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## WHY GADGET USAGE AMONG PRESCHOOLERS SHOULD MATTER TO TEACHERS? A PILOT STUDY

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### *Abstract*

*Undoubtedly, gadgets are devices for communication, entertainment and education as well for younger children. Children play with gadgets sitting or lying down at home and worse of all, apart from lacking in physical activity, they only communicate with the apps screen rather than with their parents. Besides parents, teachers are crucial in nurturing preschoolers during the early stage of their development. As a result, the current qualitative study interviewed 14 teachers to perceive their knowledge in gadget usage, sedentary behaviour and social skills among preschoolers. Besides that, teaching methods were also uncovered to understand how the teachers enhance the social skills of preschoolers and reduce their sedentary behaviour. Inductive Analysis (IA) revealed that most teachers reported that, "Parents always give their mobile phones" to the preschoolers and interestingly, the preschoolers said, "Tell the teachers that they are playing gadgets at home." Moreover, some of the teachers reported that gadgets are not safe for preschoolers if too much time is spent on them. As predicted, all the teachers were apparently unaware of the detriment of gadget usage on sedentary behaviour and social skills, especially for four-year-old children as most of them were quiet in preschool. The teachers' attitude and habit were found to be moderate in lesson planning and improving the social skills of preschoolers but minimal for addressing their sedentary behaviour.*

*Keywords: sedentary behaviour, social skills, preschoolers*

### **INTRODUCTION**

Gadgets are one of the fundamental devices we rely on in the new millennium. The younger generation is prompted to use them more often than before. According to O'Connor (2013), infants are keen to access technology and screen media in early childhood programs. As a whole, they are using gadgets with low energy, sitting or lying down, and the term "sedentary behaviour" explains such a condition. According to Biddle (2011), sedentary behaviour refers to primarily sitting or lying behaviour and spending time doing physically inactive tasks which do not require a lot of energy during waking hours. Children may accumulate extensive sedentary time whilst at school or at home. For instance, sitting while listening to teachers in class, during leisure time e.g. reading, playing video games, watching television (Biddle, 2011) and basically involve indoor activities. Findings from Alattraqchi et al. (2014) stated that one of the preschools in Kuala Terengganu

demonstrated that half of the preschoolers passed their leisure time watching television, even though they reported that they were interested in sports. The findings lend support to the fact that nowadays children have a more sedentary lifestyle. Besides sedentary behaviour, psychosocial is another factor that contributes to gadget usage (LeBlanc et al., 2012). Children are attracted to animation and music from the screen, thus, gadgets is always an alternative method for the “babysitter” to keep the children quiet. They interact with the screen instead of with their parents or peers. Such a phenomenon can cause speech delay, sleep problems, weak social skills and even brain damage, especially to younger children (NAEYC, Fred Rogers Canter, 2012).

There are inconsistent studies to clarify whether screen time is good or harmful for children (BHF National Centre, p. 3). Most parents reported that watching educational television programs helped in the learning process (Peisner-Feinberg, 2004). However, recent studies from Pagani et al. (2010), Tremblay et al. (2011), Ramirez et al. (2011) and Leatherdale and Ahmad (2011) concurred that screen time decreased academic achievement, fitness, lowered scores in prosocial behaviour and self-esteem, and instead increased victimization, lead to sedentary lifestyles and even obesity. Children are lacking in exposure to outdoor activities. For instance, in Singapore and Malaysia, besides watching television, playing gadgets could be the main factor of *myopia* (or, near-sightedness) in a seven-year-old girl with 325 degrees in each eye (Koh, 2012). Mainstream researchers are investigating the effects of screen time more than its benefits. Additional reports from BNH National Centre stated that quality research on exploring the effects of sedentary behaviour with other physical and psychological health outcomes in children and young people are required. There is a need to conduct an in depth study on the trend of gadget usage among preschoolers in Malaysia based on reports by teachers. Therefore, the following research question is formulated:

*RQ1: Do preschoolers like to play gadgets? Based on the teachers’ observations how does gadget usage among pre-schoolers relate to sedentary behaviour and social skills?*

Why do teachers matter instead of parents? The Malaysia Education Blueprint (2013-2025), accentuated the importance of teaching as a profession and is a significant factor in forecasting student outcomes. For instance, the report revealed that “*only 50% of lessons are being delivered in an effective manner*” (Preliminary Report on the Malaysian Education Development Plan 2013-2015, p. E14.). This statement indicated that the teachers’ teaching skills were modest, passive, and lacked knowledge on students’ mental, physical and psychological development. According to the report, there are five goals to be achieved in the year 2025 in the Malaysia Education Blueprint: 1) access, 2) quality, 3) equity, 4) unity and 5) efficiency. These five goals indeed require different groups of collaboration (teachers, parents, government and policy maker, society) to achieve the targets. Consequently, teachers were interviewed in the present study in order to understand their perception regarding the phenomenon of using gadgets among preschoolers.

A study from Rohaty Mohd Majzub (2013), clarified that issues in preschool education in Malaysia are on the rise and that the most prominent issue is curriculum, followed by management and monitoring, teaching and learning in the preschool classroom, philosophy and values, accessibility, equity and parent education. Most of the teachers are focused on the curriculum and lacked awareness of “play” to promote holistic development. The development of values and personality appeared to be a hidden curriculum in most of the preschools; co-curriculum activities are overlooked in order to produce super kids, yet with a lot stress. In addition, teachers lacked confidence to speak English in conducting lessons, and do not know how to integrate theory into practice. All these statements affirmed that the level of early childhood education is not qualified to meet the goals of the Malaysia Education Blueprint (2013-2025). As a result, the present study aimed to investigate whether the teachers were taught in an effective manner, especially for preschools. Therefore, the following research question is formulated:

*RQ2: How do teachers teach in preschools in order to improve the social skills of preschoolers and reduce their sedentary behaviour?*

Overall, the objectives of the present study are to 1) understand the gadget usage of preschoolers and whether it hampered or fostered sedentary behaviour and social skills based on the teachers' observations, and 2) to explore the teachers' teaching method(s) to improve social skills and reduce sedentary behaviour.

## **METHODS**

The present qualitative study utilized a Basic Qualitative Research approach, or Generic Qualitative Research/Inquiry (Patton, 2015) which can be found throughout the disciplines and in applied fields of practices, as it is the most common form of qualitative research found in education (Merriam, 2009). Generic qualitative researches focus on meaning, understanding, and the process with purposeful samples via interviews, observations, and documents. Generic Qualitative Inquiry in psychology is elucidated more specifically by Percy, Kostere and Kostere (2015) who stated that it is intended to investigate "*people's reports of their subjective opinions, attitude, beliefs, or reflections on their experiences, of things in the outer world*" (p. 78). Patton (2015) added that Generic Qualitative Inquiry is used when "*asking open-ended questions of people and observing matters of interest in real-world settings to solve problems, improve programs, or develop policies*" (p.154). The reason Generic Qualitative Inquiry was chosen was because the researcher had prior knowledge about the topic but required a more comprehensive description from the perspective of participants.

Semi-structured interviews were used in the present study, to obtain the most information from the teachers. According to Patton (2015), semi-structured type of interviewing allows the researcher and the participant to interact with the topic naturally and openly. The semi-structured interview protocol started with questions which followed a logical order, i.e. general questions to more specific ones. For instance, the interview began with the teachers' knowledge on gadget usage of preschoolers, sedentary behaviour and social skills. After that, it progressed to ascertaining the teachers' attitude and habit regarding how to reduce sedentary behaviour and improve social skills among the preschoolers. The interview questions are listed as follows:

1. In your opinion, what do you understand by "sedentary behaviour"?
2. Do you think sedentary behaviour is good for preschoolers?
3. From your observation, do preschoolers like to play gadgets? As a result, they lack physical activity?
4. In your opinion, do you think gadgets are good for preschoolers?
5. How often do you have recess in your class?
6. What are the activities that you usually implement in class during recess?
7. Do you think that social skills of preschoolers are poor? If yes, how can you improve on it?
8. Do you always plan some effective activities for preschoolers in class to reduce sedentary behaviour?
9. How do you plan to improve the social skills of preschoolers and reduce their sedentary behaviour in class?

## **PARTICIPANTS AND LOCATIONS**

A total of 14 teachers from two preschools (Pusat Minda Lestari, UMS, Sabah and Hi-Q, Pahang) were selected as samples for the study. They comprised two male teachers (14.3%) and 12 female teachers (85.7%). In terms of the ethnic composition of the teachers: six –Chinese (42.9%), four Bajau (28.6%), two Dusun (14.3%), an Indian (7.1%) and an Iban (7.1%). The criteria to select preschools as samples were based on the International ECEC Conference themed "Developing Human Capital Begins With Children" and a speech by the Prime Minister, The Most Honourable, Dato' Sri Mohd Najib Tun Abdul Razak on 14 April 2009. Early childhood education for children aged between 4 to 6 years is within the purview of three ministries: 1) Ministry of Education; 2) Ministry of Rural and Regional Development; and 3) Department of National Unity and Integration, Prime Minister's Department. The teacher-student ratio is 1: 25. As a result, preschools which met the criteria were selected for the present study.

## PROCEDURE FOR DATA ANALYSIS

Ethical permission for the present study was approved by the Ministry of Education Malaysia and the Sabah State Education Department. Apart from this, informed consents were gathered from teachers and parents before the qualitative study was carried out. Interview protocol was planned and assisted by trained research assistants from the Psychology & Social Health Research Unit, University Malaysia Sabah. Interviewees agreed to the recording of the interview for data analysis.

Inductive Analysis (IA) was used in data analysis and compared with rich descriptions and presented as themes/categories. IA is a set of data which does not attempt to fit data into any pre-existing categories. Data was collected from 14 teachers and analyzed individually. The patterns and themes from all participants were combined together to form a synthesis, and the meanings and/or implications, interpreted. According to Percy, Kostere and Kostere (2015), there are 12 steps in inductive analysis and these steps will be explained briefly in Table 1.1.

Table 1.1

### *Step by Step Description of Inductive Analysis for Generic Qualitative Inquiry in Psychology*

<b>Steps</b>	<b>Description</b>
1	Review and familiarize with the data by reading each data individually.
2	Review the highlighted data and relate it with the research question(s).
3	Eliminate all highlighted data that is not related to the research question(s). However, open a separate file to store unrelated data which might be useful later.
4	Code the data in pieces. Code it simply.
5	Cluster items of the data that are related or connected to develop a pattern(s). For each distinct pattern, describe it using a phrase or statement. Assign a second level code if necessary. Note that the words to describe the patterns are no longer the words of the participants, but your own words - make it meaningful to specialists in the field.
6	Identify items of the data that correspond to the specific pattern(s). Place them in the previously assembled cluster in step 5 which manifests the pattern.
7	Examine all the patterns and look for the emergence of an overarching theme(s), which refers to "the patterns of patterns" which involve combining and clustering related patterns into themes.
8	Arrange the themes in a kind of matrix with their corresponding supportive patterns. Include also the codes or descriptors for each of the data clusters.
9	For each theme, write a detailed abstract analysis describing the scope and substance of each theme.
10	Repeat the process for each theme.
11	Combine the analysis of data for all participants including patterns and themes that

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are consistent across the participants' data.

- 12 Finally, the themes are synthesized together to form a composite synthesis of the data collected regarding the questions under inquiry.
- 

Source: Percy, Kostere and Kostere (2015)

All qualitative data was analyzed using Maxqda version 12. Maxqda is a tool for computer-based qualitative data analysis. It works with rich text and multimedia formats, and helps to organize, classify, and code qualitative data (Saldana, 2013). This software was chosen because it allows for visualizing data, provides a flexible coding system, incorporates a smart publisher for reporting and it is especially designed for mixed-methods research. More importantly, there is no best software to analyze data and only the process of analyzing data (Saldana, 2013).

## RESULTS

The qualitative analysis focused on two objectives: (1) gadget usage of preschoolers and whether it hampered or fostered sedentary behaviour and social skills based on the observation of teachers, (2) teachers' attitude and habit of teaching preschoolers by focusing on sedentary behaviour and social skills.

- a) *Gadget usage of preschoolers and whether it hampered or fostered sedentary behaviour and social skills based on the observations of teachers*

Of the 14 teachers interviewed, 38.5 percent of the teachers reported that parents always gave their mobile phones to their children in order to keep them quiet, followed by 30.8 percent of teachers who mentioned that the preschoolers would inform their teachers that they were playing with gadgets at home when they saw mobile phones and computers in preschool. In terms of sedentary behaviour, all of them (14/14) never heard of the term, "sedentary behaviour" and had little knowledge about it. Teachers said,

*"I have a student who likes to play with mobile phones. Every morning he plays games using his mother's mobile phone on the way to school. One day, he refused to return his mother's mobile phone. Then I saw them arguing inside the car for a couple of minutes". [3\_zai; Position: 19-19; Author: Janice; 3/1/2016, 12:28 PM]*

*"I know they like to play with gadgets because many preschoolers will tell us that they like to play mobile phone games at home". [5\_asmah; Position: 13-13; Author: Janice; 26/1/2016, 2:07 PM]*

*"From my observation, preschoolers prefer to play with mobile phones - all the gadgets, compared to talking to friends, especially those sitting just beside them. Moreover, we noticed that no matter where we go, parents pampered their children by allowing them to play with mobile phones". [6\_Juliana; Position: 9-9; Author: Janice; 30/12/2015, 8:38 PM]*

On the other hand, 15.4% of the teachers reported that some of the preschoolers did not like to play with iPads and that it depended on the children's mood. Interestingly, a teacher said:

*"They told me iPad is not fun at all, because you need to use your brain to pass a certain level in the game. The child couldn't pass that level, then he said, not fun at all." [teacher 7; Position: 8-8; Author: Janice; 26/1/2016, 12:48 PM]*

When asked questions about social skills, the teachers stated that social skills of preschoolers have so far been good (87.5%) and only a minority of them had social skills which were a bit weak (12.5%). Figure 1.1 has the model showing the knowledge of teachers regarding sedentary behaviour, gadget usage and social skills.

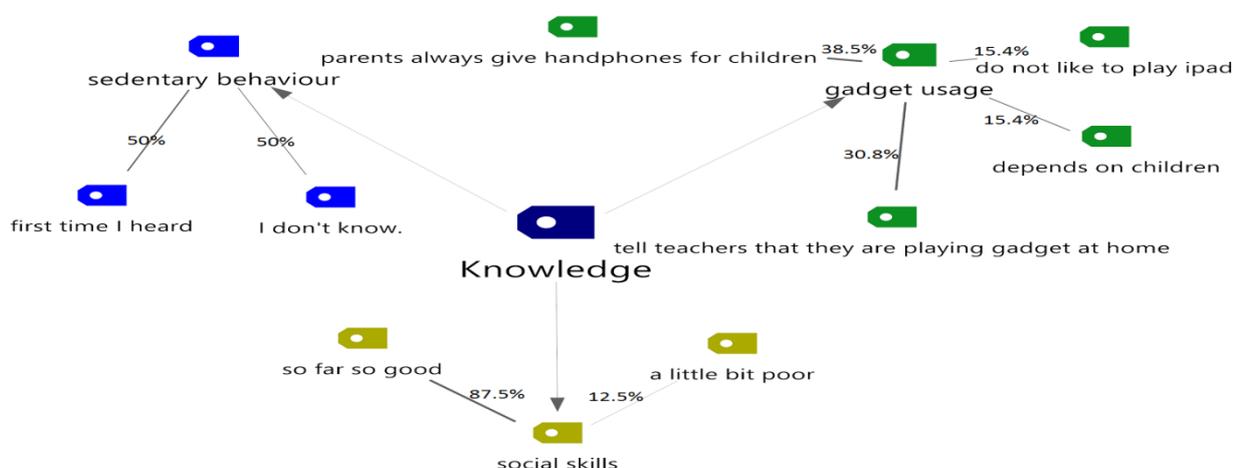


Figure 1.1: Model showing the knowledge of teachers regarding sedentary behaviour, gadget usage and social skills.

The teachers’ opinion was modest when asked whether knowledge of gadget usage hampered or fostered sedentary behaviour and social skills. In addition to this, they also provided information regarding the pros and cons of gadget usage. Table 1.2 and Figure 1.2 show overviews of the teachers’ observations on preschoolers’ gadget usage, sedentary behaviour and social skills.

Table 1.2

Main Categories and Codes for Advantages and Disadvantages of Gadget Usage, Sedentary Behaviour and Social Skills

Main Category and Code	Frequency
<b>1. Advantages of Gadget Usage</b>	<b>13 (14.4%)</b>
Learning purpose	6
Can learn IT	4
Up to date	3
<b>2. Disadvantages of Gadget Usage</b>	<b>20 (22.2%)</b>
Addicted	4
Poor socialization	4
Not good to play for too long	3
Fail to remember other things	2
Not good for eyesight	2
Not interested in learning	2
Less physical activity	1
Can't sleep	1
Radiation	1
<b>3. Advantages of Sedentary Behaviour</b>	<b>3 (3.3%)</b>
Sit and think while playing games	2
Relaxing	1
<b>4. Disadvantages of Sedentary Behaviour</b>	<b>16 (14.8%)</b>
No communication	6
No exercise	5
Affect development	2

Too much is not good	2
Obesity	1
<b>5. Good Social Skills</b>	<b>11 (12.2%)</b>
Can socialize too	9
Prefer to chit chat with friends	2
<b>6. Weak Social Skills</b>	<b>27 (30%)</b>
4 years old	8
Quiet	5
Weak comprehension skills	3
Communication is still weak	3
Mandarin is ok but not very good in English and Malay	2
Baby talk	2
Poor attitude	2
No response	1
Slow	1
<b>Total</b>	<b>90</b>

Most of the teachers had a negative opinion with regards to gadget usage (22.2%), sedentary behaviour (14.8%) and social skills (30%). Only a minority said that gadget usage (14.4%), sedentary behaviour (3.3%) and social skills (12.2%) were good for the preschoolers. From the findings, it was believed that gadgets for preschoolers were used for learning purposes, simultaneously encouraging preschoolers to be up to date with technology. Teachers said,

*"Gadget is a good development in language. What I mean is English, because sometimes they learn English through the use of gadgets, which is good". [7\_Farzana; Position: 15-15; Author: Janice; 19/1/2016, 9:18 AM]*

*"Children can learn more about IT". [teacher 2; Position: 10-10; Author: Janice; 5/1/2016, 9:19 PM]*

However, teachers also acknowledged that gadget usage caused addiction, poor socialization, fail to remember other things, not good for eyesight, not interested in learning, less physical activity, can't sleep and exposure to phone radiation. Teachers said,

*"Children communicate less with the environment, especially with parents". [3\_zai; Position: 27-27; Author: Janice; 13/1/2016, 9:11 PM]*

*"Some children are addicted to the games as they can pass a certain level". [teacher 7; Position: 8-8; Author: Janice; 5/1/2016, 10:25 PM]*

*"Children are not interested in learning if they spent too much time on gadgets". [6\_Juliana; Position: 29-29; Author: Janice; 13/1/2016, 9:33 PM]*

When asked whether gadget usage was good for preschoolers in terms of sedentary behaviour, further investigation revealed that the majority agreed that too much usage of gadgets would influence sedentary behaviour (14.8%). For instance, no communication, no exercise could affect development, and even lead to obesity. On the other hand, only a few teachers thought it was actually good for preschoolers to sit down quietly to think while playing games and relaxing. Teachers said,

*"If at home, actually it is family time with the children they should communicate with each other, do activities together instead of sitting down. But parents give gadgets to children*

*and thus lead to lack of communication and physical activities. From my observation, that is why they do not talk to each other and the parents do not know their children's development. Sometimes in preschool, when we inform the parents about the children's poor behaviour, the parents are also surprised". [7\_Farzana; Position: 9-9; Author: Janice; 30/12/2015, 8:40 PM]*

*"Too much playing with gadgets will cause lack of physical activity". [Teacher 3; Position: 8-8; Author: Janice; 5/1/2016, 9:03 PM]*

*"If you get them to play games that stimulate the brain, then they need to sit and think, because children get easily distracted, can't focus for too long. If you ask them to sit quietly to play some puzzles, they run away in less than 3 minutes". [Teacher 7; Position: 6-6; Author: Janice; 30/12/2015, 8:40 PM]*

“Weak social skills” was the prominent category (30%) and teachers surmised that the four-year-old preschoolers were weak in social skills compared to five and six-year-old preschoolers. In addition, the teachers revealed that preschoolers nowadays were quiet, had poor comprehension, weak in communication, resort to baby talk, poor attitude, fail to respond and slow when asking questions in class. Teachers said,

*"Early age preschoolers do not communicate, do not like to mix around, and do not like to go to school". [5\_Asmah; Position: 29-29; Author: Janice; 2/1/2016, 12:08 AM].*

*"Some of the preschoolers don't really understand what I want to say, their comprehension is weak". [Teacher 5; Position: 14-14; Author: Janice; 3/1/2016, 1:25 PM]*

*"Children's attitude toward academic is extreme, they can't fail in examination and they always compete with each other in class, and this competition affected their mood"[Teacher 1; Position: 15-15; Author: Janice; 5/1/2016, 3:10 PM]*

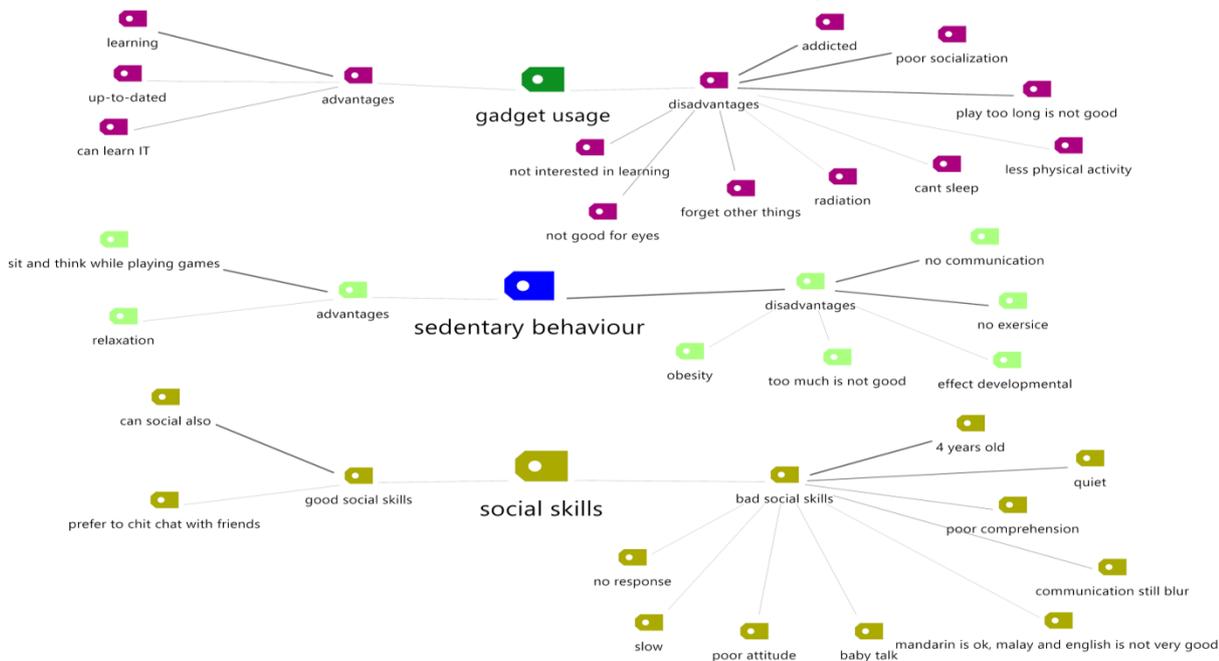


Figure 1.2: Model showing the advantages and disadvantages of gadget usage, sedentary behaviour and social skills.

b) Teachers' Attitude and Habit in Teaching

Teachers were asked about their methods of teaching preschoolers in terms of improving social skills and how they planned their teaching lessons. Results showed that out of the 14 teachers, only three reported that they always or sometimes planned how to improve their students' social skills; four of the teachers stated that they did not plan at all as they had no idea how to plan, less play time, not enough time and had problems planning; seven of the teachers did not provide any ranking in planning. The teachers also complaint that they had a tight teaching schedule. Teachers said,

*"In this preschool we have less play time, because we are more focused on academic matters". [teacher 2; Position: 16-16; Author: Janice; 27/1/2016, 11:43 AM]*

*"I have no idea how to plan to improve students' social skills." [teacher 6; Position: 16-16; Author: Janice; 3/1/2016, 12:24 PM]*

The most common method that teachers used to improve social skills was by getting students to present in front of other preschoolers and form groups during class. Other methods include seeking the attention of preschoolers, placing a quiet preschooler beside an active preschooler and also conducting short talking sessions. Teachers said,

*"We will ask the preschoolers to tell a story in front of the class. First, I will tell a story about myself. Then I will ask those who seldom talk to share their story in front of the class - some preschoolers can talk and some can't." [1\_Julyta; Position: 35-35; Author: Janice; 27/1/2016, 11:34 AM]*

*"We will have short talking sessions such as through question and answer. [7\_Farzana; Position: 25-25; Author: Janice; 13/1/2016, 9:16 PM]*

Upon further exploration, teachers revealed that they planned some daily activities during class: storytelling, singing, playing toys, colouring, emotion session, teaching using flash cards, reading and even running as refresher. When asked about the teachers' habit/routine regarding recess in class, it was found that the preschoolers had a 30-minute break without interrupting other activities. In addition, the preschoolers were given 5 minutes for relaxation after each session and 5 minutes of subject introduction before the start of another session. Some of the teachers reported that there was singing and dancing, playing in the garden, and playing puzzles during recess. Teachers said,

*"We have a "big book" for storytelling with preschoolers seated in a large circle". [7\_Farzana; Position: 25-25; Author: Janice; 5/1/2016, 3:11 PM]*

*"Before I start a lesson, I will create a happy mood first by singing a song". [3\_zai; Position: 39-39; Author: Janice; 5/1/2016, 3:12 PM]*

Table 1.3

*Main Categories and Codes of Attitude and Habit in Teaching Preschoolers*

<b>Main Category and Code</b>	<b>Frequency</b>
<b>1. Methods of Improving Social Skills</b>	<b>12 (25.5%)</b>
Present in front of class	4
Grouping	4
Seek attention	2
Sit beside an active peer	1
Short talking session	1
<b>2. Daily Activities</b>	<b>15 (31.9%)</b>
Storytelling	4

Singing	4
Playing with toys or colouring	3
Emotion session	1
Flash cards	1
Running	1
Reading	1
<b>3. Recess</b>	<b>20 (42.6%)</b>
30-minute rest	7
5 minutes of relaxation	4
Singing and dancing	2
Playing in the garden	2
5 minutes of subject introduction	2
Tight schedule	2
Playing puzzles	1
<b>Total</b>	<b>47</b>

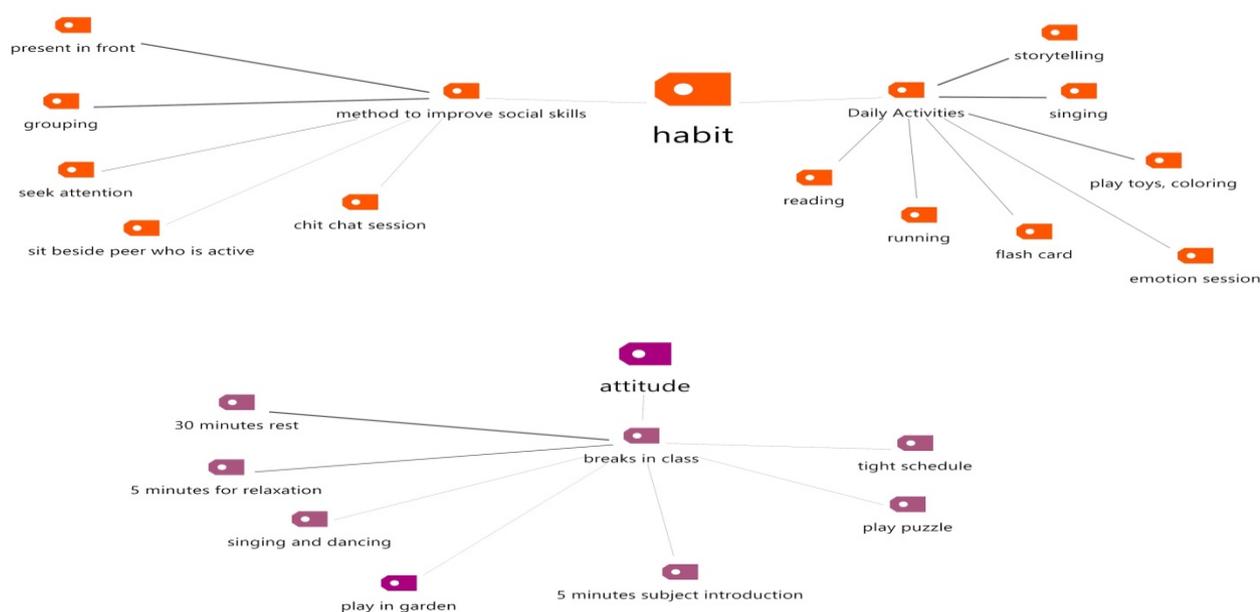


Figure 1.3: Model on Attitude and Habit of Teachers.

## DISCUSSIONS

- a) *Gadget usage and whether it hampered or fostered sedentary behaviour and social skills among preschoolers based on the observations of teachers*

The preliminary results showed that teachers had pointed out that preschoolers liked to play gadgets at home but at the same time expressed their negativity on the usage of the gadgets. In addition, teachers argued that there were advantages and disadvantages of using gadgets by preschoolers. The teachers agreed that imposing a time limit and using selected applications were key solutions for usage by preschoolers. On the other hand, teachers' knowledge on the usage of gadgets by preschoolers with regards to sedentary behaviour was inadequate. This could be due to the fact that their awareness of the term "sedentary behaviour" was still relatively new to them even though the interviewers explained the terms before asking questions. There is a rich area to explore in detail regarding the type of sedentary lifestyle that preschoolers are adapting to and whether this lifestyle is harmful for child development. According to previous researches, there were several studies

which examined sedentary behaviour in sports and exercise psychology (Biddle et al., 2013), behavioural nutrition and physical activity (De Decker et al., 2014; De Craemer et al., 2014; Jago et al., 2010), adolescent health (Ramirez et al., 2011), obesity (Manios et al., 2012; Steeves et al., 2012; Kreichauf et al., 2012), physical activity and health (Salmon, 2010). All these researchers came from science and health backgrounds instead of psychology, education or child development which prompted Biddle (2011) and LeBlanc et al. (2012) to stress that little is known about it from the psychological or educational perspective.

The knowledge of social skills among teachers was generally, on the exterior. Most of the teachers responded regarding preschoolers' communication skills and their poor understanding of language. According to Anme et al. (2013), social skills consisted of three subscales, 1) Cooperation - children's cooperative and empathetic behaviours, 2) Self-Control - children's behaviours that emerge in conflict situations, and 3) Assertion - a child's initiating behaviours. Therefore, the understanding of social skills is still ambiguous and apparent among the teachers; "social" was interpreted as "communicating skills" and "language". As a whole, the teachers' lacked informed knowledge concerning sedentary behaviour and social skills in the pilot study. Future interviews should precisely identify types of sedentary behaviour and lifestyle as well as provide explanations on specific types of social skills.

#### *b) Teachers' Attitude and Habit in Teaching*

The semi-structured interviews showed that the teachers' attitude and habit in teaching were moderate and that only certain teachers were creative in planning their lessons. Teachers were found to be less aware of children who were always sitting in class. Besides that, some teachers expressed negativity that they had no idea how to plan in order to improve preschoolers' social skills and to reduce their sedentary behaviour. This statement showed that teachers were lacking in skills of shaping good behaviour among preschoolers as they were more concerned with academic matters, for instance, can my students do well in mathematics or, can my students write properly. A current pilot study from Minges et al. (2016) suggested that the classroom standing desk has the potential to reduce sedentary behaviour among elementary school children and increase health-related outcomes. The recent study has reminded us that sedentary behaviour even though is not favourable, is rife and happens at all ages, especially younger children as less physical activity is reported in the new era (Tremblay et al., 2011). On the other hand, in terms of social skills, only a few teachers had planned lessons to attract the preschoolers in learning social skills. Therefore, the present qualitative study clearly postulated the importance of staff training in shaping pre-schoolers' social skills and reducing sedentary behaviour. Rohaty Mohd Majzub (2013) pointed out that these critical issues in preschools need to be solved. The present study contributed some new information to assist in the development of a systematic module for future researchers who are interested to promote healthy behaviour through play among preschoolers.

## **CONCLUSION**

Learning via play at school is changing with the tech-savvy world. Opportunities for children to play in school settings, both in the classroom and outdoors during recess, have been dramatically reduced (Christie & Roskos, 2014). Teachers should self-motivate with effective play techniques to reduce preschoolers' sedentary lifestyles and at the same time, enhance their social skills, interaction with peers and the environment. Should preschoolers' gadget usage be a concern to all teachers? Yes, it is the role of teachers to break the sedentary lifestyle in the preschool setting. Thus, it is advisable to introduce "fun and play" to encourage preschoolers to learn while playing. By reducing the usage of gadgets, preschoolers will have alternative physical play to enhance their social skills and achieve a healthier lifestyle.

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## REFERENCES

- Alattractchi, A. G., Muhamad Arif Fahmi Bin Abu Bakar, Farah Afiqah Binti Abu Bakar Mohamad, Anis Izzati Binti Abdul Kadir, Nur Amalina Binti Mohd Yahya, Nur Azmina Binti Juhari, Salwani Ismail, Nor Iza A Rahman, & Mainul Haque. (2014). Awareness of tadika's (kindergarten) children towards healthy lifestyle in Kuala Terengganu, Malaysia. *Journal of Applied Pharmaceutical Science*, 4(6), 115-122. DOI: 10.7324JAPS.2014.40618
- Anme, T., Shinohara, R., Sugiswa, Y., Tanaka, E., Watanabe, T., & Hoshino, T. (2013). Validity and reliability of the social skills scale (SSS) as an index of social competence for preschool children. *Journal of Health Science*, 3(1), 5-11. doi:10.5923/j.health.20130301.02.
- Biddle, S. J. H. (2011). Fit or sit? Is there a psychology of sedentary behavior? *Sport & Exercise Psychology Review*, 7(2), 5-10.
- Biddle, S. J. H., Petrolinim I., & Pearson, N. (2013). Interventions designed to reduce sedentary behaviours in young people: A review of reviews. *Br J Sports Med*, 1-5. doi:10.1136/bjsports-2013-093078
- BHF National Centre. (no yr.). *Physical activity+health*. pp:3.
- Christie, J. F., & Roskos, K. A. (2014). Play with a purpose: creating meaningful environment with children, families, and communities in the United States. In Huo, L., Neuman, S. B., & Nanakida, A. *Early Childhood Education in Three Cultures: China, Japan and the United States*. US: Springer Berlin Heidelberg.
- Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.
- De Craemer, M., De Decker, E., Verloigne, M., De Bourdeaudhuij, I., Manios, Y., Cardon, G., and on behalf of the ToyBox-study group. (2014). The effect of a kindergarten-based, family-involved intervention on objectively measured physical activity in Belgian preschool boys and girls of high and low SES: the ToyBox-study. *International Journal of Behavioral Nutrition and Physical Activity*, 11(38). Retrieved at 29 May, 2014, from <http://www.ijbnpa.org/content/11/1/38>. doi:10.1186/1479-5868-11-38

- De Decker E., De Creamer, M., De Bourdeaudhuij, I., Verbestel, V., Duvinage, K., Iotova, V., Grammatikaki, E., Wildgruber, A., Mouratidou, T., Manios, Y., & Cardon, G. (2014). Using the intervention mapping protocol to reduce European preschoolers' sedentary behaviour, an application to the ToyBox-Study. *International Journal of Behavioural Nutrition and Physical Activity*, 11(19), 1-18. doi: 10.1186/1479-5868-11-19
- Jago, R., Fox, K. R., Page, A. S., Brockman, R., & Thompson, J. L. (2010). Physical activity and sedentary behaviour typologies of 10-11 year olds. *International Journal of Behavioural Nutrition and Physical Activity*, 7(59), 1-10.
- Koh, V. (May 20, 2012). (The Newspaper on Sunday, pp:12). *Myopia in east Asia at epidemic levels*. Retrieved at December 30, 2014, from <https://www.nie.edu.sg/>
- Kreichauf, S., Wildgruber, A., Krombholz, H., Gibson, E. L., Vogele, C., Nixon, C. A., Douthwaite, W., Moore, H. J., Manios, Y., & Summerbell, C. D on behalf of the ToyBox-study group. (2012). Critical narrative review to identify educational strategies promoting physical activity in preschool. *Obesity Reviews: International Association for the Study of Obesity*, 13(Suppl. 1), 96-105. doi: 10.1111/j.1467-789X.2011.00973.x
- Leatherdale, S. T., & Ahmed, R. (2011). Screen-based sedentary behaviours among a nationally representative sample of youth: are Canadian kids couch potatoes? *Chronic Diseases and Injuries in Canada*, 31(4), 141-146.
- LeBlanc, A. G., Spence, J. C., Carson, V., Gorber, S. O., Dillman, C., Janssen, I., Kho, M. E., Stearns, J. A., Timmons, B. W., & Tremblay, M. S. (2012). Systematic review of sedentary behaviour and health indicators in the early years (aged 0-4 years). *Appl. Physiol. Nutr. Metab*, 37, 753-772. doi:10.1139/H2012-063.
- Manios, Y., Grammatikaki, E., Androutsos, O., Chinapaw, M. J. M., Gibson, E. L., Buijs, G., Iotova, V., Socha, P., Annemans, L., Wildgruber, A., Mouratidou, T., Yngve, A., Duvinage, K., & De Bourdeaudhuij, I. on behalf of the ToyBox-study group. (2012). A systematic approach for the development of a kindergarten-based intervention for the prevention of obesity in preschool age children: the ToyBox-study. *Obesity Reviews: International Association for the Study of Obesity*. 1, 3-12. doi:10.1111/j.1467-789X.2011.00974.x
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. United State: John Wiley & Sons, Inc.
- Karl E. Minges, Ariana M. Chao, Melinda L. Irwin, Neville Owen, Chorong Park, Robin Whittemore, Jo Salmon. (2016). (Abstract). Classroom Standing Desks and Sedentary Behavior: A Systematic Review. *American Academy of Pediatrics*. 137(2).
- NAEYC, Fred Rogers Center. (2012). *Technology and interactive media as tools in early childhood programs serving children from birth through age 8*. Retrieved at May 29, 2014 from [http://www.naeyc.org/files/naeyc/file/positions/PS\\_technology\\_WEB2.pdf](http://www.naeyc.org/files/naeyc/file/positions/PS_technology_WEB2.pdf)
- O'Connor, L. (2013). The Huffington Post. One third of children under 2 have used smartphones, study says. Retrieved at 29 May, 2014 from [http://www.Huffingtonpost.com/2013/10/28/chil dren-and-technology\\_n\\_4171046.html](http://www.Huffingtonpost.com/2013/10/28/chil dren-and-technology_n_4171046.html).

- Pagani, L. S., Fitzpatrick C, Barnett, T. A, Dubow. E. (2010). Prospective association between early childhood television exposure and academic, psychosocial, and physical well-being by middle childhood. *Arch Pediatr Adolesc Med.*, 164(5), 425-431.
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. (4<sup>th</sup> edi.). Thousand Oaks, CA: Sage.
- Peisner-Feinberg, E. S. (2004). Child care and its impact on young children's development. *Encyclopaedia on Early Childhood Development*, 1-7.
- Percy, W. H., Kostere, K., & Kostere, S. (2015). Generic qualitative research in psychology. *The Qualitative Report 2015*, 20(2:5), 76-85.
- Preliminary Report Malaysia Development Plan (2013-2025). (2012). Ministry of Education Malaysia.
- Ramirez, E. R., Norman, G. J., Rosenberg, D. E., Kerr, J., Saelens, B. E., Durant, N., & Sallies, J. F. (2011). Adolescent screen time and rules to limit screen time in the home. *Journal of Adolescent Health*, 48, 379-385. doi:10.1016/j.jadohealth.2010.07.013
- Rohaty Mohd Majzub. (2013). Critical issues in preschool education in Malaysia. Proceedings of the 4<sup>th</sup> International Conference on Education and Educational Technologies (EET'13). *Recent Advances in Educational Technologies*.
- Saldana, J. (2013). *The coding manual for qualitative researchers*. (2<sup>nd</sup> edi.). Thousand Oaks, CA: Sage.
- Steeves, J. A., Thompson, D. L., Bassett, D. R., Fitzhugh, E. C., & Raynor, H. A. (2012). A review of different behaviour modification strategies designed to reduce sedentary screen behaviour in children. *Journal of Obesity*, 1-16. doi:10.1155/2012/379215
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.
- Tremblay, M. S., LeBlanc, A. G., Kho, M. E., Saunders, T. J., Larouche, R., Colley, R. C., Goldfield, G., and Gorber, S. C. (2011). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, 8:98. Retrieved at May 29, 2014 from <http://www.ijbnpa.org/content/8/1/98>

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