

The Relationship between Preschool Teachers'
Knowledge and Attitudes/Beliefs
towards Sexual Learning for Preschool Children in Malaysia
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PRESCHOOL TEACHERS AND SEXUAL LEARNING

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ESTHER KONG SING YII

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Approval Sheet

This research paper attached here to, entitled 'The Relationship between Preschool Teachers' Knowledge and Attitudes/Beliefs towards Sexual Learning for Preschool Children in Malaysia' prepared and submitted by Esther Kong Sing Yii in partial fulfilment of the requirements for the Bachelor of Early Childhood Education (Hons) is hereby accepted.

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Declaration

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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Abstract

Sexual learning (SL) is not widely implemented in the context of Malaysia preschools. This research paper attempted to study the relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children in Malaysia. It was hoped to raise awareness among preschool teachers towards the importance of implementing SL and address the knowledge gap about SL from teachers' perspectives. Albert Bandura's self-efficacy theory was applied to the study. It was proposed that the knowledge and attitudes/beliefs would each contribute to the teachers' self-efficacy and lastly impacted the action they take upon sexual learning. Quantitative research method and correlational design was applied. 90 Malaysian preschool teachers were recruited through convenience sampling method to answer the 'Questionnaire on Young Children's Sexual Learning'. The finding indicates there is a significant moderate, positive correlation between level of knowledge and attitudes/beliefs among preschool teachers towards young children's SL ($r_s=.438$, $p<.001$). This result showed that as knowledge increases, attitudes/beliefs increase and vice versa. Descriptive analysis revealed that Malaysian preschool teachers exhibit a low level in knowledge ($M=4.38$, $SD=3.51$) and a neutral to slightly positive attitudes/beliefs ($M=89.30$, $SD=10.30$) regarding SL for preschool children. Inferential analysis revealed that as knowledge increases, attitudes increase and vice versa. These two variables have considerable influence upon each other. Teachers' level of knowledge and attitudes/beliefs can be improved by providing SL-related trainings and suitable resources as well as support. As recommendations, qualitative or mixed method approach is preferred over quantitative method to gain a deeper insight into teachers' perspective. Next, random sampling size is suggested for obtaining a large sample size efficiently to increase the reliability of the results.

Keywords: Sexual learning, preschool teachers, knowledge, attitudes/beliefs, preschool children

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List of Abbreviations

JKM	Jabatan Kebajikan Masyarakat
MOE	Ministry of Education
NPSC	National Preschool Standard Curriculum
PEERS	Pendidikan Kesihatan Reproduksi dan Sosial
SE	Sexuality education
SL	Sexual learning
WHO	World Health Organization

Chapter I

Introduction

Introduction

Present research explores the relationship between knowledge and attitudes/beliefs of preschool educators regarding sexual learning (SL) among preschool children in Malaysia. This chapter provides a comprehensive examination of the background of study, problem statement, research objectives, research questions, research hypothesis, significance of the study, as well as conceptual and operational definitions of terms used in this research.

Background of Study

SL is an umbrella term encompassing the acquisition of knowledge and understanding about various aspects of sexuality. The learning takes place through formal and informal channels, including teachers, parents, peers, media, personal experiences, and notably, in the context of this paper, preschool teachers. However, sexuality education (SE) occupies a significant portion of published works in the field. While SL is a lifelong journey that delves through an individual's life, SE stands as a distinct yet interconnected concept. Unlike SL, SE is a structured form of learning typically delivered within formal settings by trained professionals. The primary emphasis within SE lies in cultivating attitudes, knowledge, and skills pertinent to sexuality (Chairilsyah, 2019). Despite their differences, SL and SE are intricately linked, both contributing significantly to an individual's comprehension and development in matters of sexuality. This interconnection underscores the importance of viewing SL holistically in understanding and fostering healthy sexual development. In this study, SL and SE are used simultaneously to refer to the act of sexual learning in preschool, be it formal or informal.

The World Health Organization (WHO, 2023) defined comprehensive SE to be the conveyance and dissemination of developmentally appropriate facts about sexual health to the

young, encompassing various dimensions such as physical, social, emotional, and cognitive aspects. Apart from foundational concepts, SE places significant emphasis on the acquisition of skills vital for fostering healthy relationships and promoting responsible behavior. According to WHO's perspective, embracing holistic SE enables children to protect both themselves and others through informed knowledge. They possess the ability to identify the appropriate steps to take in safeguarding their sexual health and overall well-being. The viewpoint is further endorsed by the European Expert Group on Sexuality Education (2015), which emphasizes that SL in young children shapes them into responsible individuals as they mature.

SL has garnered global attention in response to the disturbing rise in sexual crimes involving children. Statistics indicated that this issue affects children across the globe, regardless of their residence in developed or underdeveloped countries. The National Children's Alliance (NCA, 2023) of the United States reported that two-thirds of all cases handled by Children's Advocacy Centers (CACs) involved sexual abuse of children. Similarly, the Jabatan Kebajikan Masyarakat (JKM, 2023) of Malaysia revealed a staggering total of 3,493 cases of children-involved sexual crimes. Local news highlighted a concerning trend, with 18,326 child sexual abuse cases reported to the police force between 2018 and November 2023 (Lim, 2024). In light of these distressing statistics, it is of top priority to equip children holistically through SL to support their overall well-being.

In Malaysian preschools, SL was initially introduced and integrated into the primary and secondary school curriculum in 1989 under the title of Family Health Education. Over time, it was developed into Sexuality Education and eventually settled with the title of PEERS (Pendidikan Kesihatan Reproduksi dan Sosial) (Razali et al., 2017; Zulfais Shah et al., 2021). Early exposure to SL helps children to realize that the subject can be discussed openly without embarrassment, guilt, or fear (Der et al., 2021). Similar initiatives can be found globally. For

instance, in North Carolina, United States, children are mentored about safe touch (Razali et al., 2017), while in Hangzhou, China, they are educated about human anatomy, body parts, and personal safety (Cai, 2023). In Malaysia, the PEERS program was implemented in the National Preschool Standard Curriculum (NPSC) to teach 4 to 6-year-old children about gender differences, safe and unsafe touches, proper hygiene habits, and skills to recognize and respond to inappropriate touch (Ministry of Education [MOE], 2017).

Problem Statement

Despite acknowledging the importance of SL in enhancing the sexual health and well-being of children, the integration of SL in Malaysia remains limited. Sex-related topics have long been considered taboo in the country. The conservative nature and deeply rooted values within the local community contribute to a lack of SL among preschool children. This aversion to discussing sex is deeply ingrained and inherited across generations, influenced by politics, religions and local beliefs (Rina, 2020). These influences perpetuate the prevailing belief that discussing sex is socially unacceptable, leading to a culture of silence and avoidance regarding the topic. This ‘sex is taboo not to be discussed’ mentality affects the current generation, who perceived discussions about sexual health as shameful or inappropriate, even within educational settings. Consequently, Malaysian youth increasingly turn to social media to seek information about sexual health, as adults continue to shy away from addressing the topic directly (Tan, 2020).

In the context of schools, teachers serve as the central figures who deliver education to children. Parents often relying solely on schools and educators in terms of their children’s education (Yeoh, 2023). Given the relevance of SL in children’s development, it should be integrated into the school curriculum. SL empowers children with the knowledge and skills needed to make rational decisions, engage in responsible behaviours, reduce risky behaviours, and improve school performance (Centers for Disease Control and Prevention [CDC], 2020).

However, despite the acknowledged benefits of SL, preschool teachers often gravitate towards teaching safe and conservative topics, such as differences between genders and introduction to body parts (Wan Nawi et al., 2021). While they may hold positive attitudes towards SL in preschool children, they tend to remain within their comfort zone by teaching topics are familiar to them and are less likely to be opposed by parents or society.

The tendency for teachers to remain within their comfort zone, particularly regarding SL, is deeply influenced by their level of knowledge and attitudes/beliefs towards SL. Research underscored the interconnectedness between these factors. Warraitch et al. (2021) highlighted that teachers' levels of knowledge and attitudes/beliefs significantly impact the effectiveness of SL. A lack of solid sexuality knowledge often results in negative attitudes towards SL, leading to a low intention to deliver such knowledge and hindering the success of the curriculum. According to Mohd Amin & Fariduddin (2023), teachers frequently exhibit limited preparedness to deliver SL due to insufficient knowledge. It then leads to the behaviour of avoidance as they do not feel confident in delivering information they are not adequately trained in. The sensitive cultural and religious context also influences teachers' attitudes/beliefs towards SL. When teachers harbour negative attitudes towards SL, they may not actively seek out sexuality knowledge. Additionally, teachers often face obstacles such as sensitive cultural and religious contexts, inconsistent multidisciplinary support, and a lack of training to support their development of knowledge and attitudes/beliefs to impart SL to preschoolers.

The lack of knowledge and attitudes/beliefs among preschool teachers has further led to a deficiency in the comprehensive implementation of SL for educating preschool children. Menon (2022b) advocated for an organized and thorough delivery of sexual health education within schools by mentioning that educators should be adequately trained to teach sexual health to children accurately, without bias or judgement. By providing a well-established and positive learning environment that supports SL, children can be surrounded by clear and concise

information, safeguarding them from inaccurate knowledge and inappropriate values. Furthermore, positive attitudes and a high level of children's engagement in open discussions about the topic can have a significant impact on their lives as they mature, serving as a powerful force in addressing social issues such as child sexual violence (Menon, 2022a; Menon & Chin, 2022).

Research Objectives

The study is designed to address the following objectives:

1. To investigate the levels of preschool teachers' knowledge towards SL for preschool children.
2. To investigate the levels of preschool teachers' attitudes/beliefs towards SL for preschool children.
3. To investigate the relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children.

Research Questions

The study aims to address the following research questions:

1. What is the level of preschool teachers' knowledge towards SL for preschool children?
2. What is the level of preschool teachers' attitudes/beliefs towards SL for preschool children?
3. Is there a significant relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children?

Research Hypothesis

No hypothesis is constructed for the objective 1 and 2 as they only provide descriptive data.

An alternative hypothesis has been constructed for objective 3, seeking to test the relationship between preschool teachers' knowledge and attitudes/beliefs.

H_{a3}: There is a significant relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children.

Significance of Study

This research holds significance from multiple perspectives. First, it raises awareness regarding the implementation of SL in preschools. Fortenberry (2014) emphasized that SL plays a crucial role in children's growth and development, impacting their sexual health and life trajectories to a significant extent. Thus, it is imperative to investigate the barriers that hinder the implementation of SL in preschool settings.

Next, this research addresses a literature gap in the local context by providing quantitative assess and details into preschool teachers' knowledge and attitudes/beliefs toward delivering SL to children. The majority of local research on SL tends to be qualitative in nature (Ihwani et al., 2015; Noh & Abu Bakar, 2023; Wan Nawi et al., 2021) or primarily focuses on others' perspectives (Mohd Amin & Fariduddin, 2023), leaving a notable gap in understanding preschool teachers' viewpoints. Moreover, these studies often took place in primary or secondary schools, overlooking the specific needs and challenges faced by preschool teachers in implementing SL effectively. This gap in research hinders a comprehensive understanding of the barriers to implementing SL, particularly concerning preschool teachers' knowledge and attitudes/beliefs regarding SL delivery to children.

Hence, this study aims to provide current insights into preschool teachers' perspectives on SL. By examining their knowledge and attitudes/beliefs, the study seeks to uncover the barriers they face in delivering quality SL to young children. Understanding these barriers is crucial for empowering teachers to become confident educators capable of addressing sensitive topics related to sexual health and well-being, thereby promoting the success of SL in Malaysian society. Khalaf et al. (2014) highlighted the diversity of Malaysia's society, comprising Malay, Chinese, and Indian ethnic groups with varying economic statuses, religious

beliefs, cultural rituals, and customs. This diversity presents a significant challenge in implementing SL among children in schools, compounded by prevalent myths regarding SL among both children and teachers (Shibuya et al., 2023). Sensitivity to cultural and religious considerations is essential, as certain aspects of SL may be sensitive to all parties involved.

Additionally, the findings of this research have the potential to contribute significantly to the enhancement and development of future school curricula for children and training programs for teachers (Razali et al., 2017). There is a better understanding of what to do to support the current needs of educators as the understanding of preschool teachers' level of knowledge and attitudes/beliefs is clearly established. By providing professional development opportunities for early childhood teachers, the benefits can be extended to the children who receive the education, ultimately benefiting the future leaders of the country.

Definition of Terms

Conceptual definition

Sexual learning (SL): Specific online resources defining the term SL may be lacking, thus, the meaning of the term is then derived by examining each of its components. Merriam Webster (2019b) defined sexuality as the character or condition of being sexual, while learning refers to the action of acquiring knowledge (Merriam-Webster, 2019a). Combining these definitions, SL can be understood as the action required to acquire sexuality-related knowledge.

Preschool teachers: According to Schriever (2018), preschool teachers play a dual role as educators and caretakers for young children. In Malaysia, preschool teachers are certified and competent professionals mandated with the responsibility of fostering a safe, enjoyable, and supportive environment conducive to the growth of children from birth to six years old, as per MQA standards (2015).

Preschool children: Children, as defined by the United Nations (1989) and the Child Act 2001 (Act 611) of Malaysia, encompass individuals under the age of eighteen, unless

specified otherwise by relevant legislation (Legal Research Board, 2002/2022). Within this broader category, the term 'preschool children' specifically refers to individuals from birth to six years old (Rahmatullah et al., 2021).

Knowledge: The concept of knowledge encompasses various perspectives. According to Oxford Learner's Dictionaries (n.d.), it refers to new information or skills acquired through learning or life experiences. Similarly, The Britannica Dictionary (n.d.) defines knowledge as comprising information, comprehension, or expertise acquired through practice or learning, as well as the awareness and consciousness of something. Bolisani & Bratianu (2017) further elaborate on knowledge, portraying it as an intricate concept arising from human cognition, which includes experiential understanding, abilities, and beliefs. They emphasize its role as a framework for evaluating and assimilating new information and experiences.

Attitudes/beliefs: Attitudes and beliefs are terms used to describe how individuals perceive and engage with their environment. While they serve distinct purposes and possess unique features, they are interconnected and influence each other. Attitudes refer to the enduring evaluation of ideas, people, and things in one's surroundings, ranging from negative to positive. They are shaped by individuals' beliefs, emotions, and past experiences (American Psychological Association [APA] Dictionary of Psychology, 2018). On the other hand, beliefs entail the acceptance of a truth without requiring proof or validation. Beliefs are closely related to the perceived truth of a given matter (APA Dictionary of Psychology, 2018).

Operational definition

Sexual learning (SL): In this paper, SL (sexual learning) and SE (sexuality education) are used interchangeably to denote children's acquisition of sexual health and reproductive knowledge. This acquisition occurs through formal learning sessions conducted by preschool teachers or informal channels such as teachable moments during bath or toilet time in the context of preschool. SL and SE encompass a broad spectrum of knowledge, ranging from

basic anatomical understanding to the development of prosocial behaviors and interpersonal relationships.

Preschool teachers: In the context of this research, preschool teachers encompass individuals engaged in teaching and guiding children aged six or below, irrespective of their workplace environment, including both preschools and kindergartens, regardless of public or private schools.

Preschool children: In this dissertation, the term preschool children specifically refer to individuals aged six or below who are enrolled in and attended formal educational settings, including preschools or kindergartens. This definition aims to narrow down the demographic being studied within the context of early childhood education.

Knowledge: In this research, the term 'knowledge' pertains to preschool educators' understanding of sexuality-related information and their perception of suitable content to be imparted to children. To assess their knowledge level, educators complete self-report ratings, where they indicate whether provided statements are either true or false. Specifically, they select 'definitely true' or 'definitely false' for each statement. No marks are allocated for any other choices of the participants during data analysis.

Attitudes/beliefs: In this study, the terms attitudes and beliefs are used interchangeably to refer to preschool teachers' perspectives and assumptions regarding SL among preschoolers, as well as their willingness to acknowledge its occurrence. The attitudes and beliefs can range from positive to negative or neutral. To quantify their perception, preschool teachers rate their standpoint for each statement in the survey, ranging from 'strongly agree' to 'strongly disagree'.

Chapter II

Literature Review

Introduction

This chapter is divided into three parts. The first part consists of three sections, initially exploring preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children, followed by a detailed examination of each variable. The second part outlines the theoretical framework, while the third part elaborates upon the conceptual framework.

Knowledge and Attitudes of Preschool Teachers towards SL

SL stands as a crucial element in children's developmental milestone (American Academy of Pediatrics [AAP], 2022). It serves as a foundation for cultivating healthy attitudes towards sexuality and relationships. Specifically, imparting sexual health knowledge equips children with the necessary information to navigate their sexual development with understanding and maturity, while dispelling misconceptions and fostering body awareness and responsibility (Chairilsyah, 2019). Through SL, children not only gain insights into their own bodies but also learn to develop respectful relationships and make informed decisions consistently throughout their lives. Moreover, SL aids in combating gender stereotypes and empowering children to build fulfilling relationships (Grose et al., 2014).

Preschool children in Malaysia spend considerable time in preschool settings, where their teachers serve as significant adult figures, second only to their parents. Consequently, preschool teachers play a crucial role in laying the foundation for children's development, given the significant amount of time they spend with them (Keung et al., 2019). While preschool teachers generally exhibiting openness towards the topic (Wan Nawi, 2021), many teachers lack sufficient training in delivering SL, and parental attitudes towards SL in preschools remain unclear. Research by Simsar and Çapar (2022) indicates that Turkish preschool teachers perceive SL as a means to promote body awareness and prevent child mistreatment. Similarly,

Eshak and Zain (2019) found that Malaysian preschool teachers recognize the importance of SL in safeguarding children from inappropriate sexual behaviour. It is because when children possess knowledge of right and wrong, they are empowered to respond appropriately, such as saying no, seeking help, or confiding in a trusted adult. As opposed to teachers' recognition and support, they often have limited knowledge and uneasy feelings to deliver SL. This knowledge gap among teachers persists as a longstanding issue that remains unresolved.

Over the years, the endeavour to deliver comprehensive SL to preschool-aged children has been impeded by a variety of persistent barriers, as evidenced by research findings across different contexts. Balter et al. (2021) underscored three prominent obstacles encountered by educators and practitioners in this domain: the absence of comprehensive sexuality education programs, concerns about parental reactions, and perceptions of childhood innocence. Additionally, Cohen et al. (2011) shed light on another layer of challenges, emphasizing the critical importance of addressing the inadequate training and personal discomfort experienced by many preschool teachers when tasked with delivering SL. This lack of preparedness and discomfort among educators can significantly hinder the effectiveness of SL programs, as teachers may struggle to navigate sensitive topics or lack confidence in their ability to facilitate meaningful discussions with young children about sexuality. In Malaysia, Khalaf et al. (2014) identified five key issues hindering SL implementation: practicability, acceptability, responsibility, approaches, and public unawareness. These issues are deeply intertwined with cultural norms, limited teacher training opportunities, and the inconsistency of curricula tailored to address SL in preschool contexts (Mohd Amin & Fariduddin, 2023). These persistent challenges continue to undermine SL efforts in preschool settings.

Preschool Teachers' Knowledge towards SL for Preschool Children

Preschool teachers' knowledge is widely recognized as crucial for effectively delivering SL to preschool children. Teachers equipped with accurate information can take SL

with seriousness and provide unbiased knowledge to children. However, research has consistently highlighted the lack of requisite knowledge among teachers in the field for delivering SL to children. Perspectives on what SL entails vary among educators, further complicating the issue. From a broader perspective, Asian cultures often hold differing viewpoints compared to Western societies.

A comparative analysis of attitudes/beliefs towards sexuality reveal a significant contrast between Asian and Western cultures. Studies have consistently shown that Asian individuals tend to harbor more negative views concerning sexual autonomy and rights compared to their Western counterparts (Sankhla & Theodore, 2015). This discrepancy is often attributed to the collectivistic nature of Asian cultures, which manifests in a higher tolerance for behaviors classified as sexual harassment (Mishra & Davison, 2020). Consequently, Asian preschool teachers, particularly in countries like Indonesia and Malaysia, face challenges in effectively addressing SL in educational settings. The attitudes/beliefs towards sexuality find no difference in the educational setting. While preschool teachers from Western cultures, such as Canada, perceive SL as an opportunity for children to understand themselves and their family dynamics, their Asian counterparts often struggle with appropriate methodologies and lack confidence in delivering SL education (Balter et al., 2016; Oktavianingsih & Ayriza, 2018; Noh & Abu Bakar, 2023). Indonesian preschool teachers, for instance, exhibit limited comprehension of suitable language and instructional approaches for SL, reflecting a broader trend across Asian regions. Similarly, Malaysian educators, though possessing a moderate understanding of SL, express discomfort and inadequacy in teaching the subject (Noh & Abu Bakar, 2023). These findings emphasize the necessity of culturally sensitive interventions to bridge the gap in attitudes towards sexual issues and to equip preschool teachers with the knowledge and confidence needed to address children's sexual learning needs effectively.

Promoting preschool teachers' knowledge of sexuality is crucial for effectively addressing SL among preschool children. Research consistently emphasizes the significant role that teachers' knowledge plays in shaping children's early experiences and fostering lifelong learning habits, getting them ready for challenges ahead (Sanderse et al., 2015). Studies reported that comprehensive training programs are needed to enhance teachers' knowledge levels (Balter et al, 2016). These programs not only aim to bolster teachers' confidence but also provide practical opportunities for applying learned knowledge within local contexts (Wilson et al., 2015). Murray et al. (2019) underscores the correlation between teachers' characteristics, such as certification and participation in training programs, and higher knowledge gains in children.

In light of these findings, it becomes evident that ongoing professional development is essential for preschool teachers. Eisenberg et al. (2010) advocate for the implementation of continuous training programs to equip teachers with the necessary skills to navigate the challenges of teaching SL effectively. By addressing teachers' knowledge gaps and increasing their confidence, these programs contribute to creating supportive learning environments conducive to children's healthy development and understanding of sexuality.

Preschool Teachers' Attitudes/Beliefs towards SL for Preschool Children

Preschool teachers' attitudes/beliefs significantly influence the implementation of SL for preschool children. According to a study conducted among Hong Kong undergraduate early childhood students, teachers' attitudes towards sexuality greatly impact their responses to sexual behaviours exhibited by young children (Cheung et al., 2020). Positive attitudes encourage proactive engagement, whereas negative attitudes tend to result in avoidance. Embracing constructive views towards sexuality not only reduces discomfort in discussing the topic openly but also facilitates the integration of SL in early childhood classrooms.

Various factors shape teachers' attitudes and beliefs. Martin et al. (2020) found that providing sexual education to preschool teachers enhances their understanding and perspectives on SL for preschoolers. However, while knowledge levels show improvement, attitudes may require more time and comprehensive interventions to change significantly. Despite the lack of satisfactory knowledge levels among secondary school teachers in Nigeria, their positive attitudes towards SL motivate them to willingly acquire the necessary knowledge to teach the subject effectively (Adogu & Nwafulume, 2015). Nonetheless, ongoing training remains a critical concern.

Furthermore, early childhood undergraduate students who receive sexuality education during their coursework demonstrate greater openness to SL in early childhood settings (Brouskeli & Sapountzis, 2017). Equipped with both theoretical knowledge and practical skills, they are better prepared to address appropriate topics with children. This study emphasizes that a solid foundation in both theoretical concepts and practical skills is essential for adequate preparation and effective teaching.

Theoretical Framework

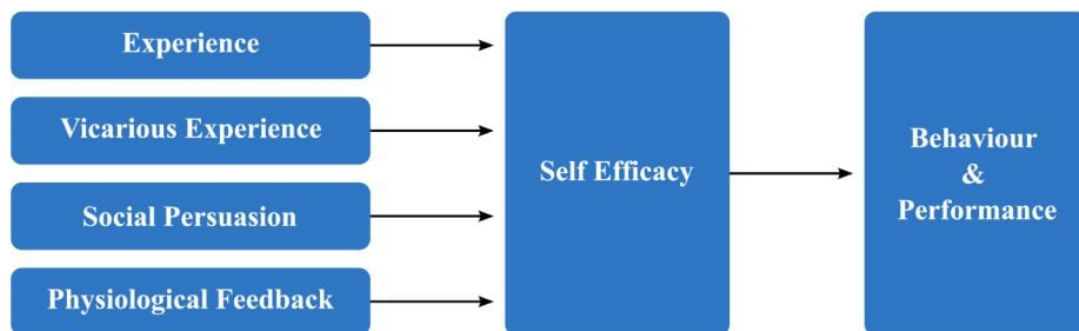
The theoretical framework is a critical component of all research methodologies, whether quantitative, qualitative, or mixed methods, as a valid theory helps to justify the importance and significance of the researchers' work (Lederman & Lederman, 2015). It is defined as the researcher's endeavour to apply a theory or a logically constructed set of concepts derived from multiple theories into the context of a study (Varpio et al., 2019).

The research is grounded in self-efficacy theory. The theory was developed by Albert Bandura in 1977 (Bandura, 1977). It revolves around individuals' beliefs in their ability to confront challenges and overcome obstacles successfully. In other words, it reflects one's confidence in navigating difficulties and their determination to address them effectively. The level of self-efficacy plays an essential role in determining how long individuals persist in

demanding situations and the level of effort they invest in problem-solving endeavours. High level of self-efficacy allows an individual to exerts power and regulation over own's desire, behaviour and social context (Carey & Forsyth, 2009). Conversely, low self-efficacy tends to discourage individuals from embracing challenges, prompting them to withdraw when faced with obstacles. Self-efficacy is influenced by four primary sources: personal achievements, observational experiences, verbal encouragement, and physiological feedback (Lopez-Garrido, 2023).

Figure 1

Albert Bandura's Self Efficacy Theory: Primary sources of influences that contribute to personal efficacy and specific performance outcomes



The first source of self-efficacy is personal achievements, which are heavily influenced by the success rate of tasks undertaken. Successes in completing tasks increase a person's expectations of future success; repeated failures on the other hand lower the expectations. Applied to the context of SL for preschool children, teachers who successfully deliver SL exhibit increased confidence levels, whereas those who encounter challenges may experience a decrease in confidence.

The second aspect to consider is observational experiences. It involves learning through observing and imitating others prior to engaging in a task. The levels of self-efficacy typically increase when observers witness others engaging in risky without encountering negative

consequences. This experience can instill a mindset of persistence and confidence in one's ability to succeed. For instance, teachers who observe their colleagues' knowledge supporting them in delivering SL may develop the attitude/belief that increasing their own knowledge levels enhances their readiness to deliver SL.

Besides confidence in success and social role models, verbal encouragement also affects self-efficacy levels. Though it may not lead to lasting changes on its own, it enhances the outcomes of corrective efforts. Individuals who receive social encouragement, along with support for effective action, are more likely to exert increased effort compared to those receiving assistance alone. In such cases, teachers implementing SL are motivated by the positive attitudes of their colleagues, which encourages them to enhance their SL delivery.

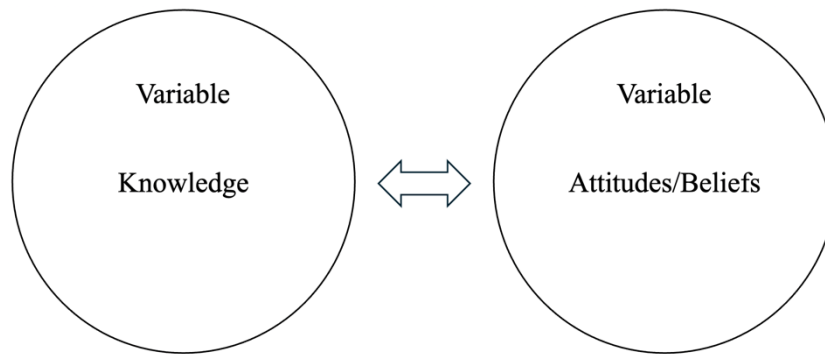
The last aspect to be mentioned is physiological feedback. When faced with stressful tasks, individuals often experience emotions that affect their perception of competence. High emotional arousal typically undermines performance. Individuals who maintain composure tend to perform better. Teachers who remain unaffected by social pressures can deliver SL comfortably, irrespective of the challenging environment.

In the context of this research, self-efficacy among preschool teachers is examined from the aspects of knowledge and attitudes/beliefs towards SL for preschool children. These aspects are correlated and they influence how confident and capable the preschool teachers feel when they engage in discussions about SE with young children. A lower level of knowledge and attitudes/beliefs may potentially hinder teachers' ability to effectively deliver SL. On the other hand, high level of these aspects is expected to correlate with greater ease and a more positive outlook, thereby contributing to the effectiveness of SL for preschoolers.

Conceptual Framework

Figure 2

The relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children



The conceptual framework provides a comprehensive justification for commencing a study, serving as the rationale behind its undertaking. Its main components include: (1) summarizing of existing knowledge, typically through a literature review; (2) identifying areas where the understanding of an issue is lacking; and (3) outlining the research methodology. Crafted with the intention of addressing the significance of the research and the potential new insights it could offer, the conceptual framework serves to guide the study's direction and purpose.

The conceptual framework illustrates the relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children in Malaysia. It is essential to look into these variables as they impact the SL experienced by preschool children. The first variable, 'Knowledge', pertains to the information possessed by preschool teachers regarding SL. The second variable, 'Attitudes/Beliefs', relates to how preschool teachers perceive SL. The researcher hypothesized that these variables exert significant influences on each other, as well as towards SL for preschool children within the preschool setting. The two-way arrow indicates that an increase or decrease in one variable is related to a corresponding increase or decrease in the other variable.

The first variable, 'Knowledge', indicates that preschool educators who have high level of self-efficacy in SL can effectively deliver accurate and comprehensive information to children using appropriate strategies. They feel confident in utilizing their knowledge to provide children with useful information and respond to their questions in a developmentally appropriate manner. These successful experiences contribute to the enhancement of their attitudes/beliefs and increase their confidence in delivering SL. Such achievements serve as personal milestones that further develop their self-efficacy. Additionally, a teacher's success serves as motivational observational experiences for their colleagues.

Self-efficacy also plays a significant role in shaping teachers' attitudes and beliefs towards SL in preschool children. Those with a high level of self-efficacy recognize the significance of SL and maintain a positive perspective towards it. They perceive SL as crucial for promoting children's overall well-being, motivating them to cultivate an open and supportive learning environment where children feel comfortable discussing sexual-related topics without fear of judgment. Simultaneously, these teachers actively participate in continuous learning, consistently enhancing their own knowledge levels to better support their students. They encourage children with verbal encouragement and constructive physiological feedback to stimulate children's learning.

Chapter III

Methodology

Introduction

This chapter aims to offer a comprehensive overview of the research conducted, focusing on key aspects such as research design, sampling method and respondents, research instrument, data analysis methods, and research procedures.

Research Design

Research design serves as the framework for guiding the research process, encompassing the selection of methodologies, sampling methods, and data interpretation procedures to address research questions (Asenahabi, 2019). It aims to optimize data acquisition while emphasizing criteria such as appropriateness, flexibility, and cost-effectiveness (Akhtar, 2016). In this study, a correlational research design was adopted to assess the statistical relationship between knowledge and attitudes/beliefs towards SL among Malaysian preschool teachers. Correlational research, a form of nonexperimental investigation, focuses on evaluating the association between variables without extensive control over extraneous factors (Jhangiani et al., 2015). Given the research's focus on quantifying this relationship, a quantitative approach was considered appropriate (Goertzen, 2017). Quantitative research involves collecting and analysing measurable data, which can be represented numerically to facilitate statistical analysis. To achieve this, a survey method was employed, utilizing online questionnaires distributed to Malaysian preschool teachers. Hence, the study aims to provide a robust analysis of the relationship between knowledge and attitudes/beliefs towards SL within the context of preschool education in Malaysia.

Sampling & Respondents

Research samples are typically selected from a larger population, with the population representing the group of individuals the researcher intends to study, while the sample refers

to a subset chosen from this group (Knechel, 2019). In this study, the population comprises Malaysian preschool teachers, while the sample consists of preschool teachers teaching in Malaysian preschools. The selection of the population significantly impacts the credibility of the research (Asiamah et al., 2017). Convenience sampling was employed to select participants for this study, as it involves approaching readily available and accessible individuals to collect data (Taherdoost, 2016). In this research, data were collected from 90 preschool teachers teaching in Malaysia.

Research Instrument

In order to ensure the reliability and validity of research findings, careful consideration of the chosen research instrument is essential (Taber, 2018). Each instrument possesses unique strengths and weaknesses, necessitating a thorough evaluation to select the most appropriate tool (Tisminetzky et al., 2022). In this study, the researcher employed the 'Questionnaire on Young Children's Sexual Learning' developed by Patricia Barthalow Koch and Peggy Brick (2013), was employed. This questionnaire, comprising three sections, was adopted to assess Malaysian preschool teachers' knowledge and attitudes/beliefs regarding SL among preschool children. The reliability of the scale was .46 for the Knowledge About Young Children's Sexual Learning scale and .92 for the Attitudes/Beliefs About Young Children's Sexual Learning scale.

Due to unsatisfactory reliability for the first section, a pilot test was conducted before its adoption. Following the pilot test, the Knowledge section showed a Cronbach's Alpha coefficient of 0.73, while the reliability of the Attitudes/Beliefs section remained high at .82. Thus, this section was adopted for this study.

The content validity of the questionnaire's scale was established through a thorough literature review on sexual development and learning among children. Koch and Brick (2013) collaborated with staff from the Family Life Education Center to facilitate the development of

questionnaire items, which were subsequently reviewed by professionals in relevant fields, including preschool educators and experts in the sexology field. This rigorous approach ensures the robustness of the research instrument and strengthens the validity of the study findings.

The questionnaire, prepared and distributed through Google Form, is structured into two parts. Part I aims to collect demographic information, including age group, race, and level of education, from the respondents. Part II contains the first two sections of the 'Questionnaire on Young Children's Sexual Learning'.

Section 1: Knowledge of Preschool Teachers towards SL

This section assesses preschool teachers' knowledge regarding preschool children's SL. It consists of 21 statements presented in a 5-point Likert Scale. Respondents select the scale that best reflects their knowledge level, ranging from 1=Definitely true, 2=Possibly true, 3=Possibly false, 4=Definitely false to 5=Don't know. Statements classified as 'Definitely true' include items 1, 2, 3, 6, 8, 13, 16, and 18. 'Definitely false' statements encompass items 4, 5, 7, 9, 10, 11, 12, 14, 15, 17, 19, 20, and 21. Each correct answer selected earns one point, while all other responses are scored as zero. Thus, the achievable score ranges from 0 to 21, with the highest possible score being 21.

Section 2: Attitudes/beliefs of Preschool Teachers towards SL

The second section evaluates the preschool teachers' attitudes/beliefs towards preschool children's SL. This section comprises 28 statements. The participants indicate their responses on a 5-point Likert scale ranging from 1=Strongly agree to 5=Strongly disagree. Scores range from 28, indicating the most negative attitudes/beliefs, to 140, indicating the most positive attitudes or beliefs toward SE in young children. It is important to note that items 3, 7, 10, 11, 12, 13, 15, 16, 19, 24, 25, 27, and 28 are scored in reverse.

Hence, the researchers utilized the questionnaire as a tool to collect the data from the preschool teachers regarding their level of knowledge and attitudes/beliefs towards SL.

Reliability

A pilot study was conducted prior to the actual study to assess the reliability of the research instrument (Hassan et. al. 2006). A total of 30 preschool teachers were recruited to test the reliability of the questionnaire. The ‘Questionnaire on Young Children’s Sexual Learning’ developed by Patricia Barthalow Koch and Peggy Brick (2013) was utilized. The age of the preschool teachers ranged from 18 to 49 years old. The reliability of the level of knowledge and attitudes/beliefs of preschool teachers towards SL were .73 and .82 respectively for pilot study.

The results indicated a high reliability of the level of knowledge and attitudes/beliefs of preschool teachers toward SL within the context of this research. Thus, no changes or removal of items were deemed necessary. The Cronbach’s alpha for knowledge achieved a higher value than previous findings, which was .46, while the reliability for the level of attitudes/beliefs remained highly reliable. The reliability of each scale is shown in Table 1.

Table 1

Cronbach’s Alpha for the Level of Knowledge and Attitudes/Beliefs of Preschool Teachers towards SL

Variables	No of items	Cronbach’s alpha (α)
Knowledge	21	.73
Attitudes	28	.82

Data Analysis Methods

Data analysis is a fundamental process for researchers to extract meaningful insights from their gathered data. Before embarking on data analysis, researchers undertake preparatory tasks such as coding and categorization (Denscombe, 2014, pp. 245–247). A preliminary exploration of any apparent trends that occur within the data may be conducted. The analysis

for this study is performed using Statistical Package for the Social Sciences (SPSS) version 29.0.2.0 (20) (IBM, 2023). The software is renowned for its statistical analysis capabilities and user-friendly interface. SPSS facilitates comprehensive data analysis, allowing researchers to derive insights effectively. The two main components to be analysed are the descriptive statistics and the inferential statistics. Descriptive statistics are employed to understand the current levels of knowledge and attitudes/beliefs of preschool teachers toward SL in preschool children. Inferential statistics, on the other hand, are utilized to examine the relationship between the two variables. Specifically, they explore how preschool teachers' levels of knowledge and attitudes/beliefs toward SL in preschool children are interconnected and influenced by one another.

Internal consistency analysis was conducted to assess the reliability of the Knowledge section in the questionnaire. This type of reliability assessment focuses on the coherence of responses across multiple items within a measure. It evaluates the extent to which items in a scale or questionnaire reflect a unified construct, indicating the consistency of participants' responses (Price, 2018). Evaluation of internal consistency can be conducted through the collection and analysis of data. A widely accepted benchmark for assessing internal consistency is the critical alpha value of 0.70, as advocated by Taber (2018). This threshold signifies a strong indication of reliability and internal consistency within the instrument.

The first part of the analysis focuses on descriptive data. It provides simple summaries about the basic features of the sample and the observations within it, such as mean (M) and standard deviation (SD) (Mishra et al., 2019). Descriptive data does not draw any inferences from the data itself (Kaliyadan & Kulkarni, 2019). To begin, a normality test is carried out using SPSS to derive descriptive data. It helps the researcher to determine whether the data follows normal distribution before conducting parametric or nonparametric test (Mishra et al.,

2019). Among the variations of the normality test, the Shapiro-Wilk test provided by the SPSS software is highly recommended (Das & Imon, 2016).

The second part of the analysis focuses on inferential data, which involves making generalizations or inferences about a population based on the data collected (Mishra et al., 2019). Inferential statistics utilizes a sample to estimate features that occur within a larger population and to test hypotheses concerning that population (Yenduri & Silver, 2023). The results obtained from inferential statistics help to draw conclusions from the research findings (Mondal et al., 2022). Spearman's correlation is adopted to analyse data when they are not normally distributed (Daines, 2024). Nonparametric statistics are employed by researchers to study non-linear relationships (Astivia & Zumbo, 2017). Spearman's rank coefficient of correlation is commonly applied when outliers are present in the data (de Winter et al., 2016). Outliers are data points that demonstrate exceptional deviation from the general pattern observed in the dataset (Al-Jabery et al., 2020). The coefficient value spans between -1 and 1, where -1 signifies the strongest negative correlation while 1 signifies the strongest positive correlation. The value of significance is determined by a *p*-value of .05. If the *p*-value is <.05, then the null hypothesis is rejected and the alternative hypothesis is accepted (Bon-Gang, 2018). Leclezio et al. (2015) had adapted a table from Dancey and Reidy (1999/2020) which reported the strength of the relationship. A Spearman correlation *p*-value of $\geq .70$ represents a solid relationship, while a *p*-value of 0.01 – 0.19 indicates no or minimal relationship.

Research Procedures

The researcher first identified the problems to be studied and defined the research objectives aimed at addressing those issues. Subsequently, a comprehensive literature review of the topic was conducted to gain insight into the existing gaps and areas requiring further investigation. The next step involved developing a research design. In this study, the researcher opted for a quantitative approach, as it facilitated the quantification of the level of knowledge

and attitudes/beliefs of preschool teachers, which were the variables. Preschool teachers constituted the population under study, and they were approached through online social media platforms to participate in answering the self-reported questionnaire.

Due to the low reliability of section 1 in the potential questionnaire (Cronbach's Alpha=.42), the researcher conducted a pilot test with 30 preschool teachers to enhance the reliability of the section. It was necessary to reconstruct and enhance the reliability of section 1 in the questionnaire.

After the improvement of the section's reliability, the questionnaire was prepared using Google Form before being distributed. Convenience sampling was employed to reach any preschool teacher actively practicing in the field. The researcher allocated time for data collection before proceeding to analyse the data. Descriptive statistics were analysed using a normality test, while inferential statistics were analysed using Spearman's correlation. The results were discussed, and implications were provided before the researcher outlined the limitations of the study and made recommendations for future research.

Chapter IV

Findings and Analysis

Introduction

This chapter presents the findings of a questionnaire administered to a sample of 90 teachers, utilizing quantitative research methods for data collection. Data analysis aims to uncover the underlying patterns and correlations within the study's contextual framework (Albers, 2017). The data presented in this chapter sheds light on the outcomes concerning preschool teachers' knowledge levels and attitudes/beliefs concerning SL among preschool children, as well as the relationship between the two variables.

Descriptive Statistics and Analysis

This section unveils the demographic details of the preschool teachers who contributed to this research by completing the questionnaire. The demographic information includes age groups, gender, races, level of education, educational background, trainings received, and scores on the knowledge and attitudes/beliefs about young children's sexual learning scale, along with their respective mean (M) and standard deviation (SD). All demographic data were recorded in a linked Google Excel sheet as participants completed the questionnaire. A total of 90 preschool teachers ($n=90$) from Malaysia participated in the study. SPSS was employed to carry out descriptive statistics to analyze the demographic data and provide insights into the respondents' characteristics.

Table 2*Age Groups of Preschool Teachers*

Age groups	Frequency (<i>n</i>)	Percentage (%)
18-29	71	78.9
30-39	17	18.9
40-49	1	1.1
Above 50	1	1.1
Total	90	100.0

Table 2 shows the age groups of preschool teachers involved in this study, categorized into four groups: 18-29 years old, 30-39 years old, 40-49 years old, and 50 years old and above. The majority of respondents, comprising 78.9% ($n=71$), fell within the 18-29 age group. The second-largest group was aged 30-39, representing 18.9% ($n=17$) of the total participants. Each of the remaining age groups, 40-49 years old and 50 years old and above, consisted of one participant, accounting for 1.1% ($n=1$) each.

Table 3*Gender of Preschool Teachers*

Gender	Frequency (<i>n</i>)	Percentage (%)
Male	2	2.2
Female	88	97.8
Total	90	100.0

Table 3 presents an overview of the gender distribution among preschool teachers who participated in the research, categorized as male and female. Among the respondents, there were 2 males, constituting 2.2% of the total participants, and 88 females, representing 97.8%. This added up to a total of 90 participants in this research.

Table 4*Races of Preschool Teachers*

Races	Frequency (<i>n</i>)	Percentage (%)
Chinese	88	97.8
Indian	1	1.1
Melanau	1	1.1
Total	90	100.0

Table 4 provides a summary of the racial composition of preschool teachers involved in the research. The predominant racial group among participants was Chinese, comprising 97.8% of the total sample ($n=88$). The remaining participants included one individual each from the Indian and Melanau ethnicities, each representing 1.1% of the total.

Table 5*Level of Education of Preschool Teachers*

Level of education	Frequency (<i>n</i>)	Percentage (%)
Certificate	8	8.9
Diploma	27	30.0
Bachelor	47	52.2
Master	7	7.8
PhD	1	1.1
Total	90	100.0

Table 5 displays the level of education of preschool teachers involved in the study. Of the total, 47 teachers (52.2%) held bachelor's degrees, while 27 (30.0%) had diplomas. Additionally, 8 teachers (8.9%) possessed certificates, including the Malaysian Certificate of Education (Malay: Sijil Pelajaran Malaysia [SPM]) or the Malaysian Higher School Certificate (Malay: Sijil Tinggi Persekolahan Malaysia [STPM]). 7 preschool teachers (7.8%) held master's degrees, and one teacher (1.1%) held a doctorate.

Table 6*Education Background of Preschool Teachers*

Education background	Frequency (<i>n</i>)	Percentage (%)
ECE	80	88.9
Non-ECE	10	11.1
Total	90	100.0

*Early Childhood Education (ECE)

Table 6 presents the educational background of preschool teachers. The majority (80 teachers, 88.9%) had a background in Early Childhood Education (ECE), while 10 teachers (11.1%) did not have prior ECE education before entering the profession.

Table 7*Trainings Received Regarding SL by Preschool Teachers*

Trainings received regarding SL	Frequency (<i>n</i>)	Percentage (%)
No	65	72.2
Yes	25	27.8
Total	90	100.0

Table 7 displays the training received by preschool teachers on SL. The data reveals that the majority, 65 teachers (72.2%), did not undergo any SL-related training. Conversely, 25 preschool teachers (27.8%) received training in SL.

Table 8

Means and Standard Deviation of Knowledge and Attitudes/beliefs about Young Children's Sexual Learning Scale

Variables	Frequency (n)	Minimum	Maximum	Mean (M)	Standard deviation (SD)
Knowledge	90	0	15	5.48	3.51
Attitudes/beliefs	90	63	120	89.30	10.30

Table 8 displays an overview of preschool teachers' knowledge and attitudes/beliefs regarding young children's SL. The sample size for both sections is 90. For the knowledge section, the M is 5.48, with a SD of 3.51. The range of scores obtained is from 0 to 15. In the attitudes/beliefs section, the M is 89.30, with a SD of 10.30. The range of scores obtained is from 63 to 120.

Inferential Statistics and Analysis

A Shapiro-Wilk normality test revealed non-normally distributed data for both knowledge ($p = .020$) and attitudes/beliefs ($p = .002$) variables. Therefore, nonparametric correlation analysis, specifically Spearman's correlations, is employed to analyze the non-normally distributed data. A p -value below .05 indicates non-normally distributed data (Andrade, 2019).

Table 9

Spearman's Correlations Output for Knowledge and Attitudes/Beliefs about Young Children's Sexual Learning Scale

Variables	r_s	p
Knowledge	.438**	<.001
Attitudes/beliefs		

** . Correlation is significant at the 0.01 level (2-tailed).

H_{a3}: There is a significant relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children.

In Table 9, Spearman's correlation analysis reveals a significant moderate, positive correlation between the level of knowledge and attitudes/beliefs among preschool teachers towards young children's SL ($r_s = .438$, $p < .001$). This indicates that as knowledge increases, attitudes also increase, and vice versa. Therefore, the alternative hypothesis was accepted.

Summary

The findings suggested that there is a significant relationship between the level of knowledge and attitudes/beliefs among preschool teachers towards young children's SL. Thus, the alternative hypothesis was accepted.

Chapter V

Discussion and Conclusion

Introduction

Building upon the findings presented in the preceding chapter, this section delves into a comprehensive discussion of the research findings, accompanied by an analysis of potential contributing factors. Subsequently, the implications stemming from the research findings are elaborated. Furthermore, a critical examination of the study's limitations is provided, alongside recommendations for future research endeavors. This chapter ends with a conclusion for the whole research.

Discussion

Knowledge about Young Children's Sexual Learning

The research indicates a significant knowledge gap among Malaysian preschool teachers regarding SL for preschool children, with scores suggesting that less than 50% of essential concepts are understood ($M=5.48$, $SD=3.51$). It is crucial to understand key concepts related to SL in early childhood as this knowledge plays a pivotal role in shaping responsible individuals later in life (European Expert Group on Sexuality Education, 2015). SL encompasses a broad spectrum, including sexual health and rights (Preinfalk-Fernández, 2015), posing a multifaceted challenge for teachers. Broadly defined, SL involves providing tailored information on sexual health, encompassing physical, social, emotional, and intellectual dimensions, along with fostering skills for building relationships and demonstrating acceptable behaviours (WHO, 2023). Proficiency in effective teaching strategies is essential as well, as SL knowledge encompasses what teachers perceive preschool children should learn, typical behaviours among children, and the significance they attach to SL (Koch & Brick, 2013). Consequently, the low levels of knowledge raise concerns about teachers' capacity to address

SL effectively in ECE settings. This discussion further examines the current state of preschool teachers' knowledge and explores factors influencing their level of understanding.

The research findings are consistent with prior studies indicating a low level of knowledge among teachers regarding SL. This deficiency manifests in various challenges that impede teachers' ability to deliver SL effectively. Lee and Khor (2021) highlighted several difficulties faced by teachers, including discomfort discussing the topic, uncertainty about permissible content, and lack of adequate resources. Consequently, teachers may hesitate to address the subject directly, leaving children's questions unanswered or diverting them to other topics, while also fearing potential negative repercussions such as misinterpretation or parental complaints. Similarly, Kagola and Notshulwana (2022) noted that teachers' limited understanding stems from their adherence to the notion of childhood sexual innocence. This perspective portrays children as passive recipients of knowledge and underestimates their capacity to engage with SL. As a result, teachers may not adequately support children in navigating their understanding of sexuality, potentially resulting in misinformation and unhealthy decision-making regarding sexual health. Ohlström's (2016) literature review further underscores the pervasive lack of knowledge across diverse contexts, including both low-income and high-income countries such as England, Australia, and the Philippines. Despite contextual differences, educators consistently report low levels of proficiency in teaching SL topics. This emphasizes the urgent need for substantial improvements in teacher training programs to address these knowledge gaps and enhance the quality of learning experiences for students. Although there are ongoing deficits in knowledge among preschool educators, there are areas in which they feel proficient, such as promoting self-protection of one's body (Cheung et al., 2020), teaching skills to refuse inappropriate actions, and enhancing self-esteem. Additionally, educators play a crucial role in instilling values like self-respect and autonomy in children concerning SL (Brouskeli & Sapountzis, 2017).

Before addressing the issue of knowledge deficiency, it is imperative to examine the factors influencing preschool teachers' understanding. A primary factor contributing to this knowledge gap is the lack of available relevant training opportunities. Notably, only 27.8% ($n=25$) of preschool teachers reported receiving sexual-related training, as indicated in the demographic section of the questionnaire in this study. The lack of training is especially concerning, especially given the recent study by Durex Malaysia, which highlights significant gaps in sexual health comprehension among teenagers aged 18 to 30 (Murugappan, 2022). This contrasts sharply with the government's commitment to promoting SL among children, as evidenced by initiatives like the PEERS program. However, the increasing prevalence of misconceptions compared to the 2016 study suggests a widening disparity in sexual knowledge among young children, emphasizing the urgent need for comprehensive SL efforts. Kamrani and Yahya (2016) also highlight the inadequacy of resources and training, which contribute to teachers' low level of knowledge in effectively delivering SL. Furthermore, preschool teachers' knowledge levels are influenced by personal experiences, qualifications, and their rapport with students, significantly shaping their decisions regarding what to teach (Preston, 2013). These influences may introduce bias, potentially leading educators to prioritize topics based on their own perspectives rather than children's actual needs. A structured review by Lameiras-Fernández et al. (2021) indicates that despite a preference for SL programs emphasizing peer learning over solely focusing on negative sexual outcomes among teenagers, teachers often prioritize addressing sexual risks. This suggests that the lack of training, coupled with personal experiences, qualifications, and teachers' rapport with students, collectively contribute to the low levels of knowledge among preschool educators.

Despite preschool teachers holding neutral attitudes or beliefs ($M=89.30$) towards SL for preschool children, the reported low level of knowledge ($M=5.48$) in this area poses a significant obstacle (Murugappan, 2022). As emphasized by Zagzebski (2017), knowledge

entails the cognitive ability to connect with reality and encompasses factual propositions about the world. In the educational context, teachers must undergo comprehensive training to acquire the requisite content knowledge and skills before they are deemed qualified to teach (Pekrun, 2021). However, the persistent lack of knowledge serves as a barrier that dampens teachers' motivation and impedes their ability to provide effective SL.

Attitudes/beliefs about Young Children's Sexual Learning

The research findings indicate that preschool educators in Malaysia generally hold neutral to slightly positive attitudes towards SL among preschoolers. Statistical analysis underscores this, with over 70% of educators holding favorable viewpoints, represented by a mean score of 89.30 and a standard deviation of 10.30. This data is particularly significant given the typically conservative stance of Malaysian society regarding sexuality education. Educators used to hold negative perceptions toward sex education. Talib et al. (2012) found that only 5% of participants reported receiving clear sex education in schools, indicating a scarcity of positive attitudes among educators. Many respondents expressed dissatisfaction with the instruction they received, citing its insufficiency, lack of clarity, and absence of guidance. Hence, despite acknowledging the importance of sexuality education, educators may still exhibit conservative attitudes or self-regulating behaviors when addressing such topics in the classroom (Kagola & Notshulwana, 2022). It is crucial to support and enhance preschool teachers' attitudes towards sexuality education to ensure the well-being of future generations.

It is common for teachers to exhibit varying levels of attitudes towards SL. While many acknowledge its importance and are dedicated to conducting SL, they often encounter external constraints such as inadequate training and concerns about parental reactions. This leads to a mix of commitment and struggle simultaneously (Plaza-del-Pino et al., 2021). The cautious approach to SL may arise from societal norms, personal beliefs, or discomfort with the subject. Several research findings resonate with this, indicating a nearly equal proportion of teachers

with positive and negative attitudes towards SL. For instance, according to the United Nations Population Fund (UNFPA) Ukraine & Cedos (2020), an overwhelming 83% of Ukrainian teachers expressed mostly or full support for comprehensive SL, showcasing a high level of positive attitudes. In contrast, a minority, constituting 9%, either partially or completely disagreed with the idea of sexuality education in schools, showing negative attitudes towards it. Conversely, Bibina et al. (2023) discovered that in India, only 22% of teachers exhibited a positive attitude towards SL, while the majority, 58%, held negative views. Additionally, 20% demonstrated a moderate attitude, suggesting potential hurdles in implementing comprehensive SL in educational settings. Similarly, Emambokus and Oogarah-Pratap (2019) observed a division among African teachers, with some holding positive and others negative attitudes towards SL. However, both groups recognized the evolving attitudes of today's youth and emphasized the importance of open communication and education on these topics, signaling a shift away from viewing SL as taboo. The difference in attitudes towards SL between Western and Asian countries may be influenced by variations in policy support, resources, social norms, and gender equality perspectives. In Western regions with more established policies and resources like Ukraine, there tends to be a more positive outlook towards SL. Conversely, in Asian regions where conservative social norms and gender inequality persist, there may be challenges in promoting a positive attitude towards sex education.

When examining the factors influencing teachers' attitudes and beliefs towards SL among preschool children, several key influences emerge. O'Brien et al. (2020) stated that teachers' personal beliefs, values, and cultural backgrounds significantly influence their perspectives on SL. For instance, religious views may shape attitudes towards SL, affecting teachers' comfort levels and approaches to teaching sensitive subjects. Educators with conservative beliefs or from cultural backgrounds that view sexuality as taboo may feel uncomfortable addressing comprehensive sexuality education. Conversely, those with

progressive beliefs or who value inclusivity and diversity may be more open to discussing a wide range of topics related to sexual health, relationships, and gender identity. Next, pre-service education plays a crucial role in equipping teachers with the necessary knowledge and skills for effective SL delivery (Leung et al., 2019). The quality and content of sexuality education curricula, along with the presence of policies and standards, further influence teachers' attitudes and approaches. Teachers inadequately trained in delivering sex education feel uncomfortable or awkward discussing sensitive topics with students. Additionally, the level of support and resources available from school administration and the community also shape teachers' attitudes towards SL (Vanwesenbeeck et al., 2016). A lack of resources and guidelines for adapting programs to local needs can hinder teachers' ability to maintain a non-judgmental attitude and implement interactive teaching methods. This scarcity negatively impacts teachers' motivation, attitudes, and skills crucial for successful SL implementation. To conclude, understanding these influences is essential for developing effective strategies to enhance teachers' attitudes and beliefs in addressing SL.

Relationship between Knowledge and Attitudes/Beliefs about Young Children's Sexual Learning

The research findings demonstrate a significant relationship ($r_s = 0.438$, $p < 0.001$) between preschool teachers' knowledge and their attitudes/beliefs towards SL for preschool children. This result suggests that as knowledge increases, attitudes also tend to increase, and vice versa. Therefore, the alternative hypothesis, which posits a relationship between knowledge and attitudes, was supported.

Research, exemplified by the study conducted by Thammaraksa et al. (2014), consistently highlights a significant correlation between knowledge and attitudes/beliefs. This relationship was prominently observed in their investigation, where teachers' attitudes toward SE notably improved after participating in a training program focused on SL. Initially,

Thammaraksa and his teams divided 90 participants into two groups: an experimental group and a control group, each comprising 45 individuals. Both groups went through a pretest evaluating attitudes toward sex education, self-efficacy in sex education, and sex education skills. Subsequently, the experimental group engaged in a program titled 'Culturally Sensitive Sex Education Skill Development' (CSSE), developed by the researchers themselves (Thammaraksa et al, 2014). The CSSE program spanned 6 weeks, with sessions held once a week for 4 weeks, comprising a total of four 3-hour activities. Immediately following the completion of the program, both groups underwent the same test again, with a follow-up assessment conducted in week 6. Over the follow-up period, it became evident that participants in the intervention group demonstrated a significantly greater likelihood of adopting a positive attitude toward sex education and exhibiting enhanced sex education skills compared to their pre-program baseline. The mean score of attitudes toward sex education stood at 61.7 on a 4-point scale, increasing significantly to 71.6 post-training. The intervention group consistently showed higher mean scores of attitudes toward sex education compared to their baseline scores ($p < .001$), both immediately after the program and during the follow-up period. These findings underscore the effectiveness of increased knowledge levels in positively influencing teachers' attitudes toward the subject, establishing a clear relationship between the two variables.

In a separate study conducted in the Klang Valley, Malaysia, Jackie et al. (2017) highlighted the significant relationship between knowledge and attitudes/beliefs. The study underscored the importance of preschool teachers possessing a deep understanding of children's developmental needs across various domains, including SL. It was emphasized that teachers' attitudes/beliefs and instructional approaches profoundly impact student learning and achievement. The research underscored the necessity of ongoing professional development to enhance both teachers' knowledge and attitudes, thereby improving teaching practices and student outcomes. The study of Jackie et al. (2017) concluded that teachers with comprehensive

subject knowledge and pedagogical skills are more likely to demonstrate positive attitudes towards their profession and students, thereby enhancing teaching effectiveness and student outcomes.

Furthermore, the findings of O'Brien et al. (2020) further emphasize the significant correlation between knowledge and attitudes towards SL. Research consistently indicates that educators with a solid understanding of SL concepts and content have the tendency to hold more positive attitudes/beliefs towards teaching this subject. This correlation arises from the fact that a thorough understanding of sexual health, diversity, and related topics provides teachers with the confidence and preparedness to address these matters effectively in the classroom. Additionally, heightened knowledge in SL correlates with increased self-efficacy and willingness among pre-service teachers to deliver comprehensive SL. Thus, the findings underscore the crucial role of knowledge in shaping attitudes towards SE, with increased knowledge often leading to more positive attitudes and subsequent behavior change.

Additionally, the study of Bourke et al. (2024) revealed there is a significant relationship between knowledge and attitudes. The student teachers, individuals who undergo trainings to become a teacher, generally showed positive attitudes towards teaching SL but they often lack adequate preparation to effectively do so. Notably, the research reveals that the input received during Initial Teacher Education (ITE) is perceived as insufficient. Hence, there is a need for improved preparation and input to bridge the gap between knowledge and attitudes in the context of teaching SL.

Bandura's self-efficacy theory can shed light on this relationship, as increased knowledge levels and attitudes/beliefs can enhance the teachers' ability to teach SL effectively. The theory indicated that individuals' beliefs in their capabilities influence their behaviours, motivations, and emotions. Self-efficacy is influenced by four primary sources: personal achievements, observational experiences, verbal encouragement, and physiological feedback

(Lopez-Garrido, 2023). In the context of SL, increased knowledge levels can contribute to higher self-efficacy beliefs among teachers, leading to more positive attitudes towards teaching SL; increased attitudes/beliefs levels can contribute to higher intention to obtain knowledge, leading to improved knowledge to support the SL sessions, forming a cyclical process of improvement. Hence, it is essential to increase preschool teachers' levels of knowledge and attitudes/beliefs to further promote the implementation of SL among preschool children.

Implication

This study highlighted the significant relationship between the preschool teachers' knowledge and their attitudes/beliefs regarding SL for preschoolers in Malaysia. Such findings provide invaluable insights that can promote efforts to enhance SL implementation across Malaysian preschools.

The critical need for SL-related training programs for preschool teachers in Malaysia is undeniable. These programs should be integral either as additional initiatives or integrated into the syllabus of Early Childhood Education (ECE) courses at tertiary education institutes. They serve as the foundation for enhancing teachers' knowledge levels, empowering them with the necessary professional growth and skills readiness to effectively impart SL to preschool children (Machynska et al., 2020). Despite the outlined requirement in the Malaysia Education Blueprint 2013–2025 for all preschool teachers to obtain at least a diploma in ECE by 2020, a significant portion, approximately 22,500, had not yet obtained their diploma as of 2022 (Rajaendram, 2023). Furthermore, only 18% of private preschool teachers have met this requirement (Kasinathan, 2023), highlighting a concerning gap in teacher qualifications. Specifically, there is a glaring absence of tailored training programs focusing on SL, as noted in a survey conducted by Amsah (2018). Since the adoption of NPSC as the national standard for preschool education in 2010, no SL-related courses have been offered to preschool teachers to ensure that they possess the necessary knowledge and understanding to implement SL

effectively. Amsah (2018) added that the first such training could be traced back to a 2-hour training in 2001. This deficiency significantly impacts the effectiveness of SL implementation, as emphasized by Eshak & Zain (2019). Noh and Abu Bakar (2023) advocate for tailored training that familiarizes teachers with age-appropriate content and builds their confidence, enhancing their effectiveness in delivering SL. However, current teacher education courses inadequately address sexuality education, leaving educators uncertain about addressing the topic in the classroom, as mentioned by Ünlüer (2018). Wilson et al. (2015) highlighted the important role of teacher training in shaping educators' perceptions and actions regarding SL implementation, with other benefits including enhanced proficiency, comfort levels, and self-efficacy (LaChausse et al., 2014). Basic training is insufficient; there is a pressing need to enhance teacher knowledge in terminology, teaching strategies, and response to various SL scenarios, as emphasized by Oktavianingsih and Ayriza (2018). Thus, ensuring accessibility of comprehensive SL training for all preschool teachers, regardless of their affiliation with the public or private sector, is paramount. This research aims to catalyse action from the MOE, entrusted with empowering teachers to deliver SE (Lee & Khor, 2021). Teachers can be trained from several aspects, like recognizing and addressing personal biases, avoid imposing these biases on students, and adhere to guidelines regarding appropriate conduct, including refraining from mentioning inappropriate humour and irrelevant metaphors. Furthermore, they need practical guidance on overcoming internal resistance, dispelling myths, addressing sensitive topics skilfully, facilitating participation among reserved children, and managing challenging questions and comments. This is specifically applicable to the aspect of '*Physical, Safety and Nutrition of Young Children*', where novice teachers may be introduced briefly about young children's SL (MQA, 2014) as they attend ECE courses in higher education institutions. Further development and refinement of the program structures are required to include SL as one of the main subjects to be studied during the ECCE courses.

The development of appropriate teaching materials for SL in early childhood education is crucial alongside addressing the training needs of preschool teachers. Research indicates that the quality of these materials significantly influences children's SL experiences (Schaefer, 2016). A study revealed that teachers find appropriate, concrete, and practical teaching materials indispensable for effective SL delivery, as they provide support during challenging classroom discussions (Depauli & Plaute, 2018). Such materials promote active learning and are considered prerequisites for successful teaching and learning in early childhood settings (Tandika, 2018). In the context of SL, relevant teaching materials not only enhance preschool teachers' comfort levels in conveying knowledge but also assist in establishing ground rules and making content more acceptable for children (Rose et al., 2019). Hence, there is a clear need to develop suitable teaching materials to facilitate the implementation of SL among preschool children.

Limitation

The first limitation of this research lies in its chosen research method. Quantitative research, which involves the quantification and analysis of variables using numerical data and statistical techniques (Apuke, 2017), is widely recognized for its efficiency and ability to yield generalizable conclusions. However, it is crucial to acknowledge its limitations. One significant drawback is its reliance on numerical data, which may overlook important non-numerical insights such as participants' experiences and perspectives (Hammarberg et al., 2016). Qualitative research, on the other hand, provides a deeper understanding of individuals' perceptions and experiences through non-numerical data, allowing for a more nuanced exploration of specific issues (Bell & Waters, 1987/2018). For instance, the questionnaire utilized in this research was originally developed and applied in a Western context, potentially posing challenges in its relevance and cultural sensitivity to Asian respondents. Consequently, participants may not fully engage with the survey questions or provide meaningful responses,

impacting the validity and reliability of the data collected. By solely relying on quantitative methods, the researcher was unable to explore participants' perspectives on the questionnaire, thus limiting the understanding of why SL implementation may be lacking. Therefore, it is imperative to consider incorporating qualitative approaches alongside quantitative methods to ensure a comprehensive understanding of the research topic, particularly in cross-cultural contexts.

Another limitation arises from the sampling method employed and the small sample size utilized in this study. Convenience sampling, which involves selecting participants based on accessibility and availability, was utilized in participant selection. This method, though expedient, may introduce biases and limit the representativeness of the sample (Andrade, 2021). While the research aimed to collect data from Malaysian preschool teachers nationwide, offering an overall perspective on SL among preschool children in the country, the use of convenience sampling and the limited sample size may restrict the generalizability and reliability of the findings (Andrade, 2021; Deziel, 2018). It is important to note that research conducted on convenience samples can only be generalized to the population that was conveniently accessible, from which the sample was drawn (Andrade, 2021). Consequently, the sample may not accurately reflect the diversity and variability present among all Malaysian preschool teachers, potentially oversimplifying or missing nuances within the data. Moreover, the small sample size diminishes the statistical power of the study and may lead to less conclusive findings (Deziel, 2018). With a limited number of participants, the variability in responses may not adequately represent the true variability present in the population, further compromising the reliability of the results. Hence, the limitations associated with convenience sampling and small sample size advise against drawing broad inferences for educational practice solely based on the findings of this study (Leppink et al., 2016). While the findings offer valuable insights into SL trends among Malaysian preschool children, they should be

interpreted cautiously and supplemented by additional research utilizing more robust sampling methods and larger sample sizes to ensure greater generalizability and reliability.

Recommendation for Future Research

The researcher has outlined several recommendations for future research. Firstly, future studies could benefit from incorporating qualitative research methods or mixed methods to gain a deeper understanding of the reasons for the lack of implementation of SL, despite the significant relationship between preschool teachers' knowledge and their attitudes/beliefs towards SL. While quantitative research provides valuable statistical data, qualitative methods offer researchers the opportunity to explore contextual nuances, human values, and cultural factors that may influence SL implementation in preschool settings (Cypress, 2015). By integrating both qualitative and quantitative approaches, researchers can achieve a more comprehensive understanding of the complexities surrounding SL implementation, enriching the findings with nuanced insights that quantitative data alone may overlook (Schoonenboom & Johnson, 2017). This integration of methods not only enhances the validity of the research but also contributes to a more comprehensive understanding of the issue under investigation (Schoonenboom & Johnson, 2017). Therefore, future research endeavours should consider employing mixed methods or qualitative approaches alongside quantitative techniques to yield more comprehensive insights into the challenges and facilitators of SL implementation in preschool settings.

For future quantitative research endeavours, researchers can select and randomize samples using cluster sampling technique, building on the strengths of this technique. Cluster sampling is a multi-stage technique that involves dividing a large population into smaller clusters and randomly selecting clusters to include in the sample (Rahman et al., 2022). This approach allows researchers to uncover localized trends, challenges, and opportunities that may not be apparent in broader analyses. Cluster sampling is particularly beneficial for surveys

conducted over large geographic areas. It enables researchers to efficiently sample groups of elements in specific geographical regions while still aiming to achieve a representative sample of the overall population (Alvi, 2016). Additionally, cluster sampling is effective when the target population is homogenous but geographically dispersed, making it suitable for obtaining a large sample size efficiently, especially when the clusters are heterogeneous and representative of the population (Rahman et al., 2022). By utilizing cluster sampling techniques, future research can provide tailored interventions and recommendations, maximizing the relevance and impact of the research findings on the targeted population or region. In summary, future quantitative research endeavour can benefit from employing cluster sampling techniques to focus on specific areas or locations, thereby enhancing the understanding of localized phenomena and addressing the unique needs of different regions.

Conclusion

The current study aimed to examine the relationship between preschool teachers' knowledge and attitudes/beliefs towards SL for preschool children in Malaysia. The study utilized a correlational research design and quantitative methods to investigate the statistical relationship between these two variables. The findings highlight a significant correlation between these factors, emphasizing the importance of considering both knowledge and attitudes when addressing SL among preschool children.

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Appendixes
Appendix A: Questionnaire
Informed Consent Letter

Questionnaire on Young Children's Sexuality Learning

Dear teacher,

You are invited to participate in a study titled as above. You are required to answer a series of questions which covers

1. Knowledge
2. Attitudes/beliefs
3. Comfort

regarding young children's sexuality learning in preschool.

Purpose: The purpose of this study is to investigate the knowledge, attitudes/beliefs, and comfortness of preschool teachers regarding young children's sexuality learning.

Procedure: This is a self-reported questionnaire consisting of part A (Demographic Information) and part B (Knowledge, attitudes/beliefs, comfort).

Participation to this survey is voluntary and will take approximately 10 minutes, if you fulfill the following criteria:

- Preschool teacher who teaches in preschool.

You have the right to stop this questionnaire at any point of time if you do not feel comfortable.

Potential risks and benefits: There are no anticipated risks associated with participating in these studies beyond those encountered in daily life.

Through this study, the perspective of preschool teachers' knowledge, attitudes/beliefs and comfort towards young children's sexuality learning in preschool is discovered. Next, it is hope to create an awareness about the importance of sexuality learning to young children. Lastly, it adds knowledge on current progression and challenges in teaching sexuality learning to young children among preschool teachers.

Confidentiality: Rest assured that the information that you will provide will be treated with utmost confidentiality. The data collected will be stored in code and access by immediate research team.

Informed consent: I have read and understood all the information stated above. I have my questions answered satisfactorily. I, hereby consent to voluntarily participate in this research.

Sincerely,

Esther Kong Sing Yii (kongsy1002@lutar.my)

kongsy1002@gmail.com [Switch accounts](#)



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Part A: Demographic Information

The information is collected to gain a brief insight into the population who respond to the questionnaire.

Age *

- ☐ 18-29
- ☐ 30-39
- ☐ 40-49
- ☐ Above 50

Gender *

- ☐ Male
- ☐ Female

Race *

- ☐ Chinese
- ☐ Indian
- ☐ Malay
- ☐ Other: _____

State *

Choose ▼

Level of education *

- ☐ Certificate (E.g. SPM, STPM, ...)
- ☐ Diploma
- ☐ Bachelor
- ☐ Master
- ☐ PhD

Background in early childhood education (ECE) *

(Others: Please specify like Accounting, Counselling, ...)

- ☐ ECE
- ☐ Other: _____

Pendidikan Kesehatan Reproduksi dan Social (PEERS)

A developmentally appropriate curriculum under the Physical Development strand in the National Preschool Standard Curriculum (KSPK) intended to facilitate children's in comprehending sexual health knowledge from the aspects of physical, emotional, mental, and social.

What is the age group that you are teaching? (Choose the age group that you are teaching * in 2024.)

- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ Other: _____

Are you aware of the PEERS program in the KSPK? *

- ☐ Yes
- ☐ No

Have you receive any training to conduct sexuality education for young children? *

☐ Yes

☐ No

Have you ever conduct lessons on sexuality education? *

☐ Yes

☐ No

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Part B: Questionnaire on Young Children Sexual's Learning

This part will contain three sections.

Section A: Knowledge about Young Children's Sexual Learning Scale

Section B: Attitudes/Beliefs about Young Children's Sexual Learning Scale

Section C: Comfort with Young Children's Sexual Learning Scale

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Part B Section A: Knowledge about Young Children's Sexual Learning Scale

Please indicate if the following statements are

1 = Definitely true

2 = Possibly true

3 = Possibly false

4 = Definitely false

5 = Don't know

Knowledge about Young Children's Sexual Learning Scale *

1

2

3

4

5

Young children's sexual learning can affect how they feel about sexuality as adults.

☐

☐

☐

☐

☐

Infants have sexual responses like clitoral/penile erections and orgasms.

☐☐☐☐☐

Even if there is no formal program, children are learning about sexuality in their preschool.

☐☐☐☐☐

It is unusual for young children to masturbate. (In young children context, it means they touch their private parts as a means of exploring their own body.)

☐☐☐☐☐

Most preschoolers are fearful of sexual topics.

☐☐☐☐☐

By 3 years of age, most children can tell the difference between males and females.

☐☐☐☐☐

It is of little concern for a child to be preoccupied with sexual behavior over an extended period of time.

☐☐☐☐☐

Healthy and natural sex play usually occurs between friends and playmates of about the same age.

☐☐☐☐☐

Children do not stimulate their own genitals until after they are 3 years old.

☐☐☐☐☐

The vagina of female infants is not capable of lubrication.

☐☐☐☐☐

Most 3- and 4-year-olds are really not curious about the differences in boys' and girls' bodies.

☐☐☐☐☐

A person's body image does not begin to form until 4 years of age.

☐☐☐☐☐

Children can be taught that it is O.K. to masturbate in private but not in public.

☐☐☐☐☐

Young children understand human sexuality best when it is taught using plants and other animals as the examples rather than talking about people.

☐☐☐☐☐

Adult responses to a child's sexual behavior have little effect upon how "good" or "bad" children think sex is.

☐☐☐☐☐

Before
answering a
child's question
about sexuality,
you should try to
find out what the
child thinks.

☐☐☐☐☐

When answering
a child's
questions about
sexuality, you
should only
provide
information and
not deal with
their feelings or
attitudes.

☐☐☐☐☐

Before
responding to a
child's sexuality-
related behavior,
you should try to
find out what
meaning this
behavior has to
the child.

☐☐☐☐☐

The most
effective method
for dealing with
sexuality-related
behavior in
children is to
ignore the
behavior.

☐☐☐☐☐

It is too
upsetting for
preschoolers to
tell them how
babies are
actually born.

☐☐☐☐☐

Young children
that have
received age-
appropriate
sexuality
education are
more likely to be
sexually
exploited and
abused.

☐☐☐☐☐

Part B Section B: Attitudes/Beliefs about Young Children's Sexual Learning Scale

Please indicate your feelings or ideas towards the following statements.

1 = Strongly agree

2 = Agree

3 = Uncertain

4 = Disagree

5 = Strongly disagree

Attitudes/Beliefs about Young Children's Sexual Learning Scale *

	1	2	3	4	5
Preschool children can be sheltered from sexual messages in our society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biology is the main influence on a person's sexual attitudes and behaviors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Masturbation is natural and healthy for children. (In young children context, it means they touch their private parts as a means of exploring their own body.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual information is too complex for most preschool children to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adults/teachers must be careful not to allow little boys to act too much like girls.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Sexual learning for young children is primarily about where babies come from.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is fine for young children to be curious about sexual topics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children receive positive messages about sexuality when adults use cute nicknames for genitals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most preschool children are too young to be able to use the correct names for their genitals (like "penis," "scrotum," "vulva," and "clitoris").	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is O.K. for preschool children to realize that their genitals feel good when they touch them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is better to use nonsexist language (i.e., "firefighter" instead of "fireman") with young children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Children should feel positively about sexuality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

It is O.K. to allow children to touch their own genitals when their diapers or pants are being changed.

☐☐☐☐☐

Teachers who have strong religious beliefs about sex should teach these to the children they care for.

☐☐☐☐☐

It is important to begin discussing sexuality openly in early childhood.

☐☐☐☐☐

Traditional gender role stereotypes discourage responsible sexual behaviors for both genders.

☐☐☐☐☐

Anatomically detailed dolls or picture books promote unhealthy sexual curiosity in young children.

☐☐☐☐☐

Talking about sexuality with young children encourages them to experiment.

☐☐☐☐☐

Adults/teachers need to understand their own attitudes about sexual topics since these attitudes may influence their children.

☐☐☐☐☐

Adults/teachers must be careful not to allow little girls to act too much like boys.

☐ ☐ ☐ ☐ ☐

Seeing children of the other sex without clothes on encourages children to experiment with sexual behaviors.

☐ ☐ ☐ ☐ ☐

Preschool programs should only deal with sexual information; dealing with sexual attitudes and values should be left up to parents.

☐ ☐ ☐ ☐ ☐

Preschool teachers should refrain from affectionately touching their children.

☐ ☐ ☐ ☐ ☐

Children have the right to choose who they want and do not want to touch their bodies.

☐ ☐ ☐ ☐ ☐

A positive rather than a punitive approach is better when handling children's sexuality-related behaviors (like sex play and masturbation).

☐ ☐ ☐ ☐ ☐

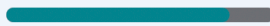
An early childhood sexuality program is adequate if it only deals with preventing sexual abuse.

☐ ☐ ☐ ☐ ☐

Children should
be encouraged to
ask their teachers
questions about
sexuality.

☐☐☐☐☐

A sexually
healthy adult
demonstrates
tolerance for
people with
different sexual
values, lifestyles,
and orientations.

☐☐☐☐☐[Back](#)[Next](#)

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Appendix B: Pilot Test

Table A1

SPSS output for reliability statistics for:

(a) Scale: Knowledge Reliability

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.732	21

(b) Scale: Attitudes/beliefs Reliability

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.819	28

Appendix C: Original Data

Table A2
SPSS output of descriptive statistics – Respondents' Age

		Age_A			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	71	78.9	78.9	78.9
	2	17	18.9	18.9	97.8
	3	1	1.1	1.1	98.9
	4	1	1.1	1.1	100.0
	Total	90	100.0	100.0	

Table A3
SPSS output of descriptive statistics – Respondents' Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2.2	2.2	2.2
	2	88	97.8	97.8	100.0
	Total	90	100.0	100.0	

Table A4
SPSS output of descriptive statistics – Respondents' Race

		Race			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	88	97.8	97.8	97.8
	2	1	1.1	1.1	98.9
	3	1	1.1	1.1	100.0
	Total	90	100.0	100.0	

Table A5
SPSS output of descriptive statistics – Respondents' Level of Education

		Level			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	8.9	8.9	8.9
	2	27	30.0	30.0	38.9
	3	47	52.2	52.2	91.1
	4	7	7.8	7.8	98.9

5	1	1.1	1.1	100.0
Total	90	100.0	100.0	

Table A6
SPSS output of descriptive statistics – Respondents' Education Background

Background					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	80	88.9	88.9	88.9
	2	10	11.1	11.1	100.0
	Total	90	100.0	100.0	

Table A7
SPSS output of descriptive statistics – SL-Related Trainings Attended by Respondents

Training					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	65	72.2	72.2	72.2
	Yes	25	27.8	27.8	100.0
	Total	90	100.0	100.0	

Table A8
SPSS output of descriptive statistics – Means and Standard Deviation of Knowledge and Attitudes/beliefs about Young Children's Sexual Learning Scale

Statistics			
		K_Sum	A_Sum
N	Valid	90	90
	Missing	0	0
Mean		5.4778	89.3000
Std. Deviation		3.50674	10.30158
Skewness		.462	.732
Std. Error of Skewness		.254	.254
Kurtosis		-.099	1.014
Std. Error of Kurtosis		.503	.503

Descriptives			
		Statistic	Std. Error
K_Sum	Mean	5.4778	.36964
	Lower Bound	4.7433	

	95% Confidence Interval for Mean	Upper Bound	6.2123	
	5% Trimmed Mean		5.3395	
	Median		5.0000	
	Variance		12.297	
	Std. Deviation		3.50674	
	Minimum		.00	
	Maximum		15.00	
	Range		15.00	
	Interquartile Range		5.00	
	Skewness		.462	.254
	Kurtosis		-.099	.503
A_Sum	Mean		89.3000	1.08588
	95% Confidence Interval for Mean	Lower Bound	87.1424	
		Upper Bound	91.4576	
	5% Trimmed Mean		88.9074	
	Median		86.5000	
	Variance		106.122	
	Std. Deviation		10.30158	
	Minimum		63.00	
	Maximum		120.00	
	Range		57.00	
	Interquartile Range		12.00	
	Skewness		.732	.254
	Kurtosis		1.014	.503

Table A9
SPSS output of descriptive statistics – Minimum and Maximum Value Obtained by Participants for Knowledge

		K_Sum			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	.00	8	8.9	8.9	8.9
	1.00	3	3.3	3.3	12.2
	2.00	8	8.9	8.9	21.1
	3.00	9	10.0	10.0	31.1
	4.00	11	12.2	12.2	43.3
	5.00	9	10.0	10.0	53.3
	6.00	9	10.0	10.0	63.3
	7.00	8	8.9	8.9	72.2

8.00	7	7.8	7.8	80.0
9.00	7	7.8	7.8	87.8
10.00	3	3.3	3.3	91.1
11.00	4	4.4	4.4	95.6
12.00	1	1.1	1.1	96.7
13.00	1	1.1	1.1	97.8
15.00	2	2.2	2.2	100.0
Total	90	100.0	100.0	

Table A10

SPSS output of descriptive statistics – Minimum and Maximum Value Obtained by Participants for Attitudes/beliefs

		A_Sum			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	63.00	1	1.1	1.1	1.1
	70.00	1	1.1	1.1	2.2
	72.00	1	1.1	1.1	3.3
	74.00	1	1.1	1.1	4.4
	76.00	1	1.1	1.1	5.6
	77.00	2	2.2	2.2	7.8
	78.00	1	1.1	1.1	8.9
	79.00	1	1.1	1.1	10.0
	80.00	2	2.2	2.2	12.2
	81.00	5	5.6	5.6	17.8
	82.00	5	5.6	5.6	23.3
	83.00	2	2.2	2.2	25.6
	84.00	9	10.0	10.0	35.6
	85.00	8	8.9	8.9	44.4
	86.00	5	5.6	5.6	50.0
	87.00	2	2.2	2.2	52.2
	88.00	3	3.3	3.3	55.6
	89.00	4	4.4	4.4	60.0
	90.00	2	2.2	2.2	62.2
	91.00	4	4.4	4.4	66.7
	92.00	3	3.3	3.3	70.0
	93.00	2	2.2	2.2	72.2
	94.00	2	2.2	2.2	74.4
	95.00	2	2.2	2.2	76.7
	96.00	1	1.1	1.1	77.8

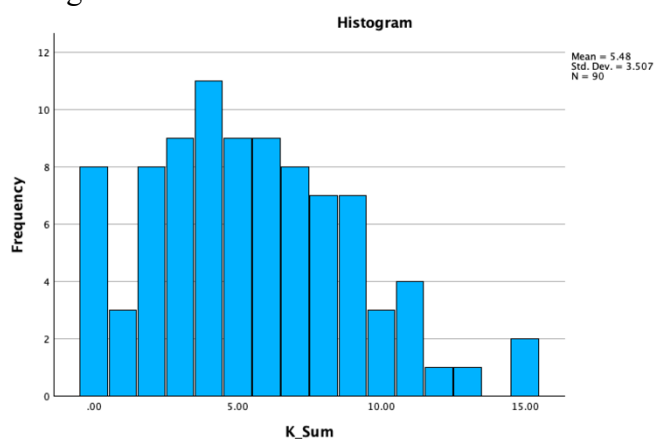
97.00	4	4.4	4.4	82.2
99.00	1	1.1	1.1	83.3
100.00	3	3.3	3.3	86.7
101.00	1	1.1	1.1	87.8
102.00	1	1.1	1.1	88.9
104.00	2	2.2	2.2	91.1
105.00	1	1.1	1.1	92.2
106.00	1	1.1	1.1	93.3
108.00	1	1.1	1.1	94.4
109.00	1	1.1	1.1	95.6
112.00	2	2.2	2.2	97.8
120.00	2	2.2	2.2	100.0
Total	90	100.0	100.0	

Table A11
SPSS output of descriptive statistics – Normality test

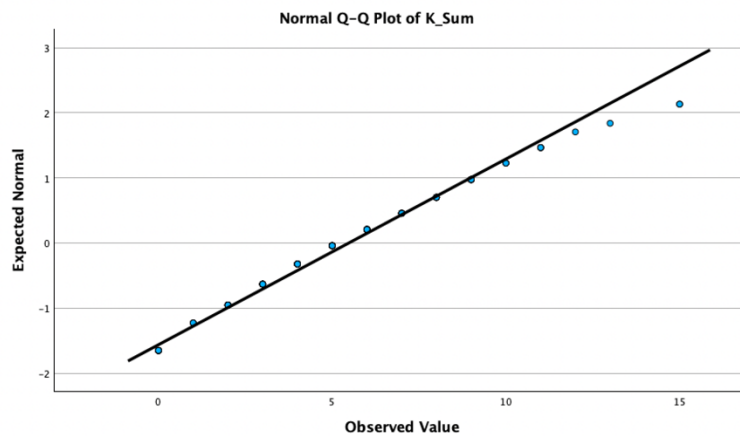
Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
K_Sum	.097	90	.037	.966	90	.020
A_Sum	.126	90	.001	.952	90	.002

a. Lilliefors Significance Correction

Table A12
SPSS output for descriptive statistics – Normality test for Knowledge
(a) Histogram



(b) Normal Q-Q Plot



(c) Boxplot

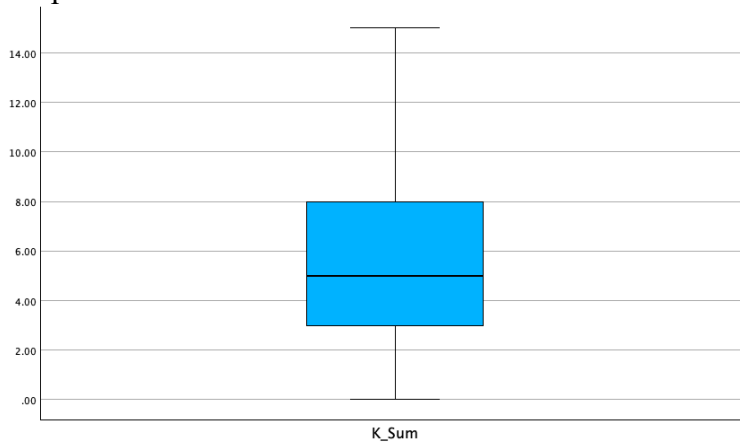
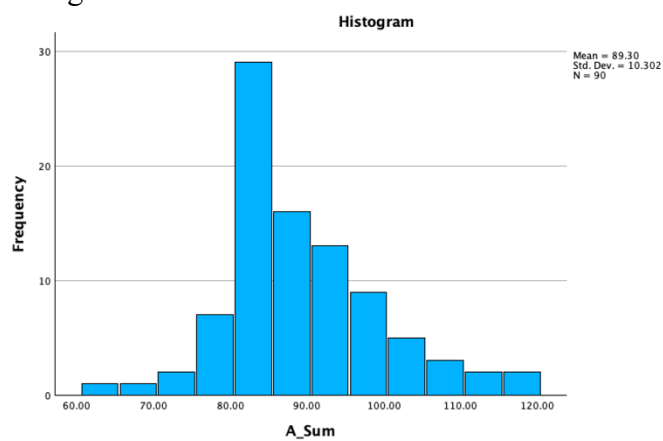


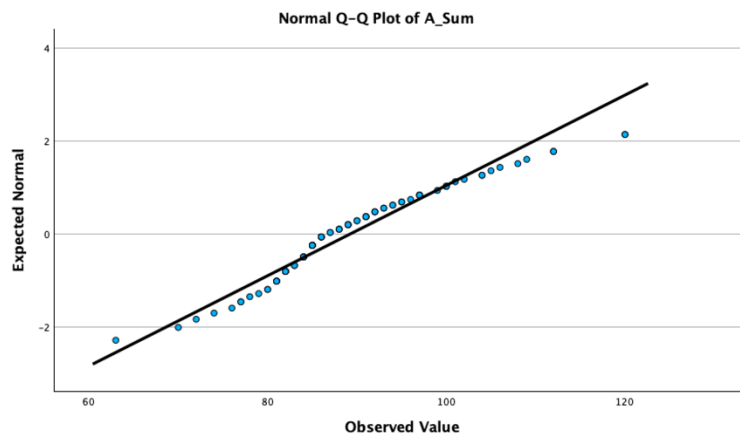
Table A13

SPSS output for descriptive statistics – Normality test for Attitudes/Beliefs

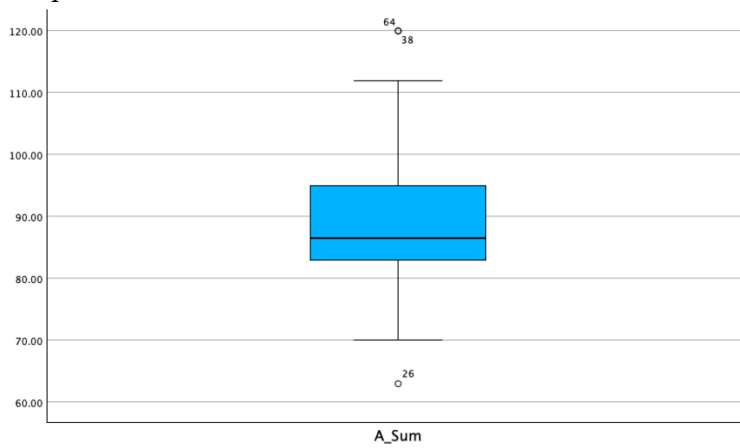
(a) Histogram



(b) Normal Q-Q Plot



(c) Boxplot



Appendix D: Result

Table A14

SPSS output for inferential statistics – Spearman Correlation Coefficient for Knowledge and Attitudes/Beliefs about Young Children's Sexual Learning Scale

Correlations

			K_Sum	A_Sum
Spearman's rho	K_Sum	Correlation Coefficient	1.000	.438**
		Sig. (2-tailed)	.	<.001
		N	90	90
	A_Sum	Correlation Coefficient	.438**	1.000
		Sig. (2-tailed)	<.001	.
		N	90	90

** . Correlation is significant at the 0.01 level (2-tailed).