia, Italy, Japan, Malaysia, Peru, the Philippines, Russia, Spain, Taiwan, and Turkey showed that students enjoyed positive experiences with gamified instruction. Four themes emerged from the students' positive experiences as shown below.

#### **Theme 1: Interactive and Enjoyable Instruction**

Gamified instruction provides interactive and fun instruction, which allows learning to be more productive, enjoyable, and engaging (Saleem et al., 2021). These features help students to learn mathematics interactively and the teacher to explain concepts, which also boosts mutual relationships among teachers and students in a fun and enjoyable way (Udjaja, 2018; Yung et al., 2020). Gamified mathematics instruction enhances the learning process, which motivates and helps students understand concepts better and attain higher performance levels while enjoying a non-serious learning process.

#### **Theme 2: Better Cognitive Engagement**

Gamification made the lessons in mathematics more interesting and exciting, promoting participation in in-class learning activities (Ng & Lo, 2022). Students were able to understand mathematical concepts, which affected their mathematics achievement (Ming, 2020; Karamert & Vardar, 2021). Activation of cognitive structures in the development of thinking in mastering complex

mathematical knowledge was evident on account of gamification (Dvoryatkina, 2021). Student performance improvement was positive and showed that they understood mathematical concepts.

### *Theme 3: Increased Students' Motivation*

Using game-based learning strategies in the classroom can boost students' enthusiasm and interest in the subject (Sakai & Siota, 2016; Gurjanow et al., 2019; Nebril, 2020; Malvasi et al., 2022). Students' confidence levels may increase, allowing them to ask and answer questions more easily. Students are given the opportunity to participate in real-world investigations thanks to gamification, which helps them develop investigative abilities and encourages critical thinking and problem-solving. Students enjoy studying mathematics, even if the subject was unrelated to other things that interest them.

### *Theme 4: Teamwork and Collaboration*

Gamification encourages a collaborative environment and teamwork, recognizing an individual's strengths in a team setting (Lai, 2017; Hossein-Mohand, 2021). Collaboration allows students to participate and share the knowledge they master (Sanjaya & Wijaya, 2007). Collaborative learning helps students develop higher-level thinking skills, which boosts their confidence and self-esteem. Team effort in gamified instruction maximizes the educational experience by demonstrating the application of the material while improving social and interpersonal skills.

### ***Meta-theme 2: Challenges in the Utilization of Gamified Instruction in Mathematics***

If gamified learning is not carried out with an effective method of instruction, students and teachers may be subjected to various unpleasant experiences (Zaharin et al., 2019). Lai (2017) mentioned the drawbacks of using gamified instruction in mathematics. According to him, gamification only generates a focus on gaining individual achievements rather than learning the subject, which leads to addiction and a lack of grasp of how the material is learned. Vitabar et al. (2019) enumerated several factors contributing to students and teachers negative experiences with gamification. These factors involved a lack of resources, time, feedback, and confidence. It would be easier for the teachers to read and understand student performances with effective technology. On the other hand, improper structuring of educational processes or insufficient competence of a majority of mathematics teachers to actually implement gamification techniques are issues that render gamification non-beneficial to students and teachers (Dvoryatkina et al., 2021). Another factor that has contributed to adverse student and teacher experiences with gamification is their lack of motivation. Students needing remediation sometimes lack confidence in their abilities, leading to little interest in mathematics and boredom with school (Sakai & Shiota, 2016). Lastly, there has been a lack of research into creating synergy between gaming and didactic technologies to facilitate the mastering of complicated mathematical knowledge. Effective technologies are needed to enhance student development and construction of a modern style of thinking (Dvoryatkina et al., 2021)

Under this heading, negative experiences were described that emerged during the utilization of gamified instruction in mathematics. The 17 studies considered were from Canada, Germany, Italy, Japan, Malaysia, Peru, the Philippines, Russia, Spain, Taiwan, Turkey, the United States, and Uruguay. Four themes emerged using gamification and negative effects on teachers and students.

### *Theme 5: Lack of Teacher Preparation*

For educators tasked with gamifying instruction, there are specific requirements for in-game integration of knowledge. They must learn the procedures used in class (Hossein-Mohand et al. 2021), and students must understand how games may help them learn math (Malvasi et al., 2022). There needs to be more study on the symbiosis of gaming and didactic technologies in learning complicated mathematical concepts, and the necessity of looking for efficient technologies to determine how they impact student progress (Dvoryatkina et al. 2021). In gamification research, it may have taken longer to find statistically significant improvements in boosting grades given the practice of using students'

improved game-based feedback, rather than examining the whole gamified system (Lim & Leong, 2017; Chu & Fowler, 2020). The duration of the whole process affects the learning of mathematics. If games were taught to students more regularly, they might have a greater appreciation for their potential.

#### *Theme 6: Unmotivated Teachers and Learners*

Students may be introduced to learning mathematics using gamification by poorly motivated or less than enthusiastic teachers. Teachers may ask appropriate questions, but need more motivation on aspects of applicability. Remedial pupils may also lack the motivation to learn mathematics (Lim & Leong, 2017). Perceived drawbacks of gamification as a teaching tool are that its focus is on obtaining individual achievements rather than understanding the material and its applicability (Lai, 2016). Connecting arithmetic principles to real-world situations is a challenge in classroom instruction. It is challenging for professors to create pertinent questions for pupils, which is one reason that this problem arises (Sakai & Shiota, 2016). Questions raised by teachers need to be more clearly connected with real-world situations, and how the game may help to provide answers.

#### *Theme 7: Insufficient Teacher Qualification*

Teachers may feel uncomfortable because they are working in an unfamiliar situation. They need to become more accustomed to using games to teach math. Insufficient qualifications may be a problem for some mathematics teachers, interfering with their ability to suggest practical ways to implement gamification (Dvoryatkina et al., 2021). A lack of resources, time, feedback, or confidence in the teacher also can contribute to poor performance in gamification (Vitabar et al., 2019). Solving mathematical problems necessitates knowledge, skills, creativity, and resilience (Lameras & Moumoutzis, 2015). It is evident that before gamification is used in a classroom, teacher qualifications must be considered. They must receive sufficient training to become accustomed to using the games properly.

#### *Theme 8: Lack of Resources and Feedback*

Due to varied working methods, a lack of materials, and other factors, teachers need help in implementing gamification in the classroom; if this is not done, it can lead to misunderstanding or failure (Lanuza, 2020). One issue identified is that teachers cannot easily monitor or interpret student performance without the aid of specialized equipment or software (Jablonka, 2017). A lack of teacher feedback, time, and resources provided to students may also pose problems (Vitabar et al., 2019); in the process of teaching and learning, resources and feedback on the use of gamification are essential.

### ***Meta-Theme 3: Addressing the Challenges on the Utilization of Gamified Instruction in Mathematics***

Incorporating gamification into math instruction and learning presents several challenges. Some of the most pressing concerns have been discussed above. In order to address these challenges, there is a need to establish pedagogical links between the subject matter and technological advancements employing "instrumental genesis." Mathematics teachers are encouraged to participate in ongoing training and education on the appropriate applications of mathematics-specific tools and resources. There is also a need to improve the quality of education and spark students' interest in mathematics by conducting more research on how gamification and serious games may help students learn (Malvasi et al., 2022). To spark students' interest, it is essential to consider their views regarding the use of gamification—particularly regarding acceptability, interest, and soft skills. There is a need to provide students with opportunities to compete, explore, and excel in the classroom setting and make the educational experience more pleasurable. Giving students more extended interventions, perhaps over a five-month semester, would be beneficial. Ensuring a more positive experience could also be provided by considering how game-based formative feedback could be provided to improve student's learning in all of their classes (Chu & Fowler, 2020). Lastly, it would be advisable to conduct future studies on whether using game assessment activities in the classroom improves academic

performance and engagement with discrete mathematics learning more than when traditional evaluation is used (Garcia-Hernandez & Gonzalez-Ramirez, 2021).

Under this meta-theme heading, opportunity is taken to describe how issues identified in the studies were dealt with. Out of the 44 studies, 22 are from Canada, Germany, Italy, Japan, Malaysia, Peru, the Philippines, Russia, Spain, Taiwan, Turkey, the United States, and Uruguay. Three themes were identified in this group, namely, gamification as an intervention, gamification as a pedagogical tool, and the importance of student feedback.

#### *Theme 9: Gamification as an Intervention*

Gamification is potentially able to give math professors more energy or effective tools. It can help them encourage pupils to study and be passionate about learning mathematics. This approach is designed to use the advantages of game-based learning settings. Gamification of math classes for kids emphasizes the connection between math education and its uses in society (Shiota & Sakai, 2016; Chu & Fowler, 2020). The creation of systems for planning and selecting information is a vital undertaking to establish a sound program of scientific and methodological assistance for instructors (Dvoryatkina et al., 2021). The first-grade math teacher especially needs to be trained and kept up-to-date on how to use resources and technologies for math education. This includes making pedagogical connections between different subjects (Hosseini-Mohand et al., 2021) and examining how to give students constructive feedback through games (Chu & Fowler, 2020). An investigative structural model serves as the foundation for the context of a learning style (Su, 2019); it is an effective method for motivating kids to study arithmetic.

#### *Theme 10: Gamification as Pedagogy*

Gamification has been shown in some studies to lead to good outcomes or at least to be an adequate methodology for use in math education. Since teachers are fundamental to the learning process, they must be trained and updated on the use of tools and resources prior to using gamification to teach mathematics (Hosseini-Mohand, 2021). The guidelines for using gamification techniques need to be redefined. The responses to using gamification techniques in mathematics education differ significantly depending on the demographic profile of learners (gender, age, educational experience). This means that different approaches need to be used with various groups (Lanuza, 2020). It has been proposed that gamification could be introduced as an integral part of other learning approaches to promote learning, enhance motivation and participation, and establish connections between mathematics and other disciplines (Lameras & Moumoutzis, 2015). Furthermore, when gamification is introduced as part of a teacher training course, it can motivate teachers and give them confidence. Gamification can also simplify assessment and provide opportunities for adapting content (Vitabar et al., 2019). It is a suitable method to practice teaching math in the modern world to hold students' interest and encourage them to appreciate math through enjoyable learning.

#### *Theme 11: Importance of Students' Feedback*

Gamification is a powerful and sometimes beneficial method that can be applied when the motivation to learn math is at risk. Remedial students introduced to these learning device have often responded enthusiastically to them and were not inclined to give up, which resulted in a satisfactory and improved learning experience (Lim & Leong, 2017). The use of computer games to teach mathematics is a form of seduction to control the child player's emotions so as to regulate their involvement in an allegedly unpleasant mathematical activity (Jablonka, 2017). In order to develop mechanisms for organizing and determining the content and methodological support, teachers should be assisted so as to become confident and efficient as quickly as possible, because this means essential improvement in their skills (Vitabar et al., 2019). An analysis of students' learning through feedback must be conducted to reassure teachers that the gamification method is more effective in delivering results in contrast to classical teaching methods (Chu & Fowler, 2020; Ming, 2020).

## Conclusion and Recommendation

Implementing gamified instruction in teaching mathematics has multifaceted effects on students. The positive experiences of students enable them to learn mathematics engagingly without actually trying hard to learn, which enhances and creates meaningful learning experiences for them. Teachers may be challenged in the task of implementing gamified instruction; however, various strategies can be adopted to address these challenges. At the completion of a learning session, it is recommended that teachers should test the effectiveness of their gamified instructions to assess students' mathematics achievements. As a consequence of the challenges and difficulties identified, the training of teachers in gamification techniques is essential to optimize the impact of these approaches on the learning of mathematics.

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## Priestly Pressure: Lived Experiences of Seventh-Day Adventist Pastors During the COVID-19 Pandemic in Singapore<sup>1</sup>

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### Abstract

The impact of COVID-19 on mental health has received significant attention. However, the data remains limited when it comes to examining its effects upon the clergy. In this study, the experiences of six Seventh-day Adventist pastors working in Singapore were explored in regards to their mental health status during the COVID-19 pandemic. Their relationships with people, their ability to navigate changing policies, and their sense of self-worth were themes identified as affecting mental health. Conflict involving parishioners, loss of interaction, and the lack of boundaries at home affected pastors' mental health and their dealings with people. Under the theme of policy, pastors needed to navigate through constant directional changes specified by government authorities and higher-level church organizations. Pastors felt a constant pressure to adhere to all the requirements when managing their churches. Supplementing these two themes, pastors were also constantly struggling internally, particularly with the sense of helplessness and incompetency. The findings from this study contrast with other similar studies, and point to potentially distinctive socioeconomic factors that may have played a role in the pandemic experiences of pastors in Singapore.

**Keywords:** *Pastoral ministry, mental health, COVID-19, Asian studies*

### Introduction

As the world battled the COVID-19 pandemic that affected people around the globe, the virus brought with it a distinctive challenge. The easily transmissible nature of COVID-19, spread through aerial droplets, severely affected human interaction, particularly areas of life that involved public gatherings and social activities. Around the world, constant lockdowns and suspension of social gatherings were mandated in one form or another. Some lockdowns even involved a nationwide shutdown of public activities. These changes had a tremendous impact on how societies operated, including how churches ran their services and activities. For about two years, worship services and religious activities across the world were affected. The pastor (or equivalent) was the individual called to navigate all these changes. Pastors are often perceived as pillars of strength and hope in a crisis. In times of distress, people tend to look to their religious leaders for counsel and support. The expectations and hopes that people put on pastors are often high. Yet, COVID-19 brought a set of challenges that was new and unique to the field of pastoral ministry.

Studies on the effects of the COVID-19 pandemic on different professions have emerged as vital research areas. Studies on the impact of COVID-19 on various professions have increased rapidly in number, and included healthcare workers (Mascayano et al., 2022; Pappa et al., 2022) and educators (Jin, 2022; Spadafora et al., 2023). However, available data about its effects on pastoral ministry—especially in Southeast Asia—remains limited.

This study was designed to fill the knowledge gap regarding the experiences of Seventh-day Adventist (SDA) pastors dealing with the impacts of the pandemic on their lives and ministry. The data collected in the study may be used to facilitate further research in understanding the mental health challenges faced by pastors, specifically those due to the COVID-19 pandemic and designing intervention steps to help them to function better in their ministry.

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## **Literature Review**

### ***Pastoral Ministry during the COVID-19 Pandemic***

As the COVID-19 pandemic continued in 2022, a steady stream of literature pertaining to pastors and the pandemic—though still quite limited—began to appear slowly. In Italy, pastors were at the forefront of the battle with COVID-19. They provided spiritual assistance, moral support, and tireless service conducting religious rites for both patients and healthcare workers, and at times risked their personal safety by serving without protective gear (Chirico & Nucera, 2020). As a result, at least 75 Catholic priests were reported to have been direct casualties of the virus due to their exposure to COVID-19 while conducting religious rites for its victims (Bramstedt, 2020).

Osei-Tutu et al. (2021a) indicated that pastors in Ghana were actively preaching messages of hope to sustain the faith of their members, promoting hygienic practices, and reducing the stigma toward those infected by the COVID-19 virus. Similar evidence was presented by Wijesinghe et al. (2021) in relating how religious leaders from different faiths in Sri Lanka worked together to promote preventive testing, mitigate misinformation, remove stigma and discrimination, encourage vaccination, and become involved in contact tracing efforts. In terms of religious rites and traditions in the church such as baptismal and communion services, pastors needed to modify the ways that these rituals were conducted in order to reduce the risk of COVID-19 transmission (Budaev, 2021). Such adaptation did not come quickly to some, since breaking time-honored traditions may be considered sinful. Since for Christians these rituals are platforms of transcendence with the divine, such sentiments are to be expected (Norman & Reiss, 2020). Sandwiched between concerns relating to both theological correctness and protection of public health, pastors experienced a tension between perspectives that sometimes conflicted. The severe limitations for conducting religious rites was particularly significant for funeral services. Bidding farewell to loved ones in normal circumstances can be challenging for many. Wake and funeral services provide a platform for those left behind to grieve and mourn. However, during the COVID-19 pandemic, such opportunities were severely limited, leaving stronger feelings of loss for those left behind (Fernández & González-González, 2022). Pastors often had to conduct funeral services on their own without the presence of anyone else, meaning that they had to carry additional burdens while still giving comfort and strength to bereaving families. Such demands may take an intense toll on the well-being of pastors. In terms of church service disruption, pastors went through struggles in their ministry, too. Levin (2020) pointed out that some clergymen actually played a role in the spread of COVID-19 by promoting pseudoscientific information about the virus, leading to misinformation or disinformation among their parishioners. Furthermore, some were responsible for spreading misinformation with a Christian twist, such as associating the pandemic with demonic powers or conspiracy theories (Sturm & Albrecht, 2021).

Relatively few studies are currently available that explore the relationship between COVID-19 and the mental health of clergymen. In one study in Italy, a negative correlation was found between emotional stability, conscientiousness, and positivity against anxiety among Catholic priests (Crea, 2021). However, when wellness was used as a measurement tool for Church of England priests, Village and Francis (2021) found that while their fatigue significantly increased, at the same time, their positive attitude towards God also strengthened and mitigated against disengagement. Lastly, using the same population of clergymen in the Church of England, Village and Francis (2021) showed that a pastor's personality played a major role in regulating mental health problems during the COVID-19 pandemic. Individuals with certain personality types tended to more prone to suffer from mental health issues.

### ***The Effects of COVID-19 on Mental Health***

Interest in examining the impact of COVID-19 on mental health has continued to emerge alongside knowledge generated about the virus and its effects on physical health. While information about how the COVID-19 virus directly affects brain functions still lacks firm empirical support, several studies have suggested observable effects of COVID-19 infection that alter human cognitive function. Data from a longitudinal study in the United Kingdom indicated that people who had contracted COVID-19

had significantly poorer outcomes in terms of depression and anxiety (Wilding et al., 2022). Among those who were suffering from long COVID, deterioration in mental health was also noticeable, indicating that the virus likely affected brain function (Palmer, 2021). Sonuga-Barke and Fearon (2021) argued that the observed effects of COVID-19 might have been largely by-products of the lockdowns and conflicts that affected the neurobiological function of the brain.

The way COVID-19 affects anxiety is particularly important, since data consistently has indicated a strong relationship between infection and anxiety. Using the Anxiety Sensitive Index-3 (ASI-3) and the Fear of COVID-19 Scale as measurement instruments, Warren et al. (2021) showed that in the United States, the ASI-3 total score was associated with above average COVID-19 fear ( $\beta = .19$ ). Using two different samples from Portugal and Brazil, Vitorino et al. (2021) also observed a significant increase in anxiety during the COVID-19 pandemic, with significant differences between the countries ( $F = 4.203$ ;  $p < .001$ ); access to healthcare providers was the common predictor for these differences. In contrasting studies in Israel and Italy by Amit Aharon et al. (2021), the increase in anxiety due to COVID-19 pandemic was much higher among the Italian population, presumably because of the pandemic's greater severity there. The effect of COVID-19 on anxiety is also likely to be age-related because of constant news reports about how the older generation is more vulnerable to developing severe side effects (Maxfield & Pituch, 2021). The consistency of this data indicating a relationship between COVID-19 and anxiety suggests that mitigating COVID-19 related anxiety may warrant deeper research in the future (Hofmann, 2021).

The mental health of families was also significantly impacted by the COVID-19 pandemic. Glasper (2020), Racine et al. (2020), and Ravens-Sieberer et al. (2021) argued that COVID-19 was uniquely affecting childrens' mental health across different age groups in Europe, since their access to the regular social activities had been severely curtailed due to lockdowns and infection control regulations. Similar evidence of unique impacts of COVID-19 towards younger populations was shown in China (Liang et al., 2020). On the parental side, a significant increase in stress and other COVID-19 related mental health problems has been reported among American (Russell et al., 2021), German (Calvano et al., 2021), and Italian (Spinelli et al., 2021) populations. Furthermore, COVID-19 can affect grandparents' mental health as well, especially when they function as the main caretakers of their grandchildren (Xu et al., 2020).

## **Material and Methods**

### ***Ethical Protocol***

This study received approval from the Singapore Adventist Conference (SAC) Administrative Committee. Before the research was undertaken, all participants received an information sheet on the purpose and methods to be used in the research. The information sheet included a clause that all participants were free to withdraw from the study at any time should they wish to do so. Finally, all participants consented to participate in the research and have their interviews recorded. These were later transcribed with no personal identification markers inserted. Interviews were stored in a secure computer, and the researcher was the only one who could access this information. Since the interviews were conducted using teleconferencing tools, the researcher ensured that interviews were completed private and confidentially, which was accomplished by conducting the interviews in an empty room and using headphones as the listening device.

### ***Interview Process***

Semi-structured interviews were prearranged at a mutually agreed time, and the question guide was provided as a baseline for further exploration based on the topic of interest. The questions were designed to explore the lived experiences of pastors during the COVID-19 pandemic in the context of Singapore. Where appropriate, the researcher prompted participants to give additional details to expand their responses with deeper insights. When debriefing participants at the end of every interview, they were asked if any clarification was needed, or if they wished to provide any other

specific feedback. All participants indicated that they did not have any specific concerns with the interview process.

### **Participants**

All participants were SDA pastors currently working for the SAC and holding long-term residency status in Singapore as citizens, permanent residents, or long-term work visa holders. All participants who join the research were over the age of 21 and were full-time, paid employees of the SDA church. Six participants were interviewed for this study. These participants represented 85% of the English-speaking pastors working for SAC. In the past three years, all participants had been serving in one of the SDA churches in Singapore. Thus, they had been fully engaged in church dynamics since the emergence of COVID-19 as a pandemic in late 2019.

All the pastors participating in the research were married. Therefore, data on the dynamics of their family lives was obtained as well. Such information was critical since pastors' family lives significantly influence the dynamics of their professional service (Johnson, 2010; Koenig & Langford, 1998; Lee, 2017).

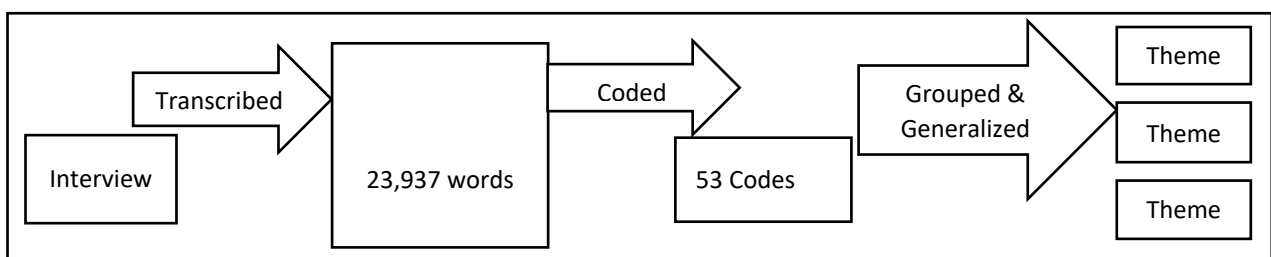
### **Data Analysis**

An open ended thematic analysis method often is used to explore patterns of specific themes relating to phenomena of interest (Braun & Clarke, 2021; Maguire & Delahunt, 2017). The idea is to extract specific themes from the transcribed text, after subjecting it to a coding process.

Following the guidelines presented by Liu (2016), the 40 pages of text (23, 937 words) obtained through the interviews was divided into three main segments. The content of the manuscript that represented the research objectives was retained, and codes were generated to identify emerging patterns from the text (Nowell et al., 2017). The interview process was done deductively, starting with generic questions and gradually moving to specific areas related to mental health, such as stress that the pastors experienced during the pandemic. Each pastor was specific in expressing his experience. However, the underlying themes expressed in their responses were consistent for each participant (Ibrahim, 2012).

From the transcribed texts, 53 codes were generated. These codes were categorized by similarities in wording to establish generalized themes that covered most of the statements expressed in the text. Figure 1 illustrates the data analysis process from the interviews to the generation of themes.

**Figure 1** *Thematic Analysis Sequence*



## Results

### *Initial Response:*

None of the participants expected COVID-19 would affect their ministry, let alone their entire life. During the interview, the first question asked of all participants was their initial reaction when they heard about the COVID-19 virus on the news. All the participants perceived the virus as something that would be a localized problem in China. However, as the COVID-19 virus developed into a pandemic, all participants started to experience some form of stress related to the situation. Participants pinpointed an increase in their COVID-19 related stress when Singapore started to impose some forms of infection control measures in public places, especially in churches.

As the interviews explored each pastor's experience in dealing with changes that COVID-19 brought to his ministry, they provided substantial explanations that could be grouped under three primary themes. These themes were identified under the headings of People, Policy, and Personal Issues.

### *Theme 1: People Issues*

A robust and consistent pattern of expression related to interpersonal relationships emerged from all participants. The patterns of expression in the transcribed interviews revealed that pastors underwent significant stress due to constant exposure to other people. All participants expressed that the tension they experienced was not a burst of intense stress, but rather stress built-up slowly and eventually become a significant factor.

#### *Sub-theme 1: Church Members*

All participants expressed that interaction with their church members was one of the primary sources of emotional tension that they encountered. In the context of the COVID-19 pandemic, participants described several specific situations where interaction with members brought stress to them. Two groups of people with polarized positions were evident. The tension between the two opposing sides placed pastors in a challenging situation, as described by one interviewee as follows:

A lot (of challenges), but I think the biggest one for [me] was balancing disagreeing parties, you know, it became very divisive. There was [the necessity] to stand on many things, in the beginning, like to shut the church, or to keep it open; or, to later on, [relating] to the health protocol, how strict we [were] gonna be. Then finally, as we all struggling with the vaccination, for and against, to stand in between that and not to take [a] side for the right reason. So that still today, I feel, I am affected to the fact I have lost some relationship[s], because of not that I have done anything, but because they think I have chosen a side in this whole situation, and they have cut themselves from us. That has been the biggest challenge for me. (P2)

The second area of stress was because pastors lost the ability to interact with members in meaningful ways. Since strict controls on social interaction were enforced, particularly early in the pandemic, many participants expressed a sense of loss related to their interactions with members. Following are some excerpts of the expressions of loss that the participants experienced. "There is a shift you know because I am an outgoing type of person; [I] like to be with people. I think the pandemic has moved me away from doing that" (P1) and "I am a person who like [*sic*] to travel and to meet people, visit them and socialize, and these are not possible during this pandemic so that ... puts me in challenging situation, a little bit in [a] difficult situation" (P4). Lastly, participants also expressed the loss they witnessed in terms of members not returning to church, even after restrictions were lifted. One participant said it in this way:

I think that every church experience [*sic*] a loss in the pandemic, where people stop coming, especially among the younger generation, and this is the lost generation that is very hard to bring back, when they've gotten used to online and eventually not watching at all. (P3)

### *Sub-theme 2: Family*

A pastor must deal with stress from interaction with people in their professional settings, along with the challenges that come from family members. Due to COVID restrictions, all participants needed to start working from home, and for most of the participants, parenting their children while juggling church responsibilities. This was a major challenge, as expressed by one participant:

It's hard to work, especially from home with two young kids; they were very young. To work in the room where my wife [is] attending to the kids outside: it's not easy. Parenting from home with kids its tough while working. I think that is one of the challenges that we face[d]. (P3)

The tension of parenting was not the only challenge that pastors faced due to the need to conduct worship services from home. The lockdowns in Singapore formed an official “circuit breaker” period. During this time, the only church services were online; furthermore, strict restrictions governed movement nationwide. Thus, pastors had only limited support from members in running these services. As a result, pastors could only ask for support from their spouses to run online streaming services from home. The pressure of running the services with very limited manpower caused tension and stress between pastors and their spouses. One of the participants expressed the issue as follows:

Most of the time, it's my wife that has to be my full-time assistant to help me with the technical support that I need for the operation of the system and everything. So [I] also pass my stress to her. The vibe passes down to her. (P4)

### **Theme 2: Policy Issues**

The second theme that consistently emerged during the interviews was the stress pastors had to contend with in managing their churches during the pandemic; their parishioners also experienced similar challenges. However, some distinctive expressions were observable in the coding sequence in the area in which pastors expressed how adherence to regulations caused emotional tensions. Thus, a separate theme from the others has been used to categorize this material.

#### *Sub-theme 1: Government Policy*

Among all the expressions recorded in the interviews, constant changes in government regulations forced pastors to modify local church operations rapidly. This stress was mainly at the beginning of the pandemic, and related primarily to navigating through the unknown, while having to be responsible for the church. The problems encountered by many participants are illustrated by the following comments:

I think it's still added on to the stress, especially in the pandemic as the rules keep changing. So, we have to apply and communicate. I think this is a very [difficult], not just tedious, but it [is] the constant change [that] makes it very hard to do. (P5)

I don't know if challenge is the right word; I guess challenge can be the right word, but definitely I think all the government rulings that keep changing last time in 2020, I think definitely create a lot of work. Thankfully, we don't have to keep submitting document [sic] anymore, but last time it keeps changing, every week they keep changing.” (P6)

#### *Sub-Theme 2: Upper-Level Church Administrators*

Participants also expressed some tension involving dynamics between local church responsibilities and direction provided by upper leadership. Most participants mentioned the pressure that they encountered due to impractical demands from upper-level management that created increased pressure on the local church level, as described below:

They were overcompensating, so they double down on their surveillance on pastor [sic]. So Tuesday we must meet, to see [that] we are actually working, I think there is where the stress [is] coming in. And

things are implemented (in the way that) you meet this week, next week you want it to be implemented, how can it be implemented? We are not even meeting members. (P1)

The tension was relatively high, especially at the beginning of the pandemic.

You know, even before (the authorities) announce, I think there was a huge stress from us where some churches closed already. Even though it was not announced, you remember those time[s]. Our conference is not willing to close; some churches want to close. We are like oh! We should not be the one! So, the whole debates start to come out in Singapore right now, at that time. So, the strain is, do we close the church or go online? Then the government haven't [sic] said anything yet at that time. So that is one of the stresses. (P1)

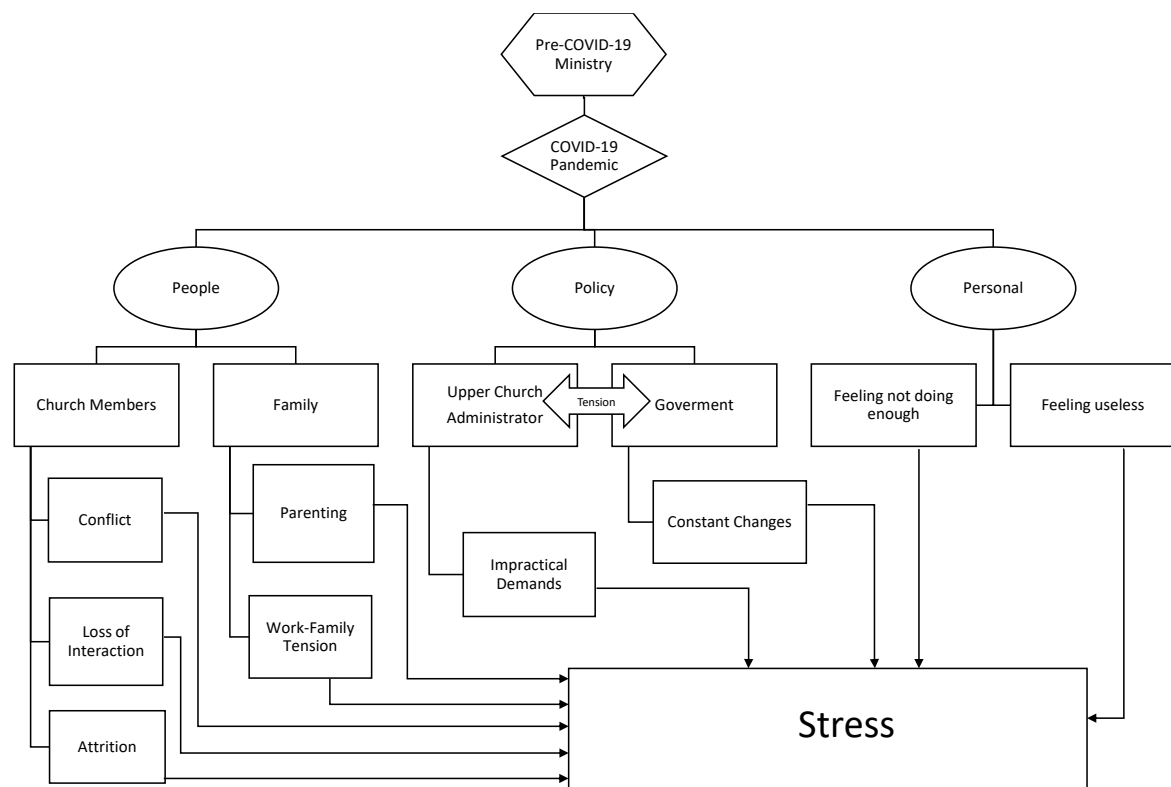
### Theme 3: Personal Struggles

Beyond external factors that led to stress, some internal emotional issues caused increased stress to pastors as they attempted to navigate the pandemic. While pastors' personal struggles did not cause the same level of intensity or tension as reported under the first two themes, it was significant enough to be noticeable in the codes. The consistent pattern was a struggle to deal with the sense of not doing enough, and using the value of work to measure their self-worth. Two participants expressed this issue as follows:

I think [for] this one I will be honest; I would say that I didn't cope very well in the beginning .... Every time I manage to ease myself a bit I was thinking it's the time for me to add something more, since there are things that I haven't done. (P6)

I think for me, at the very beginning of the pandemic, I faced a challenge because I was unable to do anything, number one, in fact it comes to the point that I felt useless. ... I felt like I was not doing anything at all. (P2)

**Figure 2** A Visual Model of SDA Pastor COVID-19 Experiences in Singapore



In summary, the three themes illustrated the main triggers causing pastors to feel constant stress in their ministry during the COVID-19 pandemic in Singapore. In Figure 2, the lived experiences of the pastors is illustrated, showing how stress affected pastors in their ministry roles during the pandemic.

## **Discussion**

As indicated in the results section, all pastors were surprised at the effects of the pandemic on their ministry. Therefore, their stress response towards the changes that ensued was spontaneous. The findings further indicated that conflict, especially in situations where one party considered themselves in a disadvantaged position, might lead to a sense of job dissatisfaction. Choi (2013) indicated that workplace conflict, mainly where a dominant management culture is the norm, contributes significantly to job dissatisfaction. Especially in highly structured church organizations like those of Seventh-day Adventists, pastors not only need to live up to the expectations of their administrators, but also those of their members. Therefore, pastors may perceive their positions as being on the receiving end of many demands and expectations during conflict resolution. Since their ability to defend themselves is limited, such conflicting demands may lead to the feeling of dissatisfaction with their work and cause stress.

Additionally, the need for pastors to mediate among conflicting views may not come as an easy task. Often their decisions cannot be purely administrative, since in their pastoral role, they are simultaneously expected to function also as peacemakers and the keepers of God's flock. In a study by Faucett et al. (2013), role conflict and ambiguity were seen as critical factors that caused stress in pastoral work. This study further expanded these findings by explaining how role conflict may lead to increased pressure in pastoral ministry.

This study's data about how family relationships affected pastoral stress levels reinforced earlier findings. Maina et al. (2018) observed that pastors' children are often negatively affected by their father's work, mainly involving administrative matters and pastoral care. The results of this study add new information from the perspective of the pastor— working from home increases the stress of pastoral work. As indicated in this study, stress levels are even more acute when a pastor has young children.

It is worth noting that stress related to financial constraints or other economic factors were not mentioned. The absence of economic issues as a stressor is inconsistent with the findings of Osei-Tutu et al. (2021b) and Tagwirei (2022). They found that economic constraints were significant for pastors during the COVID-19 pandemic. The difference between the findings is possibly related to the geographical factor. Singapore is one of the wealthiest nations in the world, and financial security may not be an important stress factor for pastors in Singapore.

As the study also shows, internal struggles relating to self-value increased the stress level of pastors. When it comes to performance measurements, pastors often need to rely on external feedback to understand the impact of their efforts. People also usually associate pastoral work with the service sector. Therefore, customer satisfaction often is used to measure a pastor's performance. The nature of performance assessment that relies on external variables can make pastors feel inadequate or not good enough if they do not possess high internal self-esteem. When pastors rely too heavily on what people think and say about their ministry, it may make them feel that they need to continue to satisfy their church members in order to feel good about themselves. Such unhealthy thinking patterns may lead to increased stress when pastors face limitations in providing the best service to their members, such as during the COVID-19 situation.

Lastly, changes in pastoral working culture cannot be effected without organizational changes. While and Clark (2021) indicated that management's role is critical in mitigating work-related mental health problems in the workplace. The SDA Church organizational structure puts local church pastors under the direction of regional leaders such as mission or conference administrators. While these administrators may not be directly involved in the day-to-day activities of the local church, they can

help to establish policies to reduce work-related stress among pastors by reducing potential pressure on pastors during a pandemic.

## Conclusion

The COVID-19 pandemic is unlikely to be the last public health crisis. Emerging infectious disease problems are likely to recur in the future. Based on the experience gathered from the present pandemic, work-related stress affected many professions, including pastors. The unique role of pastors and the broad parameters of their work may lead pastors to experience mental health issues that can affect their professional and personal lives.

By nature, pastoral work frequently deals with interpersonal relationships. Due to the nature of pastoral ministry, conflict is unavoidable. Enhancing skills to deal with conflict is necessary to reduce stress among pastors.

The role of pastoral ministry will continue to remain significant in the church's life. To the knowledge of the researcher, this study is the first research done among SDA pastors in Singapore over the last 20 years. Therefore, there is scope for further research on diverse topics. The knowledge gained from this research can be a catalyst for an increased focus on helping pastors to deal with their work challenges in order to enable them to continue providing optimal service for their parishioners.

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## Influence of Social Intelligence and Change Readiness on Quality of Work Life<sup>1</sup>

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### Abstract

Today's organizations aim to establish healthy work environments. Through purposive sampling, 150 participants from two higher educational institutions were selected to explore the factors influencing their quality of work life. The instrument was composed of adapted questions from the Tromsø Social Intelligence Scale, Assessment for Change Readiness, and Work-Related Quality of Life Scale. The findings revealed high levels of social intelligence and change readiness, along with an average quality of work life. Social intelligence ( $p = .001$ ) and change readiness ( $p = < .001$ ) were associated with the quality of work life. Significant differences in quality of work life were also exhibited in terms of educational attainment ( $p = .045$ ) and work position ( $p = .022$ ). The results of this study verified these associations with social intelligence, change readiness, and quality of work life. Furthermore, confidence and optimism were the specific subscales that significantly predicted the employee's quality of work life. The study underscored that work has the potential to influence life to a great extent, and thus managers of establishments are urged to create nurturing environments that promote personal advancement, work-life balance, satisfaction, and trusting relationships. These factors critically enhance the quality of work life.

**Keywords:** *Work-life quality, job satisfaction, social intelligence, performance*

### Introduction

Work occupies a significant portion of available time and is an inseparable, integral part of human life (Çetinkanat & Kösterelioğlu, 2016; Martel & Dupuis, 2006). What we do in our work significantly influences our social and economic status, our health, and our psychological well-being (Ivancevich et al., 2014). Thus, organizations are continuously looking for strategies to meet the demands and challenges of today's dynamic work environment.

Nowadays, the realization of an organization's goals and the sustainability of its success are contingent upon the attainment of high levels of satisfaction and well-being of employees (Akar, 2018; Vasita & Prajapati, 2014). Hence, today's organizations seek to establish a positive and healthy work environment for their employees (Akar, 2018).

Recently, one of the prominent approaches to work environments that have been studied and developed is the concept of Quality of Work Life (QWL). The theoretical models and constructs of QWL have undergone many changes since its inception over 50 years ago (Martel & Dupuis, 2006). QWL refers to an organization's philosophy and practices that promote employee dignity, introduce changes in organizational culture, enhances employees' physical and emotional well-being, and create opportunities for growth and development (Ivancevich et al., 2014). QWL is a multi-dimensional, comprehensive, and transformational concept, the object of which is to raise employees' levels of satisfaction in the work environment, and further help to promote the human factor and human expectations as important elements in organizations (Akar, 2018; Akar & Ustuner, 2019; Çetinkanat & Kösterelioğlu, 2016; Sirgy et al., 2001). Sirgy et al. (2001) defined QWL as employee satisfaction with various needs measured by the resources, activities, and outcomes resulting from work engagement. It is not merely linked to job satisfaction (Öztürk et al., 2019), but also influences satisfaction in other domains such as family life, social environment, leisure, and financial life (Sirgy et al., 2001).

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QWL is viewed as that umbrella under which organizations support employee efficiency, job security, morale, motivation, safety, and well-being (Leitão et al., 2019), and employee work experiences are rewarding, fulfilling, and devoid of negative consequences (Che Rose et al., 2006). QWL is meant to promote employees' feelings of being worthy and respected, give feelings of peace and happiness, and assist in development of a sense of security and belongingness (Akar, 2018; Akar & Ustuner, 2019; Çetinkanat & Kösterelioğlu, 2016). Employees who have high QWL experiences extend their wholehearted commitment and cooperation to their organizations, make good decisions, and positively contribute to the realization of organizational goals (Kamboj et al., 2015).

The concepts of learning how to interact with others and navigate a way through life's circumstances and experiences are some of the keys to keeping a multigenerational workforce engaged and successful. These are the realms of social intelligence. These principles give organizations tangible ways of managing and harnessing diversity, since a socially intelligent workforce will work together in harmony as a cohesive, collaborative team. The ability to relate to people, understand social circumstances, correctly interpret them, and react appropriately is referred to as social intelligence. It is the ability to develop and sustain harmonious interpersonal relationships as well as solve conflicts. Furthermore, it has the potential to build relationships that can support the interest of and provide benefits for an organization (Njoroge & Yazdanifard, 2014).

Over the years, various definitions of social intelligence have been proposed, each stressing different components of what is now clearly understood as a multi-faceted construct (Palucka et al., 2011). Social intelligence as a concept was first brought to the forefront by psychologist Edward Thorndike in 1920 (Weis & Süß, 2005). Social intelligence, in his own words, is "the ability to understand and manage men and women, boys and girls, and to act wisely in human relations" (Thorndike, 1920, p. 228). Moss and Hunt (1927, p. 108) defined it as the "ability to get along with others." Vernon (1933) provided the most wide-ranging definition of social intelligence, describing it as the concept

Reflected in the ability to get along with people in general, social technique or ease in society, knowledge of social matters, and susceptibility to stimuli from other members of a group, as well as insight into the temporary moods or underlying personality traits of strangers. (Vernon, 1933, p. 44)

By the aforementioned definitions, the concept relates to how humans act toward each other, in both cognitive aspects (i.e., the ability to understand people) and behavioral aspects, which is the ability to deal effectively with and respond towards others (Palucka et al., 2011). In an organizational context, this can refer to how leaders treat their workers, how employees treat each other, and the nature of the organization's culture (Cooper, 2021).

Research findings suggest several benefits of social intelligence. It helps individuals establish and sustain interpersonal relationships, secure social progress, develop work satisfaction, and function in social groups (Joseph & Lakshmi, 2010). Moreover, it relates to positive psychological health, playing a significant role in one's resilience (Palucka et al., 2011).

Newstrom (2011) stressed the importance of cultivating and exhibiting social intelligence at all levels, and discussed Karl Albrecht's elegant but straightforward framework of social intelligence. According to Albrecht (2006), social intelligence is a set of five primal competencies for life and leadership, namely, empathy, presence, situational awareness, clarity, and authenticity. Silvera et al. (2001) designed a multi-faceted social intelligence measure known as the Tromsø Social Intelligence Scale. The development and validation of this measure led to the identification of three factors associated with social intelligence, namely, social information processing, social skills, and social awareness.

Individuals and organizations are surrounded by continuous progress, technological advancements, and global network connectivity, all of which have resulted in perpetual change. Individuals and organizations experience change for different reasons, including improving the human condition, increasing productivity and competitiveness, responding to new or altered social and political contexts and expectations, achieving personal or organizational objectives, and correcting previous mistakes (Howley, 2012). However, change can be difficult in an organization, and it often

results in fluctuations and negative consequences. Changes in an organization are inextricably linked with the emotions of its employees. Workers will react to change in several ways. For the implementation of a relatively new idea in an organization to be effective, all members of the organization must be prepared to undergo change.

Individual readiness for change, both as a leader or as an employee, has been considered a critical factor that leads to effective and successful organizational change implementation (Holt et al., 2007; Rafferty et al., 2013). When a single leader or employee does not believe in the need for change or in the organization's capacity to make changes, the initiative and plans for change will never materialize or be difficult to achieve (Saragih, 2015).

Holt et al. (2007, p. 235) described change readiness as a "comprehensive attitude that is influenced simultaneously by the content (i.e., what is being changed), the process (i.e., how the change is being implemented), and the individuals (i.e., characteristics of those being asked to change) involved." Accordingly, readiness represents the degree to which a person or group of individuals are cognitively and emotionally inclined to consider, support, and implement a specific strategy to purposefully change the status quo. Change readiness is a measure of how well-prepared and capable workers are for transition, as well as the likelihood of high or low employee resistance, and the reasons for it (Hussain et al., 2018). When an organization's readiness for change is substantial, workers are more likely to promote change, put in more effort, and be more persistent and cooperative, resulting in a successful implementation (Weiner, 2009).

Lewin's Change Theory accounts for both the complexity and resistance to change that can be seen at all levels of an organization's workforce. Lewin posited that people naturally resist change, preferring the familiar and searching out comfort zones. Employees classically show resistance to change, a general mistrust in unproven systems, and fear of abandoning what has succeeded in the past. These are just a few of the common roadblocks to change implementation. Lewin suggested that adapting to change can be done by recognizing the three different stages, namely, unfreeze (creating the motivation to change), followed by moving through the change process by effective communication an empowering individuals to embrace new ways, and lastly, refreeze. This is returning the organization to a sense of stability, which is an integral part of creating confidence for the next inevitable change (Lewin, 1951).

Over the years, researchers have separately uncovered significant predictors of social intelligence, of change readiness, and of QWL. Furthermore, the literature consistently has depicted strong associations between QWL and employees' work engagement, motivation, organizational performance, life and job satisfaction, health, and psychological well-being (Akar, 2018; Kanten & Sadullah, 2012; Martel & Dupuis, 2006; Muthukumaran, 2018; Sirgy et al., 2001; Thakur & Sharma, 2019; Vasita & Prajapati, 2014). But despite the increasing number of papers about the three primary variables of interest in this research, only a few studies have explored the associations between them. This provides an opportunity and an avenue to advance the body of knowledge through research. This study was conducted to address the scarcity of literature on the relationships of social intelligence, change readiness, and QWL. The researchers sought to address that dearth of information by exploring the influence of social intelligence and change readiness on the QWL of workers of two selected higher educational institutions.

### ***Objectives of the Study***

In this study, the aim was to establish the influence of social intelligence and change readiness on the QWL of leaders, faculty, and staff of the selected higher educational institutions. Specifically, the objectives were as follows: (a) the level of the social intelligence and change readiness of the leaders, faculty, and staff, (b) the quality of work life of the leaders, faculty, and staff, (c) the relationship between social intelligence and change readiness of the leaders, faculty, and staff, and their quality of work life, (d) the difference in the quality of work life of the leaders, faculty, and staff when gender, educational attainment, marital status, and work position are considered, and (e) the variables that have significant predictive ability relevant to QWL.

## **Methods**

### ***Research Design***

In this study, a descriptive-correlational design was utilized that involved sufficient and precise measurement of the relevant variables, followed by an examination of their relationships.

### ***Population and Sampling Technique***

The population chosen for this study were the leaders, faculty, and staff who were currently employed for at least six months in the selected higher educational institutions. Through purposive sampling, 150 respondents were selected without regard to their age, marital status, work position, and educational attainment. The respondents consisted of 74 (49.3%) faculty, 51 (34%) staff, and 25 (16.7%) leaders that included administrators, directors, deans, and department heads. There were 96 (64%) females and 54 (36%) males. The majority (125) of the respondents were married, which accounted for 83.3% of the population; while 22 (14.7) were single, and 3 (2%) were widowed. Among the 150 respondents, 73 (48.7%) were master's degree holders, 42 (28%) were bachelor's degree holders, 30 (20%) had a doctoral degree, and 5 (3.3%) were undergraduates.

### ***Instrumentation***

The instrument used was divided into four parts and was administered through Google Forms. A constructed questionnaire was devised to determine the demographic profile of the respondents. The remaining three parts of the questionnaire were adapted from existing instruments. Permission to use the questionnaires was obtained from the corresponding authors. Modification of some parts of the questionnaire was done to cater to the uniqueness of the respondents.

The first part of the instrument was a demographic profile of the faculty and staff, which included their age, gender, marital status, educational attainment, and work position (leader, faculty, or staff).

The second part of the instrument was adapted from the Tromsø Social Intelligence Scale (Silvera et al. (2001) scored on a 7-point scale (ranging from 1 = *Extremely Poor* to 7 = *Extremely Well*) with 21 items. The three subscales of social intelligence used were social information processing, social skills, and social awareness. Cronbach's alpha coefficients obtained for these were .81, .86, and .79, respectively.

The third part of the instrument involved the assessment for change readiness. This scale consisted of 35 items measured on a 6-point scale (ranging from 1 = *Not Like Me* to 6 = *Exactly Like Me*). The seven traits of the change-readiness assessment included resourcefulness, optimism, passion or drive, adaptability, confidence, and tolerance for ambiguity. The scale had a Cronbach's alpha of .83.

The last part of the instrument was adapted from the Work-Related Quality of Life scale of Easton and Van Laar (2018). The 23-item psychometrically substantial scale gauged employees' perceived quality of life as measured through six psychosocial sub-factors: job and career satisfaction, general well-being, home-work interface, stress at work, control at work, and working conditions. Respondents answered questions on a 5-point scale (*Strongly Disagree*, *Disagree*, *Neutral*, *Agree*, and *Strongly Agree*). The Work-Related Quality of Life scale had good sub-scale reliability as well as good convergent, discriminant validity, and test-retest reliability, and is widely used (Easton & Van Laar, 2018a, 2018b). The Cronbach's alpha values for the subscales used in this study ranged between .75 and .89; overall reliability was .91.

### ***Data Gathering Procedures***

Ethics approval was obtained from an institutional Ethics Review Board. The ethical principles adopted upheld the dignity of the respondents. Extensive instruction and guidelines for filling out the survey were explained, as well as the purpose of the research. Participant confidentiality was maintained. Participants were given the right to withdraw if they wished. Honesty in answering the questions was also emphasized to ensure accurate results. Data were retrieved through responses submitted via Google Forms.

### ***Analysis of Data***

The information collected for the outcomes was statistically tested, evaluated, and summarized. Descriptive statistics were used to determine the respondents' demographic profiles, levels of social intelligence and change readiness, and respondents' QWL. Pearson's correlation coefficient was used to determine the significance of the relationship between the independent and dependent variables, and the strength of the associations between them. Kruskal Wallis test, Mann-Whitney U test, and Pairwise Comparisons were employed to determine the differences in respondents' QWL considering their marital status, gender, educational attainment, and work position as a leader, faculty, or staff. Multiple regression was used to determine the variable(s) that mostly predicted the QWL of the respondents.

### **Results**

In this descriptive-correlational study, the aim was to assess the influence of social intelligence and change readiness on the QWL among employees of faith-based higher educational institutions. Further, the objective was to determine, if possible, the variables that significantly predicted employees' QWL.

#### ***Levels of Social Intelligence and Change Readiness***

Descriptive statistics were used to analyze the levels of social intelligence and change readiness. The results obtained showed that the level for social information processing was very high. On the other hand, the levels of social skills, social awareness, and the overall social intelligence of the respondents was high.

Employees who participated in the study had very high levels of resourcefulness and confidence. Moreover, levels of optimism and passion and drive were both high, while levels of adventurousness, adaptability, and tolerance for ambiguity were moderate. Thus, the overall level of change readiness of respondents was high.

#### ***Quality of Work Life***

Employee perceptions of the degree of their QWL are shown in Table 1. Respondents had an average degree of QWL in terms of home-work interface, control at work, working conditions, and stress at work. However, results also indicated that the degree of QWL of the respondents in terms of general well-being, along with job and career satisfaction, were low. As a result, the general QWL of respondents was average.

**Table 1** *Quality of Work Life of the Respondents (N = 150)*

<b>Feature</b>	<b>Mean Score</b>	<b>SD</b>	<b>Interpretation</b>
General Well-Being	65.21	8.45	Low
Home-Work Interface	76.20	9.46	Average
Job and Career Satisfaction	63.60	8.35	Low
Control at Work	76.57	10.18	Average
Working Conditions	79.93	10.34	Average
Stress at Work	82.31	10.76	Average
Quality of Work Life	73.97	9.47	Average

*Note.* Low = 23.00–71.49; Average = 71.50–82.49; High = 82.50–115.00.

#### ***Change Readiness, Social Intelligence, and Quality of Work Life***

Pearson Product Moment Correlation was used to evaluate the relationship between change readiness and QWL, and between social intelligence and QWL. The results shown in Table 2 (please see next page) revealed that subscales of change readiness and the QWL were positively correlated. This also applied to the subscales of social intelligence and the respondents' QWL.

**Table 2** Descriptive Statistics and Correlations for Change Readiness, Social Intelligence, and QWL

QWL Feature	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Resourcefulness	23.03	3.53																			
2. Optimism	18.63	3.51	.11																		
3. Adventurousness	13.57	3.69	.20	-.17*	.37**																
4. Passion or Drive	20.69	3.54	.049	.000	.61**	-.095	-.27**														
5. Adaptability	16.70	3.58	.000	.25	.000	.25	.001	-.18*	.30**	.54**	-.28**										
6. Confidence	22.38	3.00	.030	.000	.000	.000	.000	.64**	.16*	-.24**	.42**	-.15									
7. Tolerance for Ambiguity	14.63	3.54	.000	.044	.003	.000	.064	.000	.044	.43**	-.51**	.48**	-.15								
8. Change Readiness	18.52	1.67	.001	.000	.000	.000	.000	.066	.49**	.69**	.53**	.24**	.53**	.46**	.44**						
9. Social Information Processing	37.03	5.19	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000	.367**								
10. Social Skills	33.91	6.17	.000	.134	.204	.000	.824	.000	.077	.000	.000	.000	.587**	.39**							
11. Social Awareness	33.91	6.17	.000	.427**	.416**	.188*	.126	.300**	.396**	.148	.587**	.39**	.000	.000	.41**						
12. Social Intelligence	34.47	4.33	.000	.000	.021	.126	.000	.000	.071	.000	.000	.000	.000	.000	.000	.72**					
13. General Well-Being	65.21	8.45	.844	.000	.000	.106	.000	.787	.000	.000	.000	.29	.00								
14. Home-Work Interface	76.20	9.46	.414**	.473**	.195*	.146	.359**	.383**	.164*	.629**	.63**	.83**	.72**								
15. Job and Career Satisfaction	63.60	8.35	.000	.000	.017	.074	.000	.000	.044	.000	.000	.000	.000	.24**							
16. Control at Work	76.57	10.18	.001	.001	.05	.13	.11	.28**	.013	.32**	.27**	.12	.16	.24**	.96**						
17. Working Conditions	79.93	10.34	.000	.000	.048	.18*	.10	.32**	.020	.38**	.25**	.15	.17*	.25**	.96**	.97**					
18. Stress at Work	82.31	10.76	.000	.000	.56	.031	.22	.000	.81	.000	.002	.062	.043	.002	.000	.000	.97**				
19. Quality of Work Life	73.97	9.47	.000	.000	.087	.11	.12	.29**	.066	.36**	.22**	.17*	.19*	.26**	.94**	.97**	.96**	.98**	.97**		
			.001	.000	.29	.19	.13	.000	.42	.000	.006	.039	.019	.001	.000	.000	.000	.000	.000	.98**	.98**
			.000	.000	.54	.096	.16	.000	.62	.000	.004	.089	.051	.003	.000	.000	.000	.000	.000	.99**	.99**
			.000	.000	.048	.18*	.096	.33**	.006	.37**	.27**	.16	.16	.26**	.97**	.99**	.97**	.98**			
			.000	.000	.56	.029	.25	.000	.94	.000	.001	.054	.053	.001	.000	.000	.000	.000	.000	.98**	.98**
			.000	.000	.037	.19*	.09	.31**	-.004	.37**	.29**	.15	.16	.26**	.96**	.98**	.95**	.98**	.98**	.99**	.99**
			.000	.000	.65	.018	.24	.000	.96	.000	.000	.070	.059	.001	.000	.000	.000	.000	.000	.99**	.99**
			.000	.000	.053	.16	.11	.31*	.023	.37**	.26**	.15	.17*	.26**	.98**	.99**	.98**	.99**	.99**	.99**	.99**
			.000	.000	.518	.053	.195	.000	.784	.000	.001	.067	.043	.001	.000	.000	.000	.000	.000	.000	.000

Note. \* $p < .05$ , \*\* $p < .01$ .



Resourcefulness, optimism, and confidence were seen to be associated with all subscales of quality of work. Interestingly, passion or drive was significantly linked with home-work interface, working conditions, and stress at work. However, the results also revealed that there was no correlation between adventurousness, adaptability, and tolerance for ambiguity. Yet all the subscales of change readiness were correlated with the respondents' overall QWL. Hence, summing up the correlations between the subscales still generated a moderate degree of correlation with overall change readiness and the total QWL of the respondents [ $r(148) = .37, p < .001$ ].

Remarkably, social information processing was clearly linked with all the subscales of QWL. Meanwhile, social skills were found to be associated only with job and career satisfaction. The subscale of social awareness was linked with home-work interface and job and career satisfaction. The correlations between the subscales generally yielded a small degree of correlation with the overall social intelligence and total QWL of the respondents [ $r(148) = .26, p = .001$ ].

### ***Educational Attainment and Quality of Work Life***

Kruskal Wallis-Test was used to determine if there was a significant difference in the QWL of the respondents related to educational attainment. The results in Table 3 show that there were significant differences involving educational attainment and QWL involving the home-work interface ( $p = .029$ ), working conditions ( $p = .042$ ), stress at work ( $p = .013$ ), and the general quality of work life ( $p = .045$ ).

**Table 3** Means, Standard Deviations, and Kruskal-Wallis Test in Educational Attainment and QWL

QWL Feature	Mean Rank				$\chi^2$	p-value	$\epsilon^2$
	Undergraduate Level (5)	Bachelor's Degree (42)	Master's Degree (73)	Doctoral Degree (30)			
General Well-Being	88.40	67.51	74.17	87.77	2.27	.228	0.03
Home-Work Interface	83.50	63.29	74.36	94.05	7.66	.029	0.06
Job & Career Satisfaction	72.70	65.19	74.49	92.85	7.09	.065	0.05
Control at Work	85.70	64.42	74.97	90.60	6.18	.084	0.05
Working Conditions	81.60	63.95	74.38	93.38	7.55	.042	0.06
Stress at Work	82.70	63.52	73.15	96.78	10.61	.013	0.07
Quality of Work Life	83.00	64.32	74.10	93.30	9.43	.045	0.06

The results of a pairwise comparison test indicated that respondents with a doctoral degree had a significantly higher level of QWL than those with a bachelor's degree in terms of home-work interface ( $p = .003$ ), working conditions ( $p = .027$ ), stress at work ( $p = .008$ ), and general QWL ( $p = .031$ ).

### ***Work Position and Quality of Work Life***

A Kruskal-Wallis H test was applied to investigate the differences in the QWL when work position was considered. The results in Table 4 (please see next page) substantiated the existence of differences in home-work interface, job career satisfaction, working conditions, stress at work, and total QWL.

The results of the pairwise comparison test revealed that leaders (administrators, directors, deans, and department heads) had a significantly higher level of home-work interface ( $p = .009$ ), job and career satisfaction ( $p = .012$ ), working conditions ( $p = .021$ ), stress at work ( $p = .005$ ), and general QWL ( $p = .018$ ) than faculty and staff members.

**Table 4 Means, Standard Deviations, and Kruskal-Wallis Test in Work Position and QWL**

QWL Feature	Mean Rank			$\chi^2$	<i>p</i> -value	$\varepsilon^2$	Interpretation
	Staff ( <i>n</i> = 51)	Faculty ( <i>n</i> = 74)	Leaders ( <i>n</i> = 25)				
General Well-Being	67.75	75.31	91.86	5.18	.075	0.04	Not Significant
Home-Work Interface	64.74	75.95	96.12	8.79	.012	0.06	Significant
Job and Career Satisfaction	66.03	74.93	96.52	8.31	.016	0.06	Significant
Control at Work	66.78	76.59	90.06	4.92	.086	0.03	Not Significant
Working Conditions	65.53	76.09	94.08	7.29	.026	0.05	Significant
Stress at Work	63.42	76.54	97.06	10.16	.006	0.07	Significant
Quality of Work Life	65.55	75.86	94.74	7.59	.022	0.05	Significant

### ***Influence of Social Intelligence and Change Readiness on Quality of Work Life***

Stepwise regression was executed to determine if social intelligence and change readiness predicted QWL. The regression analysis generated two models as reflected in the summary in Table 5. The first model showed that Confidence (8.8%), a subscale of change readiness, was the highest predictor of QWL. The second model revealed that if optimism, which is also a subscale of change readiness, is added to confidence, the QWL increased. It specifically indicated that confidence and optimism predicted 14.8% of the QWL.

**Table 5 Model Summary of the Regression Analysis**

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adj. <i>R</i> <sup>2</sup>	SE of Estimate	Change Statistics				
					<i>R</i> <sup>2</sup> Change	<i>F</i> Change	<i>df</i> 1	<i>df</i> 2	Sig. <i>F</i> Change
1	.307 <sup>a</sup>	.094	.088	9.043	.094	15.389	1	148	.000
2	.400 <sup>b</sup>	.160	.148	8.738	.066	11.494	1	147	.001

Note. a = Model 1—Predictors: (Constant), Confidence; b = Model 2—Predictors: (Constant), Confidence, Optimism.

An ANOVA analysis was performed to determine whether the overall regression model was a good fit for the data. The first model returned the following result,  $F(1, 148) = 15.39$ ,  $p < .001$ , and the second gave values  $F(2, 147) = 13.99$ ,  $p < .0001$ . This showed that some independent variables had significant predictive ability for the dependent variable. These results implied that each regression model was a good fit.

Furthermore, in Table 6 a summary is provided of the coefficients for regression. Confidence ( $\beta = .307$ ,  $p < .001$ ) and Optimism ( $\beta = .260$ ,  $p = .001$ ), which are both subscales of change readiness, were significant predictors of QWL. The findings suggest that a high QWL was associated with high levels of confidence and optimism.

**Table 6 Coefficients for the Regression Analysis**

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	95% Confidence Interval for Beta	
		Beta	SE	Beta	<i>t</i>		Lower Bound	Upper Bound
1	Confidence	.970	0.247	.307	3.923	.000	.481	1.459
2	Confidence	.835	0.242	.264	3.447	.001	.356	1.314
	Optimism	.701	0.207	.260	3.390	.001	.293	1.110

Note. Dependent Variable: QWL

## **Discussion**

### ***Level of Social Intelligence and Change Readiness***

The results of the study revealed that the surveyed institutional employees possessed a high level of social intelligence. According to Hesson and Olpin (2016), people crave for human relations. This notion helps to explain respondents' high levels of social intelligence.

Employees with high social intelligence are highly empathic individuals; therefore, it is easier for them to understand the thoughts and interpret the intentions of the people with whom they interact (Popp, 2017). On the other hand, leaders with high social intelligence can help to hasten the realization of the organization's goals (Nouri et al., 2015).

The results showed that respondents' change readiness ranged from moderate to very high. The change readiness level can differ depending on how the costs and benefits of continuing a behavior are viewed versus the costs and benefits of changing it (Vakola, 2014). Employees who are willing to change will engage in proactive actions to help their organization realize its goals (Muafi et al., 2019).

### ***Quality of Work Life***

Quality of work life in an organization is a vital factor for determining employee-related outcomes in modern organizations (Ramawickrama, 2018). QWL is thought of as determining how organizations promote employee efficiency, job security, morale, motivation, safety, and well-being (Leitão et al., 2019), and ensuring that employees' work experiences are rewarding and fulfilling (Rose et al., 2006).

In general, employees of these institutions were moderately satisfied with their work life in terms of their home-work interface, control at work, working conditions, and stress at work. Thus, they are likely to extend their wholehearted cooperation and support to management to improve productivity and the work environment (Chand, 2021). However, the results of this study revealed the low condition of the general well-being and job and career satisfaction of faculty and staff. According to Medhi (2021), job dissatisfaction is more likely to lower employee engagement, as well as increase turnover rates.

### ***Educational Attainment and QWL***

The differences in the home-work interface imply that there is variation in balancing home and work demands (Dorsey, 2003). In this study, doctoral degree holders had a more fulfilled life inside and outside of their paid work. They had higher perceived levels of working conditions, and had better perceived job security and available resources to do their jobs effectively. In contrast, disappointment with physical working conditions, including health, safety, and work hygiene, can have significant adverse effect on employees' quality of work life (Shanafelt et al., 2012). The doctoral degree holders in this study perceived higher work-related stress. However, Freeborn (2001) reported that people who recognized their work pressures as reasonable tended to have higher levels of job satisfaction.

### ***Work Position and QWL***

The burdens of work among the staff made them unable to leave work behind, as they needed to render not less than 40 hours in the workplace. This gave them the feeling that they could not invest in other aspects of their lives as they wished (Easton & Laar, 2018). This idea was supported by Shanafelt et al. (2012). Accordingly, working longer hours lead to a poor home-work interface.

### ***Conclusion and Implications***

Quality of work life deals with the process of creating a work environment that fosters cooperation among the employees to contribute to achieving organizational goals. The indicators of QWL included in this study were general well-being, home-work interface, job and career satisfaction, control at work, working conditions, and stress at work. Based on these findings, the following conclusions were drawn.

The respondents' levels of social intelligence and change readiness were high, while their quality of work life was average. These results suggest that respondents were highly empathic; thus, it was easier for them to appreciate the opinions and understand the intentions of people with whom they interact (Popp, 2017). Additionally, faculty and staff were resourceful and confident to face change. According to Weiner (2009), when organizational change readiness is high, organizational members are more likely to initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behavior.

Though the respondents' general QWL was satisfactory, it should be noted that general well-being and job satisfaction were low. Employers need to embrace a certain level of employment security and job safety so that employees are free from job anxiety, receive a reasonable wage, enjoy a family day or leisure in life, have social life opportunities, and participate in decision making. Hence, administrators should seek to find ways to reach these ideals so that profound problems do not arise in the organization.

Significant differences in the QWL were also exhibited in terms of educational attainment and work position. Doctoral degree holders had a higher home-work interface level than those who with bachelor degrees. Moreover, department heads, deans, directors, and administrators exhibited a significantly higher quality of work life in terms of home-work interface, job and career satisfaction, working conditions, stress at work, and overall quality of work life than did staff members. From these results, it is recommended that relevant policies and services be reviewed to provide awareness, simplify responsibilities, and foster conditions that support attaining successful QWL. Further, both individuals and administrators need to enthusiastically observe a work-life balance and make modifications if necessary. Discussion and compromise on flexibility, if needed, should be addressed to find acceptable solutions.

The results of this study verified the associations among social intelligence, change readiness, and quality of work life. Furthermore, confidence and optimism were the specific subscales that significantly predicted employees' quality of work life. Specifically, the findings of this study revealed that a high QWL was associated with high levels of confidence and optimism. In this regard, the researchers suggest that the administrators establish approaches that will augment employees' confidence and optimism to promote more staff engagement and increase QWL.

Lastly, the researchers aimed to underscore that the work environment has the potential to influence life to a great extent, and that nurturing workers' opportunities for personal advancement, work-life balance, satisfaction, and trusting relationships is critical in enhancing the QWL. This aim was fulfilled at a certain level.

## Limitations

This study has its own limitations. The generalization of the findings should be treated with caution since the study was conducted with participants from just two organizations. Generalizability is limited due to the small homogenous sample; nevertheless, the study's results may be aligned with other studies that highlight the need for improving QWL. Future studies covering larger samples may strengthen the findings' generalizability.

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## The Relationship between Physical Activity in a Natural Environment and Symptoms of Anxiety and Depressive Disorders: A Cross-Sectional Study Among University Students<sup>1</sup>

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### Abstract

Mental health is a raising concern globally. Anxiety disorders and depression dominate among all mental health problems. Previous studies have shown that physical activity, especially when done in an outdoor natural setting, may have a positive impact on improving mental health including depression and anxiety symptoms. This descriptive correlational study was conducted at Asia-Pacific International University, Thailand to investigate the relationship between physical activity in a natural environment and the occurrence of depressive and anxiety disorder symptoms. In the study conducted, a cross-sectional design was used involving a total of 62 online students who participated in a survey in the midst of the COVID-19 pandemic. The results indicated a high prevalence of depressive (67.2%) and anxiety (77%) symptoms ranging from mild to extremely severe. The data were analyzed using Pearson's correlation. The results showed a weak but insignificant negative ( $r = -0.157$ ) correlation between physical activity in a natural environment and anxiety symptoms, and a weak but insignificant positive ( $r = 0.134$ ) correlation between physical activity in a natural environment and depressive symptoms.

**Keywords:** *Natural environment, physical activity, anxiety, depression*

### Introduction

Mental health problems are now a rising public health concern worldwide. In 2017, it was estimated that 792 million people were living with a mental health disorder, which was around one in 10 globally (10.7%) (Dattani et al., 2021). Mental health problems are the single largest cause of disabilities worldwide, and some of the major disabilities are depression, anxiety, dementia, and alcohol abuse (Pan American Health Organization, 2019). Among these, depression and anxiety disorders dominated (Dattani et al., 2021). Depression is a worldwide illness and is also a major contributor to the total global burden of disease. It is estimated that 5% of adults are affected by depression (World Health Organization, 2021). And around 19.1% of the U.S.A. population aged 18 and above are affected by anxiety disorders every year (Anxiety and Depression Association of America, 2022).

The outbreak of the COVID-19 pandemic placed people under widespread emotional distress, particularly those with anxiety and/or depressive disorders. A nationwide survey in China in 2020 found that the implementation of unprecedented strict quarantine measures had triggered a series of psychological disorders, such as panic disorder, anxiety, and depression (Qiu et al., 2020). Panchal et al. (2021) pointed out that the average percentage of adults in the U.S.A. reporting anxiety or depressive disorder symptom greatly increased from 11.0% in 2019 to 41.1% by January 2021.

### Literature Review

Good mental health is defined as "a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, work productively and contribute to his or her community" (World Health Organization, 2018, para 1). Moreover, depression and anxiety were among the top 10 causes of disability-adjusted life-years among 10–24-year-olds in 2019 (GBD 2019 Diseases and Injuries Collaborators, 2020). As the most prevalent mental disorder, depression is defined as "a mood disorder that causes a persistent feeling of sadness and loss of interest" (Mayo

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Clinic, 2023, para. 1). Anxiety refers to an emotion identified by tense feelings, worried thoughts, and physical changes like sweating, trembling, and dizziness (American Psychological Association, 2022). Anxiety and depression often occur concurrently and sequentially in children and adolescents (Garber & Weersing, 2011).

Growing evidence suggests that physical activity acts as a protective factor against mental health symptoms among children and adolescents. It protects against emergence of depression regardless of age or geographical region, and decreases anxiety symptoms in people with a current diagnosis of anxiety and/or stress-related disorders (Oliva et al., 2021; Schuch et al., 2018; Stubbs et al., 2017). Chekroud et al. (2018) looked at the association between physical exercise and mental health in 1.2 million individuals in the USA. They found that all types of exercise were associated with a lower mental health burden than no exercise. The most significant associations with mental health were found in popular team sports, cycling, aerobic, and gym activities, with durations of 45 mins, and frequencies of three to five times per week. Grasdalsmoen et al. (2020) examined associations between the frequency, intensity, and duration of physical exercise and mental health problems among university students. They found that psychological distress and depressive disorders were negatively associated with physical activity; the more frequent, intense, and longer the duration, the less psychological distress and depressive disorders were reported.

Besides exercise, undertaking such activity in a natural environment has been shown to be more effective in improving mental health problems than if exercise is completed indoors. Mitchell (2013) concluded that physical activity in natural environments was associated with reducing poor mental health more than physical activity in other environments. Lawton et al. (2017) found that people who engaged in outdoor physical activity reported higher nature connective experiences and lower somatic anxiety levels. These findings were also reflected in Howell and Passmore's (2013) research, where they found affiliation with nature impacts people's physical health and overall well-being positively. Affiliation with nature impacts people's physical health and overall well-being positively. According to Hossain et al. (2020), exposure to a natural environment improved depressive symptoms, anxiety, and mood disorders. In addition, exposure to nature increased positive emotions and the ability to reflect on a life problem (Mayer et al., 2009). A study by Beyer et al. (2014) showed that higher levels of neighborhood green space were significantly associated with lower levels of depression, anxiety, and stress symptoms. A recent study also showed that contact with nature provided positive well-being effects, helped to maintain mental health, and had the potential for boosting resilience to environmental stressors, including those associated with COVID-19 (Samuelsson et al., 2020).

### **Research Objective**

Asia-Pacific International University (AIU) campus, located in Muak Lek, Thailand, is surrounded by rolling hills and tree-lined pathways, with green lawns and many flowering plants. A football field, tennis courts, badminton courts, basketball courts, and on campus exercise room are available for students to use. However, all sports facilities were closed and group sports were prohibited during the pandemic at the time that this study was conducted. Students could only exercise inside their own rooms or individually on campus. The aim of this study was to find out if there was a relationship between physical activity in a natural environment and depressive and anxiety symptoms among the students at the University.

### **Research Questions and Alternative Hypotheses**

1. Q 1: Is physical activity in a natural environment correlated with depressive symptoms among students at Asia-Pacific International University?

$H_1$ : Physical activity in a natural environment is correlated at a statistically significant level with depressive symptoms among students at Asia-Pacific International University.

2. Q 2: Is physical activity in a natural environment correlated with anxiety symptoms among students at Asia-Pacific International University?

$H_2$ : Physical activity in a natural environment is correlated at a statistically significant level with anxiety symptoms among students at Asia-Pacific International University.



## **Methodology**

### ***Study Design and Setting***

This study was a quantitative, cross-sectional, and correlational study conducted during the COVID-19 pandemic at the Muak Lek AIU Campus in Saraburi Province, Thailand. The study population consisted of around 300 English speaking students at the University who lived on campus during the pandemic. Students who spoke English but lived in the community, and those who were Thai speaking and lived on campus were excluded. Participants voluntarily filled in a questionnaire about their physical activity and depression and anxiety symptoms during the previous seven days. Snowball sampling was used when distributing the questionnaires.

### ***Instruments/Measures***

The questionnaire used in this study was adapted from the Depression Anxiety Stress Scale-21 (DASS-21) (University of Wisconsin-Madison, 2023) and the International Physical Activity Questionnaire (IPAQ) short version (IPAQ, 2012). DASS-21 is a short version of a self-reported instrument designed to measure depression, anxiety, and stress. Questions related to stress were removed since it was not the focus of this study. It does not require training to administer this questionnaire; it targets participants aged 17 and above, and may also be used with individuals in clinical settings or in a research study (NovoPsych, 2021). IPAQ is a well-developed instrument that can be used internationally. It assesses respondents' vigorous, moderate physical activity, and walking in the past week. In this study, these questions were divided into two sections that accessed participants' indoor and outdoor physical activity (IPAQ, 2012). Both questionnaires are in the public domain, and required no permission for use.

To access both students' indoor and outdoor physical activity levels, questions such as "During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling?" from IPAQ were split into two questions "During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling (indoors)?" and "During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling (outdoors)?"

### ***Data Collection***

Before starting data collection, the proposal was sent to the AIU Research Office for approval. After receiving approval at the end of January 2022, data collection started at the end of March and ended in the first week of April. This questionnaire was developed using a Google form and was distributed to each dormitory Messenger group and to students at the library. Later, snowball sampling was used to send the questionnaire to students individually through Messenger to get more students to participate.

After the Google forms were distributed to individuals on Messenger, a mistake was pointed out by one participant. The question "During the last 7 days, on how many days did you do vigorous physical activities like heave [*sic*] lifting, digging, aerobics, or fast bicycling?" from IPAQ were supposed to be split into two questions asking about both indoor and outdoor vigorous physical activity separately. However, in the online questionnaire that was sent to the students, only indoor exercise was mentioned and outdoor was missing. Therefore, almost 20 responses couldn't be used for the correlation analysis of outdoor exercise. Besides, participants were expected to give specific times in answering questions like "How much time did you usually spend doing vigorous physical activity?" and so responses with words or phrases like "not sure," "7 days," or "very few times" were removed. In the end, 35 responses remained and were used to do the analysis.

### ***Ethical Considerations***

An explanatory document about the survey and informed consent was provided to participants. Those who consented were asked to complete the anonymous, self-reported questionnaire.

### **Data Analysis**

Data analysis was conducted using the Statistical Package for the Social Sciences. Descriptive statistics was used to examine the prevalence of depressive anxiety symptoms and physical activity levels. Pearson's correlation was performed to analyze the linear relationship between physical activities indoors and outdoors with depressive and anxiety symptoms.

### **Results**

A total of 63 responses were received. One respondent filled in only demographic data; therefore, this response was removed from the data set. The remaining 62 responses were analyzed.

The youngest of the respondents was 19 years old, and the oldest was 32. Gender was almost evenly distributed at 46.8% and 53.2% male and female, respectively. Most of the respondents were Seventh-day Adventist Christians (83.6%), followed by Buddhists (8.2%), Baptists (6.6%), and other religions (1.6%). The distribution among the faculties from most to least were Arts and Humanities (22.6%), Education (22.6%), Religious Studies (21.0%), Business Administration (8.1%), Information Technology (8.1%), and Nursing (1.6%).

### **Prevalence of Physical Activity and Depressive Anxiety Symptoms**

Responses were used to analyze the prevalence of physical activity and depressive anxiety symptoms and for the correlation analysis. The prevalence of normal, moderate, and high physical activity levels were 37.1%, 42.9%, and 20.0%, respectively.

Table 1 shows the prevalence of reported normal, mild, moderate, severe, extremely severe anxiety symptoms. The highest level of anxiety was found in the extremely severe category accounting for just over a third of participants. Around three quarters of the study population showed anxiety symptoms. Normal depressive symptoms were reported in just under a third of participants. Mild, moderate, severe, extremely severe depressive symptoms essentially were equally represented among the categories. It was clearly apparent that depressive symptoms were a predominant feature among the individuals surveyed in the study group.

**Table 1** *Prevalence of Anxiety and Depressive Symptoms*

<b>Feature</b>	<b>Normal</b>	<b>Mild</b>	<b>Moderate</b>	<b>Severe</b>	<b>Extremely Severe</b>
Anxiety Symptoms	23.0%	11.5%	19.7%	11.5%	34.4%
Depressive Symptoms	32.8%	13.1%	19.7%	18.0%	16.4%

### **Correlation between Physical Activity in a Natural Environment and Depressive Anxiety Symptoms**

Pearson's correlation was used to analyze the correlation between physical activity in natural environments (referred to as "outdoor") and depressive and anxiety symptoms, and between indoor physical activity and depressive and anxiety symptoms. The correlation between outdoor physical activity and anxiety is shown in Table 2.

**Table 2** *Correlation Between Outdoor Physical Activity and Anxiety Symptoms*

<b>Feature</b>	<b>Statistics</b>	<b>Anxiety</b>	<b>MET Category Outdoor</b>
<b>MET Category Outdoor</b>	Pearson Correlation	-.157	1
	Sig. (2-tailed)	.367	
	N	35	35

The analysis revealed a weak and statistically insignificant negative correlation of  $-.157$  ( $p = .367$ ) between outdoor physical activity and anxiety symptoms. However, the trend shown was that the more outdoor physical activity that was reported, the less self-reported anxiety symptoms were recorded.

The correlation between outdoor physical activity and depression is shown in Table 3. A weak and statistically insignificant positive correlation of .134 ( $p = .443$ ) was found between outdoor physical activity and depressive symptoms. The more outdoor physical activity that took place, the trend was for more depressive symptoms to be reported.

**Table 3** *Correlation Between Outdoor Physical Activity and Depressive Symptoms*

Feature	Statistics	MET Category Outdoor	Depression
MET Category Outdoor	Pearson Correlation	1	.134
	Sig. (2-tailed)		.443
	N	35	35

The correlation between indoor physical activity and anxiety is shown in Table 4.

**Table 4** *Correlation Between Indoor Physical Activity and Anxiety Symptoms*

Feature	Statistics	Anxiety	MET Category Indoor
MET Category Indoor	Pearson Correlation	.064	1
	Sig. (2-tailed)	.715	
	N	35	35

Analysis of data given in Table 4 showed no statistically significant correlation ( $p = .715$ ) between indoor physical activity and anxiety symptoms. A similar result was found between indoor physical activity and depression, i.e., no statistically significant correlation ( $p = .773$ ) was shown. These data gave no indication that indoor physical activity influenced either anxiety or depression.

## Discussion

The results from this study indicated a high prevalence of depressive (67.2%) and anxiety (77%) symptoms regardless of the severity level. The majority of the respondents (62.9%) reported they had a moderate or high level of physical activity. The high prevalence of depressive and anxiety symptoms could be explained by both Norton's findings (2007) where he showed that Asians reported higher DASS-21 scores than other racial groups such as Africans, Caucasians, and Hispanic/Latinos and the impact of the COVID-19 restrictions which limited socializing.

Results also showed no correlation between indoor physical activity and depressive anxiety symptoms. A weak negative correlation was found between outdoor physical activity and anxiety symptoms. A weak positive correlation was found between outdoor physical activity and depressive symptoms. A study by Taniguchi et al. (2022) indicated that exposure to sunlight is one important factor that has a positive impact on people's mental health, including depression. Students at AIU tend to exercise in the evening, rather than in the morning or during the daytime. Their exercise, presumed to have been taken during the evening and in the absence of companionship, may have been responsible for the unexpected trend observed. Chekroud et al. (2018) found that compared with other exercise types, popular team sports showed the largest associations with lower mental health burdens. Missing elements such as sunshine and social activity during the pandemic period might explain the positive correlation trend between outdoor physical activity and depressive symptoms.

Results on the correlation between outdoor physical activity and anxiety agreed with Lawton et al.'s (2017) study. People who engaged in outdoor physical activity reported significantly lower somatic anxiety levels. Mitchell's study (2013) showed that regular use of natural environments was associated with a lower risk of poor mental health. However, no association dealing with depression and the exercise in the natural environment was examined in Mitchell's study. The results obtained in our study suggested that the effect of physical exercise in a natural environment on depressive

symptoms could merit further examination if a similar stressful episode occurred in the future. However, gathering data from a much larger sample size would be merited.

### Limitations

There were several limitations encountered in this study, the biggest of which was the small sample size used. The survey instruments were used directly without considering the primary language of respondents. Allowance for the participation of the potential Thai cohort of students by having a Thai translation of the questionnaire would have been beneficial. Greater clarity regarding how much time the respondents spent on vigorous physical activity in the past week would have been beneficial together with an indication of the time of day that the activity occurred. Respondents were expected to answer how many minutes or hours they exercised. Instead, some respondents reported one to two times, and were therefore removed from the data analysis. A mistake in one question was found at an early stage of the questionnaire distribution, and so some responses obtained before fixing this error could not be included in the analysis. If a pilot study had been carried out before actual research, this problem could probably have been avoided.

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## Perceptions Towards the Flipped Approach for English Language Speaking: Preliminary Observations and Recommendations for a University Classroom in Indonesia<sup>1</sup>

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### Abstract

In a traditional learning style where the teacher assumes an authoritative position, students may be receiving input rather than producing output. Contrary to this, a flipped classroom model emphasizes more output; furthermore, input is generated by students' own preparation for learning activities that are done in class. With an interest in the flipped classroom model, this paper investigates the perceptions of university EFL students in relation to the development of their speaking skills. A questionnaire was distributed to 12 students enrolled in a General English 4 class at a university in Indonesia. This questionnaire aimed to describe students' satisfaction and experience in learning English through a flipped classroom model. Students' responses from the questionnaire indicated that the flipped classroom model is a viable approach that can have a positive influence on students' learning satisfaction and experience. The study also indicated that students particularly enjoyed speaking activities which were done in a collaborative manner. Based on this finding, a recommendation for practice is offered.

**Keywords:** *English, foreign language, speaking skills, flipped classroom*

### Introduction

A flipped classroom model is the opposite of a traditional classroom setting. While a traditional classroom model refers to teachers delivering their lectures inside the classroom (Limniou et al., 2018), a flipped classroom model has the students learn the lessons outside class in order to allow time for practical learning activities inside the classroom. According to Rhodes and DeLozier (2016), flipped classrooms "refer to the practice of assigning lectures outside of class and devoting class time to a variety of learning activities" (p. 141). The activities done inside the flipped classroom normally comprise activities that emphasize student-centered learning, with the teacher being a guide or facilitator. In terms of English language teaching, the flipped approach has been found to be valuable for the purpose of English language practice (see Chen Hsieh et al., 2017; Alsowat, 2016). This approach allows learners to prepare before class, and for the teacher to use class time to work on what the learners had prepared. The flipped model may thus be beneficial for contexts where English is learned as a foreign language (EFL). Through this model, teachers can look forward towards more time outside the classroom for learners' development of English. This may be useful, especially for learners' development of speaking skills. Often, learners' English-speaking skills get sidelined due to limited time or resources. The teacher may also encounter difficulty in working with each learner in the class, especially if there are many students (Akçayır & Akçayır, 2018). With an interest in the feasibility of the flipped approach to teach speaking, this paper will examine the satisfaction of students towards the development of English-speaking skills through a flipped approach. From there, a recommendation for practice is provided.

### Literature Review

#### *The Flipped Model*

The flipped model allows students to be self-directed in their learning. Mainly, they are able to manage when and where they access the materials for learning. Besides encouraging students to work independently, the flipped approach also engages different cognitive processes (Zainuddin, 2017). For

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instance, the flipped classroom approach allows the development of soft skills needed to complete a learning task. These skills include personal responsibility, critical thinking, collaboration, creativity, respect, and punctuality (Lestari, 2021). Furthermore, studies have indicated that there is a link between the flipped model and students' learning style in that students may or may not be receptive towards the learning expectations required to engage in a flipped setting. When preparing materials for a flipped setting, this needs to be considered in order to ensure that most, if not all, students receive optimal instruction and guidance from the teacher (Afriyasaki et al., 2016), especially when online tools are used to deliver the teaching and learning activities (Loo, 2020). With the flipped approach, students also become accountable towards their learning. In this setting, students will need to complete tasks before attending a lesson in order to be able to participate fully in the corresponding activities held in class with facilitation from the teacher (Zainuddin et al., 2019).

It should be noted that while the flipped approach encourages independence among students, not all of them will find this learning method appealing. There will still be students whose preference is to be guided directly by their teachers (Mubarak et al., 2019). Besides self-regulation, the flipped approach also encourages social collaboration between students. As reported by Heryana et al. (2022), using the flipped classroom allowed learners to interact with classmates outside of class, and it also gave them the opportunity to work on problem-solving tasks on their own, which were subsequently discussed with the teacher in class. What this also shows is how the flipped classroom actually offers opportunities for learners to come to class with output in hand that their teacher can work on (Heryana et al., 2022). Hence, the flipped approach also creates more opportunities outside of class for contact with learning materials. The characteristics of a flipped model are proposed by Hwang et al., (2015, pp. 451–452), which were derived based on a review of related studies:

1. *Changes in the Usage of Class Time*: Those teaching contents that were traditionally taught through direct instruction and can be understood by students on their own are provided in other forms, such as video, for students to learn outside the classroom. Besides, in-class discussion, projects, and problem solving are included in the class to help students cultivate their analytical and judging abilities and apply what they have learned.
2. *Changes in the Usage of Time Outside the Class*: The time used to do homework is moved to the class time. Different ways of self-learning, such as watching videos, are scheduled before the class time.
3. *Time Outside of Class* is designed for students to *Gain Knowledge* at the remembering and understanding levels.
4. *Peer Interaction, Student–Teacher Interaction, and Problem-Solving Skills* are emphasized in class. Students gain knowledge at the analyzing, evaluating, and applying levels.
5. *Technology is Used, Especially Video*. While some scholars have argued that technology is not a necessary element for self-learning before class time, undeniably it is the easiest way to present teachers' instruction of the learning contents. Besides, teachers can manage the video and teaching materials for students more conveniently through teaching platforms or other online systems, and have interaction with students before and after class. Therefore, technology benefits the implementation of the flipped classroom.

Since the flipped model affects what happens outside the formal classroom, several considerations need to be made when using this teaching method. To use the flipped approach, the teacher needs to familiarize students with learning materials that they will encounter when learning independently. Besides the materials, students also need to be exposed to the learning processes expected for the lesson (Pratiwi et al., 2022). However, the flipped approach requires more than just proper planning from the teacher and commitment from the students; other factors such as equipment and accessibility are also important (Lestari, 2021; Kondo, 2018). As such, it should be noted that it is not solely up to the teacher to ensure the success of the flipped classroom; the school or institution also has an important role to play. Equipment to support and sustain a flipped model

must also be prepared, as well as technicians who can assist teachers create appropriate lessons (Afrilyasanti et al., 2016).

### ***The Flipped Model in English Language Education***

For the English language classroom, the flipped model is valuable as it can encourage more contact time with materials, classmates, and the teacher, all of which may contribute to the improved development of students' language proficiency (Zainuddin et al., 2019). The flipped classroom also frees teachers and students from traditional, and culturally-rooted, pedagogical approaches for the teaching and learning of English (Safiyeh & Farrah, 2020). As such in terms of English language development, the flipped approach has been found to be helpful (for a review of studies on the use of the flipped model in a speaking class, see Santhanasamy & Yunus, 2022). In the context of Indonesia, research has reported a generally positive view towards use of the flipped approach (e.g., Afrilyasanti et al., 2016; Afrilyasanti et al., 2017). Researchers have also reported the extent of improvement, especially in learners' productive skills of writing and speaking (Mubarok et al., 2019). There have been reports on the improvement of writing proficiency (Afrilyasanti et al., 2016; Afrilyasanti et al., 2017), as well as on speaking (Taufik, 2020). Despite this observation, many classrooms, including those that are flipped, still focus on students' writing development. This may be due to pressure to ensure students' passing of national examinations, for which speaking is not a significant element (Taufik, 2020). This brings about the need to examine the feasibility of using the flipped approach to teach speaking as a means to allow more time outside of class for learners' improvement of communication skills. Furthermore, speaking may be a more complex language production process, as there are more variables to consider, especially in a setting where English is spoken as a foreign language (EFL). Some variables may include the variety of English used, the accent and the perspectives held towards particular accents if any, as well as the organization of content, which can be driven by cultural tendencies. Nonetheless, while studies regarding the teaching of speaking using the flipped model may be limited, at least one study indicated students' positive response towards the flipped model. Abdullah et al. (2019) reported that participants showed improvement in speaking performance not only in the classroom, but outside of it as well. Moreover, participants also had an overall increase in self-regulation strategies which were observed not only in speaking classes, but in other courses as well.

### **The Study**

The aim of this study was to examine the perceptions of students towards the use of a flipped model for the teaching of speaking. This was premised upon classroom-based action research, which Mettetal (2001) briefly defines as planning and actions taken to improve the teaching and learning situation. This process, however, should not just be limited to the teacher; rather, it needs to be a collaborative effort where students and possibly other colleagues are involved (Cain, 2011). Furthermore, Cain (2011) argued that while classroom-based action research may be restricted to a unique context, there may still be resonance with other classrooms or teaching and learning experiences that may spur research-based actions by other teachers.

### **Study Setting**

This study may be considered the initial phase of a classroom-based action research investigation, where preliminary insights regarding students' perceptions were gathered. This study involved participants ( $n = 12$ ) who were EFL students taking General English 4 at Universitas Klabat, Indonesia, of which six were male and six were female. At the time of this study, their ages ranged from 19 to 24. These students had taken General English 3 prior to taking General English 4. All of the students' first language was Bahasa Indonesia. Some of the sample lesson plans used are shown below.



### Sample Lesson 1: *News Story*

#### Pre-class Activity (flipped):

- Students review tenses in English.
- Students learn some new vocabulary words related to news articles.
  - Examples of vocabulary: attacks, chases, crashes, misses, overturns, rescues, survives, threatens
- Students watch a news story and discuss the news by answering the following questions:
  - What happened (where and when)?
  - What else was happening at the time?
  - What has happened since?
  - What's happening now?

#### In-class Activity:

- Students are divided in groups according to their major and asked to present a news related to their major. They are given 15–20 minutes to prepare the news story, including PowerPoint slides. After a group presents, one of the other groups gives a short summary or shares the main points of the news story.

### **Data Collection and Analysis**

To determine the feasibility of using the flipped approach to teach speaking, a questionnaire was employed to examine students' satisfaction and experiences. Student satisfaction was considered to be a valuable construct given that the flipped approach required students to be motivated in order to learn on their own, or prepare materials before class meetings with teachers (Afrilyasanti et al., 2016; Afrilyasanti et al., 2017). Students' experiences, on the other hand, would be useful for the teacher and others in the planning of subsequent flipped lessons. The questionnaire consisted of eight questions that were distributed through a Google Form. The questions focused on student satisfaction in participating in the flipped classroom model. The survey was made available both in Bahasa Indonesia and in English to ensure that students really understood the questions. The survey was distributed to the students prior to their final examination. This was to minimize bias among the students, especially if they were already aware of their final examination results. Data from the questionnaire was collected and analyzed descriptively.

### **Results**

The results of the survey are shown in Table 1. As can be seen from student responses, there was a generally positive perception towards the use of a flipped approach. In summary, more than half the students enjoyed the approach (Questions #1 and #5), with the opportunity to practice with their classmates being mentioned as the most enjoyable and helpful activity (Questions #3 and #4). This observation is in light with the study of Kondo (2018), which reported how the study environment, including the presence of peers, was an important contributor to students' motivation in speaking activities. The students seemed to be able to self-regulate their own learning as well, seen through their responses to Questions #2 and #7. Finally, through the use of a flipped approach, the actual class session with their teacher could be organized to be more active (Question #7).

**Table 1** Results of Students' Satisfaction and Experience With the Flipped Approach

No	Question/Statement	Response
1.	How much did you enjoy the class? <i>I really enjoyed the class</i> <i>I enjoyed the class</i>	<b>66.7%</b> 33.3%
2.	How much of the lessons did you understand from this class? <i>I understood everything</i> <i>I understood most things</i> <i>I understood some things</i>	8.3% <b>83.3%</b> 8.3%
3.	Please choose 3 activities you enjoyed the most: a) <i>Presentations</i> b) <i>Debate</i> c) <i>Practicing (Drills) on the white board</i> d) <b>Practicing with partners/in groups</b> e) <i>Listening activities</i>	21.4% 14.3% 14.3% <b>28.6%</b> 21.4%
4.	Please choose 3 activities that helped you the most: a) <i>Presentations</i> b) <i>Debate</i> c) <i>Practicing (Drills) on the white board</i> d) <b>Practicing by partners/groups</b> e) <b>Listening activities</b> f) <i>F) Others (please specify)</i>	21.7% 13.0% 8.7% <b>26.1%</b> <b>26.1%</b> 4.3% (Speaking Exam)
5.	Did you enjoy the class by using most of the time in class doing work, and reading the lesson at home? a) <b>Yes</b> b) <i>No</i>	<b>91.7%</b> 8.3%
6.	Please state the reason why for your answer to question #5. a) <b>Helpful and effective</b> b) <i>Better focus</i> c) <i>It trains me to study independently</i> d) <i>Prefer lesson in class and do work at home</i> e) <i>Easier to understand</i> f) <i>It's better</i> g) <i>We can discuss with our teacher as our guide</i>	<b>5</b> 1 1 1 2 1 1
7.	Does preparing at home help you perform well in class? a) <b>Yes</b> b) <i>Neutral</i>	<b>75.0%</b> 25.0%
8.	Is there something helpful and new in the flipped classroom model of learning that you do not get in a traditional classroom model? a) <i>A more independent study</i> b) <b>Yes, more active learning in class</b> c) <i>Yes</i> d) <i>No</i> e) <i>No response</i>	8.3% <b>50.0%</b> 16.7% 8.3% 8.3%

### Discussion and Recommendation for Practice

The results from the questionnaire showed an overall positive light on the use of a flipped approach for the teaching of English-speaking skills. Based on the findings, it may be assumed that the participants were ready and willing to take on some of the learning responsibilities outside of class time. Teachers can maximize this to dedicate the class time to be more active, where the students can interact directly with the teacher. When this is done for speaking lessons, students will certainly benefit through a more active session with the teacher and other classmates. Furthermore, the findings from the questionnaire also indicated that the students viewed work in pairs and in small groups positively. This may not be surprising, given that the context of Indonesia is one that values collectivism. As such, learning activities that are done with classmates may be more appealing for the

students (see Gayatri et al., 2023). The teacher should leverage this observation, and strive to create activities that promote cooperation and collaboration among students. This may be achieved by organizing dialogues or conversations with classmates, or as indicated in the responses to the questionnaire, communication activities that involve a certain amount of interaction, such as presentations and debates. The former can be organized according to topics that students themselves choose, or even assigned by the teacher. Presentations may serve as a valuable opportunity for students to practice speaking to an audience; using visual aids; and also instilling confidence in addressing their classmates' questions. The latter activity, on the other hand, could be very useful to enhance students' critical thinking skills, and their ability to employ persuasive rhetorical strategies in their speeches (see Arung & Jumardin, 2016). These alternative speaking activities need to be considered and planned carefully; an example is shown in Table 2. This Table may be used as a template to guide other English-speaking classes or lessons.

**Table 2** *Recommended Speaking Activities With Peers*

<b>Component</b>	<b>Activity</b>	<b>Purpose of Activity</b>
<b>Topic</b>	<b><i>A concept or idea that is generally known to the students</i></b>	<b><i>A concept or idea that is generally known to the students, but viewed or received differently</i></b>
Elements of Speaking Skills to be Taught	Speaking clearly Speaking to an audience (information transmission)	<ul style="list-style-type: none"> <li>• Speaking clearly</li> <li>• Speaking persuasively to an audience and to an opposing team (information negotiation and creation)</li> </ul>
Other Skills to Be Taught	Preparing visual aids	<ul style="list-style-type: none"> <li>• Critical thinking (information synthesis)</li> <li>• Respect (for differences in opinions)</li> </ul>
Assessment	Clarity of speech and presentation	<ul style="list-style-type: none"> <li>• Persuasiveness of speech</li> <li>• Criticality and novelty of ideas</li> <li>• Ability to defend and promote one's position</li> </ul>

As is well known, lessons and materials for the flipped model need to be appealing to ensure that students' motivation towards independent learning is maintained (Afrilyasanti et al., 2016; Afrilyasanti et al., 2017). Besides the appeal, the flipped lesson also needs to be familiar to the students, so that they would be able to work on it on their own outside of the classroom.

## Concluding Remarks

English is a foreign language in Indonesia, and the language often is being taught in order students to pass exams, such as the national exam (Zein et al., 2020). Driven by the desire to prepare students for this exam, lecturing about the English language has been heavily used in order for students to absorb as much information as possible. While this method has been useful to a certain degree, it does not necessarily support students' development in communication, especially in speaking. Hence, findings from this current study provide some initial insights into how the flipped approach may be a viable practice to counter a teacher-centered English language approach. Specifically, the results as seen through the satisfaction and experience of the participants indicated a positive disposition towards the flipped classroom model. The positive outcome was deemed to be related to elements of the flipped classroom model that students did not find in the traditional lecture classroom model, such as being able to practice speaking with their classmates outside of class time. Future research may consider organizing a longitudinal study to examine the impact of using a flipped approach in developing students' speaking skills. A longitudinal study could also include other sources of qualitative data, such as observation and interview data. It may also take into account data from other courses which may require students to speak in English. Another research alternative is to compare conventional approaches to teaching English, such as a teacher-centered classroom, with the flipped approach. This area still requires further examination, given that the Indonesian context and other parts of the region, still place the teacher in the position of being an authority.

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## Mediating Role of Coping Strategies on the Symptoms of Complicated Grief and Psychological Well-Being during COVID-19 Pandemic<sup>1</sup>

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### Abstract

The COVID-19 pandemic altered the way people live. For safety reasons, the government of the Philippines imposed health guidelines that affected the grieving process of Filipinos, resulting in complicated bereavement; yet there is little research examining potential protective factors for grieving Filipinos. This study investigated the mediating role of coping strategies between complicated grief and psychological wellbeing among 200 bereaved Filipinos aged 18 to 67. The researchers employed random sampling to administer modified versions of the Inventory of Complicated Grief, Coping Strategies Scale, and Ryff's Psychological Well-being questionnaires. It was determined that the degree of complicated grief was low, the level of coping strategies was high, and coping mechanisms were frequently employed. The findings indicated that coping strategies fully mediated the relationship between symptoms of complicated grief and psychological well-being ( $\beta = -.493$ ,  $t = 2.16$ ,  $p = .03$ ). Implications and recommendations were discussed.

**Keywords:** *Grief, well-being, coping*

### Introduction

The World Health Organization (WHO) declared in March 2020 that the novel coronavirus or COVID-19 outbreak in China characterized a global pandemic (Cucinotta & Vanelli, 2020). COVID-19 is a contagious viral respiratory disease that led many countries, including the Philippines, to impose health protocols to contain the virus (i.e., wearing a mask, physical distancing, and a limited number of people at any social gathering). According to the Center for Strategic and International Studies, the Philippines has the 2nd highest COVID-19 death rate among Southeast Asian countries, with 34,672 deaths as of September 9, 2021. However, due to health protocols, the mourning rituals could not be performed, making the grieving process more difficult for bereaved families. For instance because of an abundance of caution, funeral homes in the Philippines pushed for cremation even when COVID-19 was unverified or not suspected, and burial and cremation processes had to be completed within 12 hours of death (Go & Docot, 2021; *Department of Health Website*, n.d.). COVID-19 related deaths usually ended up with cremation, with little to no chance to hold funeral services. In addition, families and friends living a distance away did not have the opportunity to attend the service because of travel restrictions or community quarantines.

Few studies suggested that normal grief might develop into complicated grief (CG) during the COVID-19 pandemic (Eisma & Tamminga, 2020; Goveas & Shear, 2020; Eisma et al., 2021; Chuqian & Tang 2021). It is difficult to pinpoint a specific time when "normal" grieving becomes CG as each person's experience is different. The main distinction is that feelings of sadness or anger fade over time with normal grief, and people resume their daily habits. A person with CG may feel trapped, unable to recuperate or return to their previous life indefinitely. Grief is the typical response to the loss of something meaningful, like a job or a relationship, whereas CG is usually the result of someone's death (Shear et al., 2011).

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People who lost someone during the COVID-19 pandemic experienced higher grief levels and prolonged grief than those who lost someone before it (Eisma & Tamminga, 2020). In addition, bereaved individuals felt more insecure and preoccupied if they lost someone due to COVID-19 (Han et al., 2021). According to Vahdani et al. (2020), grieving can be prolonged, difficult, and even traumatic if mourning rituals are not performed, resulting in complicated grief characterized by maladaptive thoughts, sentiments, emotions, and behaviors that exacerbate grief. Furthermore, Zhai and Du (2020) found that neglecting the needs of grieving individuals may result in poor mental and physical health.

Most of these studies emphasized how normal grief might become complicated grief as a result of a COVID-19 related death. However, there is limited research discussing possible protective factors from pathological grief. Moreover, few if any studies have been conducted in the Philippines about understanding the grieving process of Filipinos and how they cope with grief, given that no intervention programs exist in the Philippines yet. Therefore, this study aimed to examine the potential mediating effects of Filipino coping strategies on the symptoms of complicated grief, along with psychological well-being. In addition, this study aimed to identify what coping strategies worked best for bereaved Filipinos for both COVID- and non-COVID-related deaths. This study aimed to answer the following research questions:

### **Research Questions**

1. Is there a significant relationship between the following? (a) Symptoms of complicated grief and coping strategies, (b) symptoms of complicated grief and psychological well-being, and (c) coping strategies and psychological well-being.
2. Do coping strategies mediate the relationship between symptoms of complicated grief and psychological well-being among bereaved Filipinos?

### **Methodology**

#### ***Research Design***

This study utilized a descriptive-correlational research design to look for relationships between variables without using a control variable. Through descriptive statistics, identifying coping styles as helpful or not was made possible. The ultimate goal of descriptive statistics is to find new meaning, explain what already exists, identify the frequency with which something happens, and categorize data (Walker, 2005). In addition, this study included the structural equation modelling (SEM) approach. It is a sophisticated statistical technique used in behavioral science that combines a measurement model and a structural model into a single statistical test (Hoe, 2008; Hox & Bechger, 1998). In SEM statistical models, paths represent the causal relationships—proposed relationships between variables representing causal and consequential constructs of a theoretical proposition (Lowry & Gaskin, 2014). The advantage of SEM is that it allows researchers to specify and estimate more complex path models, including intervening variables between the independent and dependent variables, and latent factors (Hox & Bechger, 1998). The researchers used a descriptive-correlational approach with SEM, as it intentionally aimed to explore the prospective relationships among the coping strategies, symptoms of complicated grief, and psychological well-being variables.

#### ***Population and Sampling Techniques***

The population for this research study were 200 Filipinos who were 18–67 years old and had experienced the death of a loved one during the COVID-19 pandemic. The age range was a natural outcome of the snowball sampling technique. Contacting respondents was via social media. The selection of participants was through a purposive sampling procedure, also known as judgmental, selective, or subjective sampling. It is a non-probability sampling technique that relies on the researchers' judgment to select the participants based on the characteristics of a population and the objective of the study. This type of sampling can be useful when researchers need to reach a targeted sample quickly, and sampling for proportionality is not the primary concern (Crossman, 2019).

Further, snowball sampling was used in this study. According to Sharma (2017), snowball sampling is a non-probability sampling technique in which the study participants recruit people they know to participate in the study. Thus, the number of participants seems to enlarge like a rolling snowball. This sampling technique is commonly used when the target population is difficult to approach.

### ***Instrumentation***

The researchers employed structured questionnaires as their instruments to collect data and help ensure the validity and reliability of the research study. The researchers utilized three (3) standardized questionnaires in this study: The Inventory of Complicated Grief (ICG), Coping Strategies Scale, and Psychological Well-being Scale (PWB).

#### ***Inventory of Complicated Grief (ICG)***

This instrument examined pathological grieving indicators such as anger, disbelief, and hallucinations. The test consists of 19 first-person statements that describe a client's immediate bereavement-related thoughts and behaviors. Internal consistency was excellent, with an alpha coefficient of 0.94. In the same study, the test-retest reliability was 0.80. This scale also has a clinical cut off point that has been well-validated. Clients with a score of more than 25 are at high risk of requiring clinical care.

The scale and verbal interpretation of the Symptoms of Complicated Grief had a 5-point Likert scale with responses ranging from *Never* (1) to *Always* (5), and verbal interpretations.

#### ***Coping Strategies Scale***

This measurement tool examined Filipinos' stress coping strategies and provides a coping dispositional profile that aids in coping behavior assessment. The measured variables are cognitive reappraisal, social support, religiosity, recreation, problem-solving, tolerance, emotional release, over-activity, and substance use. This scale's inter-item consistency adds to its reliability, and SPSS reliability analysis confirmed it. The degree of interrelatedness or homogeneity of items on a scale is inter-item consistency. The items in each domain represent the same coping strategy construct. High inter-item consistency implies high reliability. Construct validity uses confirmatory factor analysis. The Ways of Coping Questionnaire and COPE Inventory items in each Filipino Coping Strategies Scale domain was associated with the corresponding items in related areas of the scale. The correlations between the domains determine convergent validity. Pearson correlation demonstrated statistically significant correlations between the domains of the three coping measures. Positive correlations ranging from low to high confirmed the domain constructs' validity. The Filipino Coping Strategies Scale's overall Cronbach's alpha was .716.

The scale and verbal interpretation of Coping Strategies has a 4-point Likert scale, with responses ranging from *Never* (1) to *Always* (4), and verbal interpretations ranging from Not Utilized to Highly Utilized.

#### ***Psychological Well-Being Scale (PWB)***

This a theoretically based tool that measures many aspects of psychological well-being. It measures six aspects of well-being and happiness, but only 3 were used: namely, autonomy, personal growth, and self-acceptance. Researchers then reverse-coded 21 elements so that higher scores implied greater happiness, and then computed different subscale scores by adding all items in each subscale together. The test-retest reliability coefficients for a subsample of the individuals across six weeks were also high (.81–.88). The factor correlations in the pure six-factor model (in absolute values) ranged from moderate to substantial, .03 to .67. The shorter scales with 20-item parent scales usually have between .70 and .89 reliability. It includes positive and negative items on each scale (Ryff & Keyes, 1995 p. 720). The questionnaire was shortened to seven questions from an 18-item questionnaire and underwent a reliability study.

The scale and verbal interpretation for psychological well-being has a 7-point Likert scale with responses ranging from *Strongly Agree* (1) to *Strongly Disagree* (7), and verbal interpretations ranging from *Very Adequate* to *Very Poor*.

### **Ethical Considerations**

The Ethical Review Board of the Adventist University of the Philippines approved this study. The researchers guaranteed confidentiality to all participants. They informed the participants about the study's benefits, effects, and purpose. Participants' safety was valued, and no harm was done to them, whether psychological, physical, emotional, or mental. The informed consent form also included information on the population criteria. In the event of any unforeseen events, the researchers' phone numbers and emails were provided so that they could assist the respondents at any moment. The participants had the right to withdraw, and no information was used against them.

### **Statistical Treatment of Data**

To answer the main problem of this study, the researchers utilized means, standard deviations, frequency tables, Pearson correlation analysis, linear regression for descriptive analysis, and SmartPLS to analyze the data collected.

## **Results and Discussions**

### **Symptoms of Complicated Grief and Coping Strategies**

Table 1 presents the correlation analysis to answer the research question: Is there a significant relationship between the symptoms of complicated grief and coping strategies, symptoms of complicated grief and psychological well-being, psychological well-being and coping strategies?

**Table 1** *Correlation Between Symptoms of Complicated Grief and Coping Strategies*

Coping Strategies	Correlation with Complicated Grief	
	<i>r</i>	<i>p</i>
Cognitive Reappraisal	-.187**	.008
Social Support	-.014	.843
Problem Solving	-.191**	.007
Religiosity	-.085	.230
Tolerance	.022	.761
Emotional Release	.215**	.002
Overactivity	.184**	.009
Recreation	-.123	.082
Substance Use	.236**	.001

\*  $p = .05$  (2-tailed), \*\*  $p = .01$  (2-tailed).

Table 1 indicates that when the bereaved Filipinos used coping strategies, specifically cognitive reappraisal and problem-solving, they were less likely to experience CG. It also implies that when the bereaved Filipinos use coping strategies, specifically emotional release, over-activity, and substance use, they are more likely to experience CG.

In general, positive associations were found between putative maladaptive emotion regulation strategies (e.g., emotional avoidance) and complicated grief, and negative associations were seen between putative adaptive emotion regulation strategies (cognitive reappraisal, acceptance, and problem-solving) and complicated grief (Eisma & Stroebe, 2021).

Based on a qualitative study conducted by Chuqian and Tang (2021), another participant was overworked and abusing alcohol to avoid remembering his loss. Psychological characteristics linked to the deceased and contextual factors appeared to be risk factors. Moreover, CG has sensible emotional releases such as anger and loneliness (Stroebe et al., 2007). Furthermore, individuals who used substances were more likely to suffer complicated grieving later in life, especially if their substance intake escalated prior to the loss (Parisi et al., 2019).



### ***Symptoms of Complicated Grief and Psychological Well-Being***

Table 2 presents the correlation analysis to answer the research question: Is there a significant relationship between the symptoms of complicated grief and coping strategies, symptoms of complicated grief and psychological well-being, psychological well-being and coping strategies?

**Table 2** *Correlation Between Symptoms of Complicated Grief and Psychological Well-Being*

Psychological Well-Being	Correlation with Complicated Grief	
	<i>R</i>	<i>p</i>
Autonomy	-.087	.219
Personal Growth	-.186**	.009
Self-Acceptance	-.171*	.015

\*  $p = .05$  (2-tailed), \*\*  $p = .01$  (2-tailed).

Table 2 implies that when bereaved Filipinos have personal growth and self-acceptance, they are less likely to experience CG.

The grieving process in some studies led to Personal Growth Theory, where personal growth refers to the process of being constructively transformed by a traumatic incident, as opposed to a sense of accomplishment or contentment with returning to normalcy (Hogan et al., 2010). Furthermore, individuals who have reached acceptance as the final stage of grieving can live in peace with their loss (Ristriyani et al., 2018).

### ***Coping Strategies and Psychological Well-Being***

Table 3 presents the correlation analysis to answer the research question: Is there a significant relationship between the symptoms of complicated grief and coping strategies, symptoms of complicated grief and psychological well-being, coping strategies and psychological well-being?

Table 3 below shows that among the coping strategies subscale, seven have a significant correlation with the psychological well-being of the bereaved Filipinos. However, the correlation differs in each aspect of psychological well-being, namely, autonomy, personal growth, and self-acceptance.

**Table 3** *Correlation Between Coping Strategies and Psychological Well-Being*

Coping Strategies	Correlation with Psychological Well-Being					
	Autonomy		Personal Growth		Self-Acceptance	
	<i>r</i>	<i>p</i>	<i>R</i>	<i>p</i>	<i>r</i>	<i>p</i>
Cognitive Reappraisal	.307**	.000	.347**	.000	.475**	.000
Social Support	.158*	.026	.343**	.000	.391**	.000
Problem Solving	.319**	.000	.390**	.000	.425**	.000
Religiosity	.138	.051	.368**	.000	.488**	.000
Tolerance	.136	.056	.289**	.000	.140*	.048
Emotional Release	.057	.422	-.009	.898	-.002	.982
Overactivity	-.042	.557	-.154*	.029	-.184**	.009
Recreation	.280**	.000	.453**	.000	.459**	.000
Substance Use	.061	.389	-.020	.776	-.001	.994

\*  $p = .05$  (2-tailed), \*\*  $p = .01$  (2-tailed).

The results in Table 3 indicate that when bereaved Filipinos used coping strategies, specifically cognitive reappraisal, problem-solving, social support, and recreation, they were more likely to have autonomy, personal growth, and self-acceptance. It also implied that when bereaved Filipinos used religiosity and tolerance as their coping strategies, they were more likely to have personal growth and self-acceptance, while the use of over-activity implied that they were less likely to have personal growth and self-acceptance.

Concerning the impact of coping strategies on psychological well-being, Halstead et al. (2017) asserted that individuals who use problem-solving and social support coping strategies in dealing with stressors may incur fewer psychological costs. This may reflect the good faith and religiosity that are highly prevalent in our community. Additionally, participants who displayed high levels of reappraisal were found to have reported less anger than those who did not (Juang et al., 2016). In the study of Iwasaki et al. (2002), recreation and leisure activities reduced self-reported levels of stress and contributed to both physical and mental health in various contexts and among individuals. Some studies indicated the ability to accept uncertainty, which could be due to an increased tolerance of uncertainty when living with a long-term health problem (Kurita et al., 2013).

However, individuals who habitually are overactive may contribute to their own psychological distress, along with their unwillingness to rely on others for support (Andrews et al., 2015), and poorer psychological health (Callaghan & Morrissey, 1993; Kashdan & Rottenberg, 2010).

The results in Table 4 indicate a significant direct effect of grief on coping strategies and coping strategies on psychological well-being. It demonstrated that the more symptoms of complicated grief one experiences, the less effective are the coping strategies. However, less effective coping strategies lead to lower psychological well-being. This is consistent with previous studies suggesting that coping strategies could lead to lower psychological well-being (Peña & Ritzer, 2017; Shambraw et al., 2021).

**Table 4** *Mediation Analysis Results on the Role of Coping Strategies on Complicated Grief and Psychological Wellbeing*

Effects	Coefficients	t	p	Interpretation
Direct Effects				
CG -> PWB	-.164	1.108	.268	Not Significant
CG -> CS	-.646	2.240	.025	Significant
CS -> PWB	.763	6.273	.000	Significant
Total Effect				
CG -> PWB	-.657	2.283	.023	Significant
Indirect Effect				
CG -> CS -> PWB	-.493	2.159	.031	Significant; Full Mediation

*Legend.* CG – Complicated Grief, CS – Coping Strategies, PWB – Psychological Well-Being

Further, the total effect of complicated grief on psychological well-being was significant. However, excluding the mediating variable, the (direct) effect of complicated grief on psychological well-being was not significant. Finally, the indirect effect of complicated grief on psychological well-being through coping strategies was significant. This shows that coping strategies fully mediated the relationship between complicated grief and psychological well-being.

The overall results indicate that complicated grief did not directly affect psychological well-being. Instead, higher levels of complicated grief could lead to less effective coping strategies, which would in turn result in a lower level of psychological well-being. It further suggests that more effective coping strategies do not lead to higher psychological well-being alone. Instead, it is necessary to have lower levels of complicated grief to utilize good coping strategies that lead to higher levels of psychological well-being.

This study provides new empirical evidence that complicated grief symptomology could make a bereaved person use unhealthy coping strategies. In contrast, a cross-sectional study suggested that specific coping strategies caused by closeness to the deceased led to complicated grief. Approach coping was associated with symptoms of complicated grief (Buqo et al., 2020). In addition, Schnider et al. (2007) also suggested that avoidant emotional coping predicted symptomology of complicated grief. Avoidant coping can be beneficial, but it could also become dangerous if it persists and negatively impacts the bereaved person's general wellness. Grieving individuals would therefore benefit from having to process the pain properly, and allow themselves to face the present moment rather than being stuck in the past forever.

Overall, the statistical analysis performed in this chapter suggests that the hypotheses were rejected except for the second hypothesis. The findings emphasized a relationship between coping strategies, symptoms of complicated grief, and psychological well-being, with significant differences in terms of the relationship and age of the deceased loved one, and the age and gender of the bereaved, but not the type of death. Additionally, only coping strategies were found to predict psychological well-being. Finally, the study found that coping strategies fully mediated the relationship between symptoms of complicated grief and psychological well-being.

## Conclusions

The COVID-19 pandemic disrupted many living patterns, including the grieving process, which led to increased incidences of complicated grief. Despite that, this study found that bereaved Filipinos had lower levels of complicated grief symptomology and higher levels of psychological well-being. In addition, this study confirmed that Filipinos commonly use adaptive coping strategies in times of grieving. Further, the results supported the notion that the higher the psychological well-being, the lower the level of complicated grief symptomology. Results also show that coping strategies were associated with higher levels of either psychological well-being or complicated grief symptomatology.

Coping strategies vary in terms of gender, age, and relationship. Interestingly, the immediate family of the deceased used more efficient coping strategies than friends and other family members despite higher complicated grief symptomology. In comparison with Bowlby's attachment style theory, the immediate family could still utilize adaptive coping strategies regardless of attachment styles. Surprisingly, there were no differences between COVID and non-COVID-related deaths. Contrary to our assumption, COVID-related deaths were not inclined to higher levels of complicated grief symptomology.

Moreover, the results demonstrated that coping strategies predict psychological well-being. That is, bereaved Filipinos who use healthy coping strategies will also be high in psychological well-being. Finally, as the results show full mediation of coping strategies, it is appropriate to conclude that coping strategies promote higher psychological well-being. This implies that grief intervention programs should assist the bereaved in using healthy coping strategies. For instance, mental health professionals could help alleviate the symptoms of prolonged grief disorder by improving the problem-solving skills of the bereaved, improving their ability to accept their emotions and the situation, and using therapies that aim to reconstruct their thought patterns.

Nonetheless, generalizability of these findings might be limited due to the nature of the non-probability sampling methods used, which may have resulted in an under-representation of some coping strategies. In addition, the participants were primarily female and young adults, which could have affected the results. Despite its limitations, this study still contributes to the existing knowledge that bereaved Filipinos during the COVID-19 pandemic had high psychological well-being due to the coping strategies they used, and not because of a lack of complicated grief symptoms. Thus, this study highlights the importance of coping strategies as effective interventions for bereaved Filipinos to enhance their psychological well-being during their grieving periods. Future researchers are encouraged to increase the sample size or replicate the study with different respondents and additional variables in different locations or environments. To increase quality and reliability, they could employ a mixed-methods strategy. In addition, an interview approach should be included in the instrument.

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## Obscure Biblical Allusions in Robert Frost's "Mending Wall"

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### Abstract

Allusions are implied or indirect references that give writing aesthetic value. Robert Frost used allusions in his poems, but his Biblical allusions in the poem, "Mending Wall", have not yet been studied in detail. Perhaps the reason is that they are obscure rather than overtly present in the poem. The purpose of the study was to analyze this poem's obscure Biblical allusions through literary research. Numerous obscure Biblical allusions were discovered, including the poem's title "Mending Wall", which alluded to God's salvation as a mending process. "He is all pine" alludes to wood used to make the cross for the Crucifixion of Christ; "apple orchard" refers to the Garden of Eden; "good neighbor" to Jesus' command to love one's neighbor in the parable of the "Good Samaritan;" "loaves" to the miracle of loaves and fishes; and "Bringing a stone ... In each hand" denotes the tablets of the Ten Commandments carried by Moses. Thus, all these references used in Frost's poem have Biblical affiliations and represent the obscure Biblical allusions hidden in this poem.

**Keywords:** *Biblical allusion, Frost, poetic analysis, mending wall*

### Introduction

Robert Lee Frost, or simply Robert Frost, began his poetry career as a teenager and began to teach at a school when he was seventeen years old. Frost had only a visual memory of his first small school and teaching experience in the hills near Salem, New Hampshire, early in the 1900s. While the kids did their work in their seats, he liked to sit at the window and draft his poems while gazing out into the pine trees (Newdick, 1936).

The opening poem of Frost's second collection of poetry, *North of Boston*, which was released in 1914, is named "Mending Wall." Like the majority of the poems in this book, "Mending Wall" is a tale set in a rural New England community. It talks about building a barrier between the properties of two New England farmers each spring. Every year, they pondered how the wall was breached (Sethi, 2018).

'Boston' is a representation of many things that have gone into the formation of the American consciousness both as a city and as a name, and its influence has extended far beyond its immediate surroundings. Boston has had a significant impact on America for about three centuries as the spiritual capital of the New England states, as the birthplace of the American Revolution and the nation, and as the first hub of American culture (Lewis, 2022).

This poem is built around the lives of two neighbors who met mainly in the spring of every year to mend their wall. For the speaker of the poem, Frost himself, this exercise of mending is more of a playful thing than a serious one. Nevertheless, they took this activity to not only mend their wall, but also to stitch together their relationship.

The poem uses three major allusions. The speaker of the poem explains the task of fixing the wall in the first few lines, picking up the broken stones and balancing them on the wall. It is almost a yearly tradition. Every year, the speaker and the neighbor must cope with the wall's damage from the previous year because no repair is ever truly permanent. As a result, the description of the labor closely matches a significant tale from Greek mythology: the Sisyphean Myth (Thomières, 2011). The other two allusions are the "elves," and 'Good fences make good neighbors'—an age old saying based on a quote by Henry David Thoreau (MacEnulty, 2017).

In other words, many researchers have pointed out the historical and mythological allusions in the poem, but not the Biblical allusions. Thus, there is a gap in the literature about "Mending Wall" that is related to its Biblical allusions. Therefore, this research paper attempts to identify the obscure Biblical allusions that are present in the poem.

The methodology employed in this study is literary research. It is the scientific, critical study of literature, usually for analytical purposes.

### Literature Review

Grace (1939) considered each poem from the standpoint of the quantity and caliber of the syntheses it contained in order to analyze and assess it. Their synthesis is a phrase that is both potent and distinctive, in which the individual words are obscured by the whole of which they are a part. No word can be changed or removed without causing the synthesis to fail. In other words, the synthesis—the irrevocable union of one word, image, or sound with one or more other words, images, and sounds—is the place in any particular line where the poetry is most concentrated.

Allusion is a very important device in literature, and that makes it very difficult for poetry to survive without it. M. H. Abrams, as cited by William Irwin, defines allusion as “a brief reference, explicit or indirect, to a person, place, or event, or to another literary work or passage (Irwin, 2001).” Irwin further pointed out that allusions are mainly overt, but sometimes they are covert; they may even be concealed. For instance, it is commonly known that Alexander Pope, one of the most well-known English poets of the early 18th century, attempted to hide many of his allusions; otherwise, his intended audience would have been somewhat smaller. However, allusions do not have to be subtle (Irwin, 2001). Irwin (2001) also asserts Michael Leddy’s belief that allusion can sometimes be so subtle that only the author is aware of it, even if others should be able to spot it in theory. It can be isolated and pointed on a micro level.

The above explanation of the creative use of allusions by many writers is also applicable to Frost. Frost was a master artist who created classics with words that penetrated human souls regardless of distance, culture, and norms. Moreover, “Frost’s poems are so marvelously intricate that they reward attention to details of imagery, allusion, and tone (Pack, 2003).”

As a matter of fact, Frost’s poetry is rife with irony and complex undertones. When a poem—or all of his poetry—seems to have been understood by the reader, the poet/magician pulls the rug out from under him, and the reader starts to realize that he has been duped. Despite using very straightforward language, Frost’s poem “After Apple-Picking,” which was first published in his book *North of Boston* in 1914, is symbolic in meaning. Frost conceals the more obvious meanings of his poems using literary tactics like symbolism, imagery, dramatic setting, and—as Frost himself put it—“sound of sense.” The vague meanings and allusions to various subjects in Frost poems like “Mending Wall” and “Come In” are frequent (Tebbe, 1997).

His highly acclaimed dramatic narrative poem, “Mending Wall,” showcases his exceptional creativity. Frost wrote this poem in early 1913 (published in 1914) after he had been in England for about a year. According to John Evangelist Walsh and Douglas Wilson, as paraphrased by Sanders (2007), Frost’s excursion to Kingsbarns, Scotland, in August of that year was inspired by the stone walls he saw while out walking with the British academic J. C. Smith. Frost was drawn to Smith at once and opened up to him about the Derry farm, from which he had been gone for four years, as well as about his upcoming second book. After arriving back in Beaconsfield, Frost wrote to Sidney Cox about the stone walls, using the local term for them—“dry stone dykes”—and saying just, “I liked those,” a terse statement given their apparent significance.

Readers appreciate Frost’s “Mending Wall.” Though he was a modern poet, he used blank verse in this to win his readers’ admiration. The speaker in this poem is opposite the wall. The speaker’s older neighbor is separated from him by a wall. While the neighbor sees this wall as a symbol of progress, he views it as unnecessary. (Latif et al., 2022).

Frost juxtaposes two individuals who appear to be very different on either side of a crumbling stone wall, and then assigns them the responsibility of fixing the damage. One of these characters, who is the speaker of the poem, is not sure if he wants to fix the wall each year, or if he just does it to spend time and talk with his neighbor while also having a philosophical conversation with those listening to the poem. He seemed to have a tremendous desire to remove the obstacles standing in the way of the complete union of space and thoughts (Luce, 2000).

The 'wall' in the poem stands for the duality of life; it is the subject of both destruction and creation, which are interdependent. Here, destroying something does not always mean that it is a negative thing if it inhibits decent neighbors from getting along, just as creating something that alienates people from one another is not always a good thing. Thus, Frost's wall, which simultaneously divides and brings two individuals together, is a representation of ambiguity (Srinivasarao, 2013).

The neighbors get together annually, and they rebuild the wall. Hard and impenetrable boulders make up the wall. The speaker in Frost's poem imagines them as loaves and balls—bread to be shared—and toys—another type of outdoor game—to be played together. Frost contends that the wall, with all of its symbolic implications, serves as the framework for healing the relationship between these estranged men (Perlow & Furman, 2017).

It is quite clear that the entire poem is about walls in the metaphorical sense of dividing people. However, the wall that divides the speaker from his neighbor is also a wall that mends, indicating that it serves both a positive and a negative purpose. The speaker says: "Before I built a wall I'd ask to know / What I was walling in or walling out" (Lathem, 1969, p. 34). The typical focus of criticism of "Mending Wall" is about what is being walled off in an absurd ritual, yet what is being walled in is just as significant to the poem (Arms & Henry, 1979).

In intellectual and political debate, lines from Frost's well-known poem "Mending Wall" are frequently used to frame discussions of boundaries. Some have used passages from the poem to defend the building of physical barriers, while others have challenged this notion (Madsen & Ruderman, 2016).

The poem is also rich with symbolism, especially that of the apple tree and the pine tree. The apple tree is a representation of both guilt and atonement in the Christian tradition. In an 18<sup>th</sup>-century hymn, the tree that Eve was not permitted to eat from in the Garden is now referred to as "Jesus Christ, the Apple Tree." The cedar, a member of the pine family, is connected to God's worship in the Bible; Solomon's temple was constructed from Lebanon cedars (NRSV, 1 Kings 5) (Phillips, 2020). "He is all pine and I am apple orchard." (Line 24)

"The verse above is symbols. In this line, He is all pine and I am apple orchard the symbol is represented by words all pine and apple orchard. The narrator uses these words to symbolize the dissimilarity between his neighbor and his selves. Based on both their characteristics, pine is inalterable but apple is useful. It means that the narrator is better than the neighbor" (Rinda, 2020).

Like many other great poets, Frost's poems also exhibit simple layers but at the same time are multilayered and complex. Even this poem, "Mending Wall" is quite heavy and complex. "The first surface meaning, the anecdote, the parable, the surface meaning has got to be good and to be sufficient in itself. If you don't want any more, you can leave it at that" (Cook, 1976).

Frost used simple words with a multipurpose effect. "Frost's name for the phenomenon was *synecdoche*—the name for the part signifying the whole, as in "hands" for "sailors" or "wave" for "sea" (Quinn, 1999). Many of Frost's poems ask a question and offer two opposing viewpoints. In some, Frost uses an allusion to skew the argument in favor of one point of view. However, the allusion may be so subtle that the reader does not notice it, giving the impression that the poem is conflicted because the poet has not made up his mind about the issue (Selvi & Malar, 2021).



### ***The Bible and Robert Frost's poems***

In his well-researched book, Robert Faggen (2008) says, "Robert Frost knew the Bible well, an unsurprising fact given that he was raised by a Swedenborgian<sup>1</sup> mother in the late nineteenth century when Biblical literacy would still have been the rule, not the exception" (p. 151). Other excerpts from Faggen's book also support the Biblical background of Frost.

"Frost played deeply with Biblical stories.... Be that as it may, the Bible is in Frost's work, and his way of Biblical interpretation needs to be gone into, if not explained...." *Wild Grapes*,"...*"After Apple-Picking,"*...*"Mending Wall,"*... are just some of the poems haunted by Biblical stories and proverbs" (p. 151).

Frost's attitude toward work and the environment is connected to and occasionally expressed through the story of the Fall, which is evidently referenced in more poems than just those that do so explicitly (Parfitt, 1996). As researchers, our deep interest in the Bible and its influence in literature encouraged us to look at Frost's "Mending Wall" in a different way. Moreover, learning this poem as students and teaching it in the classroom helped us to unravel the hidden Biblical allusions. In order to identify the allusions, we made a list of all the terms that evoked a Biblical connection. After that, we recorded the specific Bible events associated with them, and then analyzed how the obscure allusions pointed to Biblical events.

### **Findings/Results**

Many great writers of English literature including Spenser, Shakespeare, Milton, Tennyson, and Browning used Biblical allusions. Without them, much of the charm and the worth of their poetry would be gone. So did American authors including Robert Frost. A detailed analytical study of Frost's "Mending Wall" clearly illuminated several significant, though obscure, Biblical allusions. All the suggested allusions are positioned creatively in different lines by the poet.

#### **1. "Mending Wall"**

The poem's title has "Wall," a common motif found in the Bible. The Bible has some important and fascinating stories related to walls. Joshua's effort to destroy the walls of Jericho and Nehemiah's efforts to rebuild the walls of Jerusalem are prominent examples that are metaphoric and symbolic. With reference to Biblical stories, walls are a symbol of protection, safety, salvation, and strength. For example, Samuel recounts that David's men "were a wall to us both by night and day, all the time we were with them keeping the sheep" (1 Samuel 25:16, 2010).

As quoted by Daniel L. Dreisbach (2007) from the Dictionary of Biblical Imagery, "walls become a symbol of salvation itself" (p. 924). Besides their metaphoric and symbolic significance, Frost uses walls as an obscure allusion to God's salvation. This can be further established when the reader delves into "Something there is that doesn't love a wall, / That wants it down. "I could say "Elves" to him" (Lathem, 1969, 34). "Elves" are considered as spirits that can bring diseases and destruction. In the poem, they are the ones who don't like walls and thus the "mending" goes on. Thus, "Mending Wall" alludes to the salvation of God as a work in progress to save and protect God's people despite "Elves" working against it.

Even though one perspective establishes "mending wall" as a Biblical allusion of God's protection, there are other interpretations that treat the "wall" as a metaphor or symbol of entirely different things.

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<sup>1</sup> Several related Christian denominations with a congregational system of ministries and churches connected by a central leadership council; they have been influenced by the scientist and mystic Emanuel Swedenborg.

## 2. "Pine" and "Apple Orchard"

Trees have prominent symbolic significance in the Christian theology. Buckley (2017), quoting Mircea Eliade, stated that

Christians view Jesus Christ, a historical figure who is frequently represented by the wooden cross on which he died, as their sacred center rather than a specific location. However, in Christian theology, the tree also represents both Adam's fall in the Garden of Eden and salvation via Christ's crucifixion. The tree is considered a profane emblem of spring and renewal. The tree has come to represent human redemption and an extension of the cross in Christian literature.

As a New England farmer, Frost's daily life included both apples and pines. However, Frost, a scholar of classical and biblical literature, also considered his poems as dialogues with the entire canon of religious and secular literature. He emphasized the qualities of the two farmers in the "Mending Wall" by using the symbolism of the apple and the pine. He also employs it to mimic and refute a key passage, the conversation between Eve and the serpent in the Garden of Eden (Phillips, 2020).

"Not satisfied with apple tales, legends and symbols, many people in the Middle Ages began searching for the Garden of Eden and its infamous apple tree.... The apple began appearing in devotional pictures, often mythical depictions of the Garden of Eden, in Western art in the Middle Ages." (Janik, 2011).

In Lines 24–26 (Lathem, 1969, p. 33) of the "Mending Wall" Frost writes,

"He is all pine and I am apple orchard / My apple trees will never get across / And eat the cones under his pines, I tell him." If the apple tree is a temptation to life, the pine forest is a temptation to death," according to Phillips (2020).

This establishes the researchers' assumption that a "pine" tree was used in making the cross. Similarly, presentation of two trees alludes to the two trees in the Garden of Eden. One tree was the Tree of Life, and the other was the Tree of the Knowledge of Good and Evil (Genesis 2:8-9, 2010).

## 3. "Good Neighbors"

Love is the foundational principle that keeps neighbors as "good neighbors." That's why in the Gospel of Matthew 22:37–39 (Matthew 22:37–39, 2010) Jesus says, "'You shall love the LORD your God with all your heart, with all your soul, and with all your mind.' This is *the* first and great commandment. And *the* second is like it: 'You shall love your neighbor as yourself.'

A *good neighbor* is always and should be interested in the affairs of his/her neighbor. By taking care of the neighbor, the caretaker would become a "good neighbor." That's what Jesus Christ explained through the parable of the "Good Samaritan," and this term is well known in humanitarian and secular circles beyond the Christian religion.

Frost's poem is also a reflection of the universal need for limits, a reflection on how to sustain societal harmony, and a philosophical investigation into who our neighbors might be, both ethically and psychologically. The narrative of two neighbors is presented; they get together every spring to fix a deteriorating stone wall between them, and the poem distinguishes between two methods based on their characteristics. One focuses on the ceremonial act of mending this shared work, using a falling wall as an opportunity for creativity and play, and one feels compelled to keep using a father's tired cliché (Hinrichsen & Dempsey, 2011).

The opportunity to mend the wall can be considered as an opportunity to mend the neighborly relations. Frost's next-door neighbor had an intriguing viewpoint on this yearly tradition of wall-mending; "good fences make good neighbors." He might have noticed something in that yearly tradition that we have missed. Frost believed that his apple trees would never wander into his neighbor's pine forest without permission and consume its pinecones. He made fun of his neighbor by using this absurd image. His neighbor, though, had not argued; "good fences make good neighbors," he merely retorted. Frost continued to walk with his neighbor alongside the wall. To ensure that two herds of cattle are kept apart, you might require sturdy fences. On this land, however, there were no cows. He only says, "good fences make good neighbors" (Robeck, 1999).

According to Copland and Peat (2016), Frost attests that neighbors can be both wonderful and unpleasant. Comparing the concept of the neighbor to two other categories of human relationships—family and friendship—helps us to better comprehend its distinctive features. The concept of family conjures up permanent and legally binding blood ties or social contracts. Contrarily, friendship is a non-contractual relationship. Additionally, it is founded on the acceptance of diversity while imagining connections across that diversity. The neighbor paradigm allows for even more diversity than friendship because neighbors don't always look for kinship, but rather coexist in an uneasy, occasionally hostile, occasionally helpful nearness. Neighbors form a temporary, open, and non-binding community.

Thus, the use of “good neighbor” by Frost is a clear indication of its use as a Biblical allusion.

#### **4. “Loaves”**

The use of the first literary device in the poem is in Line 17 in the form of a metaphor. Stones are compared to the “loaves”, and this evokes the miracle of loaves and also the breaking of bread by Jesus in the Bible. Van Iersel, as quoted by van Aarde (1994), “regards the variation in the wording ‘He gave thanks and broke the loaves’ (Mk 6:41) and ‘When he had...given thanks, he broke them’ as of fundamental importance. If we accept, as most scholars do, that this ‘central formula’ is an allusion to the celebration of communion in the early church.”

Van Aarde (1994) further noted that the preceding result is undeniably true when Mark 6:41 and Mark 8:6 (the language of the twofold narrative, respectively), are compared with Mark 14:22 and 1 Corinthians 11:23–24 (the words of the Markan and Pauline narratives of the establishment of communion). The stories about the multiplicity of loaves were not connected to the custom of communion by Mark. Before Mark, it was present in the transmitted history. John's association of the miracle of the multiplicity of loaves (John 6:1–15), the link to the Old Testament story of the manna from heaven (John 6:22–40), and the custom of communion further supports this inference (John 6:41–59).

Therefore, “loaves” is another obscure Biblical allusion used by Frost. Furthermore, in Line 18, he mentions that “we have to use a spell to make them balance.” The use of “spell” is an allusion to the prayer of Jesus that multiplied the loaves to feed the listeners and satisfy their hunger. Thus “loaves” gets firmly established as an obscure allusion in the poem.

#### **5. “In Each Hand, Like an Old-stone Savage Armed”**

This line from the poem can evoke several thoughts in readers. Readers subconsciously suppress the unpleasant and out-of-place imagery of the “stone-armed savage” and the “yelping dogs” because they seem out of place in the pastoral setting of the poem. These pictures do not go with the typical notion of a first reading of the poem or the typical perception of the poet. Maybe erecting walls is both a savage invention and a pitiful first step away from savagery (Dubinsky, 1995).

Ahmed and Al-Gobaei (2013) reflected on Frost's lines from “Mending Wall” that talk about ‘The neighbor resembling a Stone Age savage when he is carrying stones and is walking along the wall. In this dramatic monologue, the narrator poses inquiries and then he responds to them.’

This dramatic monologue, as part of visualization, can also allude to Moses, the Bible hero carrying the two stone tablets with Ten Commandments and reaching the people of Israel. Moses got a savage look especially after seeing the Israelites worshipping the golden calf. Exodus 32:19 (2010) reads, “So it was, as soon as he came near the camp, that he saw the calf *and* the dancing. So Moses' anger became hot, and he cast the tablets out of his hands and broke them at the foot of the mountain.”

#### **Discussion**

For English poetry analysts, Frost's poems are an interesting mix of challenge and adventure. This paper shows that a treasure trove awaits anyone willing to take up the challenge. Thus, the present study researched and analyzed the obscure Biblical allusions in Frost's “Mending Wall.”

Works of poetry are not just a simple literary emancipation, but a storehouse of literary creativity that opens new chapters every day. In that context, Frost's "Mending Wall" still holds valuable treasures. The use of Biblically connected words, phrases, or events like "Mending Wall," "loaves," "pine," "apple orchard," "good neighbors," and "in each hand, like an old-stone savage armed" are all seen to be Biblical allusions used by Frost. This was possible because of previous studies on the meaning of allusion; the Biblical allusions found in Frost's poems are similar to the literary works of other writers. Because Frost's poems are 'marvelously intricate and they reward attention to details of allusion' (Pack, 2003), "Mending Wall" also has 'allusions to various subjects' (Tebbe, 1997).

Therefore, this poetic analysis may establish that the title "Mending Wall" is an obscure reference to Joshua's effort to destroy the walls of Jericho, Nehemiah's efforts to rebuild the walls of Jerusalem, and also "wall" as an allusion to God's protection as established by Dreisbach (2007). "Loaves" used as a metaphor in the poem is a clear allusion to the feeding of the five thousand, and also an allusion to the 'celebration of communion in the church' (van Aarde, 1994). This "communion" Frost undeniably desired to establish with his neighbor. The next obscure Biblical allusions are "Pine" and "Apple Orchard;" these two allusions are connected to the two trees in the Garden of Eden. One was the Tree of Life and the other was the Tree of the Knowledge of Good and Evil found in the book of Genesis. Another major Biblical allusion is the "Good Neighbors." Even though "Good fences make good neighbors" was not original with Frost, it was popularized through his poem. As an allusion, "Good Neighbor" clearly alludes to the parable of the "Good Samaritan" told by Lord Jesus Christ. The final allusion is in Line 40 of "Mending Wall" that says, "In each hand, like an old-stone savage armed (Lathem, 1969, p. 34)." This dramatic monologue helps readers to visualize the Biblical character Moses carrying the two stone tablets with Ten Commandments and reaching the people of Israel. Especially, Moses had a savage look on his face after seeing the Israelites worshipping the golden calf (Ex. 32:19, 2010).

These findings may add to previous studies done regarding various overt and covert Biblical allusions in many items of English literature. Nevertheless, the researchers also think that some words, phrases, and ideas as Biblical allusions from the poem "Mending Wall" may need further study to fully establish them.

## Conclusion

Robert Frost has authored a vast body of poems, some of which concentrate more on the concepts of nature and death, while others have a more overtly religious bent. Particularly, Frost's early upbringing in the Christian faith by his mother influenced his poetry to a certain extent; this is evident in the use of Biblical imagery, motifs, and symbols in several of his poems. For example, a poem entitled "Astrometaphysical (Lathem, 1969, p. 388–389)" delves deeply into concepts of the sublime with its rich descriptions of nature and the power of nature. In terms of religious interpretation, this brief poem has a lot going on. It begins with the speaker openly addressing God and expressing love for the sky.

Similarly, "Mending Wall"—true to its name—is still "mending" relations in politics, between countries, and even between ordinary people, and it also reveals its metaphysical qualities. Moreover, this great work of poetry encouraged the researchers to study and understand how Frost artistically placed obscure Biblical allusions. Thus, the identification of "Mending Wall," "Pine" and "Apple Orchard," "Good Neighbors," "Loaves," and "In each hand, like an old-stone savage armed" as Biblical allusions in the poem will enrich English literature. Moreover, the findings of this study help us to understand the metaphysical elements of Frost's poetry, and the beauty of Bible as a masterpiece that has been inspiring writers of all generations to freely allude to its characters, events, and ideas.

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Paper Section	Recommended Tense	Example
Literature review (or whenever discussing other researchers' work)	Past Present perfect	Quinn (2020) presented Since then, many investigators have used
Method	Past	Participants completed a survey
Description of procedure	Present perfect	Others have used similar methods
Reporting results	Past	Results were nonsignificant Scores increased Hypotheses were supported
Discuss implications of results	Present	The results indicate
Presentation of conclusions, limitations, future directions, etc.	Present	We conclude Limitations of the study are

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