

# Period Poverty and Its Consequences among Secondary School Students in Perak, Malaysia

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**Abstract** Period poverty refers to the lack of access to menstrual products. More than a billion women currently lack access to even the most basic supplies during their period, which can be linked to the inconveniences faced by women during their menstruation. The aim of this study was to evaluate period poverty issues among secondary school girls aged 15 to 17 in Ipoh, Malaysia. A cross-sectional questionnaire-based study was conducted among female secondary school students in Ipoh, Perak in order to determine the prevalence of period poverty and its consequences among adolescent girls. The study type was a convenient study, which involved distribution of questionnaires to the secondary school girls. Based on attitude adequacy on menstrual health practices, results showed students had good practices in maintaining menstrual hygiene and only 8.57% had an inadequate level of menstrual practices. Besides, period poverty is not prevalent among secondary school girls in Ipoh, Perak. This was due to that only 16.67% of students experienced period poverty. Moreover, previous study on period poverty showed how it affecting the students lifestyle. Results showed that 20.95% skipped the attendance in school, 37.62% experienced emotional stress and anxiety and 39.05% did not change their menstrual products due to unclean washing facilities and 54.76% experienced lack of participation in school activities.

**Keywords** Period Poverty, Prevalence, Consequences, Secondary School Students

## 1. Introduction

Menstrual health is a topic that has been grossly neglected for millennia due to the negative stigma and misconceptions surrounding a woman's menstruation [1]. Menstrual health management includes the ability to access accurate information on menstruation, sanitary products, and clean and safe washing facilities by people who menstruate [2]. Proper menstrual health education must be given to young girls who are experiencing menarche as their bodies are undergoing many changes during adolescence [3]. The stigma surrounding menstruation is especially true for many girls, leading to the feeling of embarrassment and reluctance to discuss this topic with their peers or the adults in their lives [4]. The most concerning issue is that most young girls tend to be unaware of how their bodies are developing and how to deal with their first menstruation [5]. Period poverty has several causes, one of which is limited access to products [6]. Menstruation supplies are quite hard to get in schools, which puts students at risk. A lot of students leave school

early because there aren't enough supplies and they can't menstruate securely in class. However, there are several reasons that a student would skip class during her period such as physical symptoms, embarrassment, hiding, fear of leaking, product availability, and the capacity to control menstruation while in school [7].

Poor menstrual health has led to a number of problems that women experience during menstruation such as period poverty. Period poverty commonly includes social, economic, political, and cultural impediments to accessing menstruation supplies, education, and sanitary facilities [8]. In addition, poor menstrual health knowledge gives rise to poor menstrual practices such as wearing pads or tampons for too long in order to cut costs, absorbing menstrual blood with newspapers or dirty clothes, and not washing or washing the vagina with unsanitary water [9]. This will inevitably lead to more serious health complications like fungal infections, yeast infections, bacterial infections, Urinary Tract Infections (UTIs), and even death in extreme cases [10]. In Malaysia, period poverty is a relatively careless problem; many individuals are unaware of the potential consequences. Communities have neglected to address the stigma and discrimination associated with menstruation, the eradication of period poverty, and the removal of social, cultural, financial, and political barriers to promote menstrual health. Period poverty concerns may cause young people to lose out on opportunities for education and employment for adults. Secondary school girls (aged 15 to 17) were selected as our subjects because we wanted samples of adolescent girls who had reached menarche for future research on menstrual practices, impacts, and challenges. We also wanted to educate the next generation about period poverty at an early age and to take this issue seriously. It has therefore served as a tentative proof for us to investigate the frequency of period poverty among secondary school girls in Ipoh, Perak, for the reasons mentioned above. Therefore, the objectives of the present study are: 1. To study the knowledge and awareness of students regarding period poverty, 2. To study the students' practices in maintaining menstrual hygiene, 3. To explore the prevalence of period poverty cases among secondary school girls in Ipoh, Malaysia and 4. To study the consequences of period poverty on the students' lifestyles.

## 2. Materials and Methods

This study was carried out in Ipoh, Perak and involved 210 secondary school girls from three schools in Ipoh ranging from the ages 15 to 17. The schools were chosen through cluster sampling and would be identified as a representative of the socioeconomic diversity in the city of Ipoh consisting of urban, suburban, and rural areas. This study had been conducted throughout a span of 15 days,

from 19th January 2023 to 2nd February 2023.

### 2.1. Study Design

A cross-sectional questionnaire-based study was conducted among female secondary school students in Ipoh, Perak to determine the prevalence of period poverty and its consequences among adolescent girls. The study type was a convenient study, which involved distribution of questionnaires to each of the three participating schools and consisted of 39 questions to gather information based on their knowledge, awareness, and practices regarding menstrual health and period poverty. Sociodemographic data (age, education, household income, household size, religious affiliation) were collected using the self-reported questionnaire. The questionnaire was conducted in both Malay and English as these are the two most spoken languages in Malaysia. The questionnaire used in the study was extracted from the published paper and therefore not validated. However, some modifications were made to the questionnaire as per the need of the study.

### 2.2. Sample Frame and Size

The sampling size data for this study was calculated using the Sample Size for a Proportion or Descriptive Study on the web program OpenEpi version 3.01. The calculation was done by inputting the population size of 702 female students (ages 15 – 17) from across three secondary schools in Ipoh. This is followed by 50% anticipated frequency, 5% absolute precision and 1.0 random sampling. The calculated sample size in reference to the mentioned input is 196 with a confidence level of 90%. The sampling frame includes 210 students, expecting 70 female students from each participating school will take part in the study. The participating schools include:

1. Sekolah Menengah Kebangsaan (SMK) Raja Permaisuri Bainun – Urban area
2. Sekolah Menengah Kebangsaan (SMK) Buntong – Suburban area
3. Sekolah Menengah Kebangsaan (SMK) Aminuddin Baki – Rural area

These three schools were selected based on their area of location such as urban, semiurban and rural areas to examine the impact of environmental location on menstrual health, as there was a gap in educational performance between the students of rural and urban areas [11].

### 2.3. Sampling Method

A cross-sectional study design was used. Data were collected from a convenience sample of 210 female students from SMK Raja Permaisuri Bainun, SMK Buntong and SMK Aminuddin Baki using paper-and-pencil data collection methods.

## 2.4. Inclusion and Exclusion Criteria

Inclusion criteria are such as those who are between 15 and 17 years old, those attending a participating school, those who have a menstrual cycle and those given their consent to willingly participate in this study. Exclusion criteria are those below 15 and above 17 years and other criteria vice-versa.

## 2.5. Data Collection

A physical written questionnaire was developed for all participants which consists of 4 sections that contain information on their socio-demographic background (Section A), knowledge on menstruation and period poverty (Section B), menstrual health practices (Section C), and prevalence of period poverty (Section D). The questionnaires were pre-tested by public health lecturers of UniKL RCMP to ensure its accuracy, and councilors of participating schools to ensure that the content language is understandable by participants. The subject information, consent form, and questionnaires were distributed to the participants via school councilors of participating schools and the questionnaires were completed in the presence of the research team to answer any inquiries by the participants.

## 2.6. Data Analysis

The data obtained from participants were summarised and cleaned in Microsoft Excel. Then, it was exported to IBM Statistical Package for the Social Sciences (SPSS) version 20 for analysis and interpretations followed by

descriptive analysis as mean, total number, and percentage. T test was conducted to identify any associations between the categorical data. On the other hand, ANOVA test was conducted to observe any statistically significant differences between two or more groups of independent variables on a continuous or ordinal dependent variable. The outcome of all data collected was interpreted as tables, charts, and graphs.

## 3. Results

### 3.1. Sociodemographic Characteristics of Respondents

In regards to age, 15.24% were 15 years old, 46.67% were 16 years old, and 38.09% were 17 years old with the mean age of 16.2381. Among the respondents, the majority (48.57%) were of Malay race, while 9.05% were Chinese, and 42.38% were Indians. For religion, approximately half (50%) practice Islam, 6.67% practice Christianity, 34.29% practice Hinduism, 8.57% practice Buddhism, and others (Sikhism) were 0.47%. According to the individual household income (RM), Malaysian government divided the population into T20, M40 and B40 and this classification is based on a fixed income. B40 represents the bottom 40% of income earners, M40 the middle 40% and T20 the top 20% [12]. In the present study, more than half (71.43%) belonged to the B40 category, while 18.57% were from the M40 category, and 10% were from the T20 category. For residential areas, 62.4% lived in urban areas, 25.2% lived in suburban areas, and 12.4% lived in rural areas as shown in Figure 1.

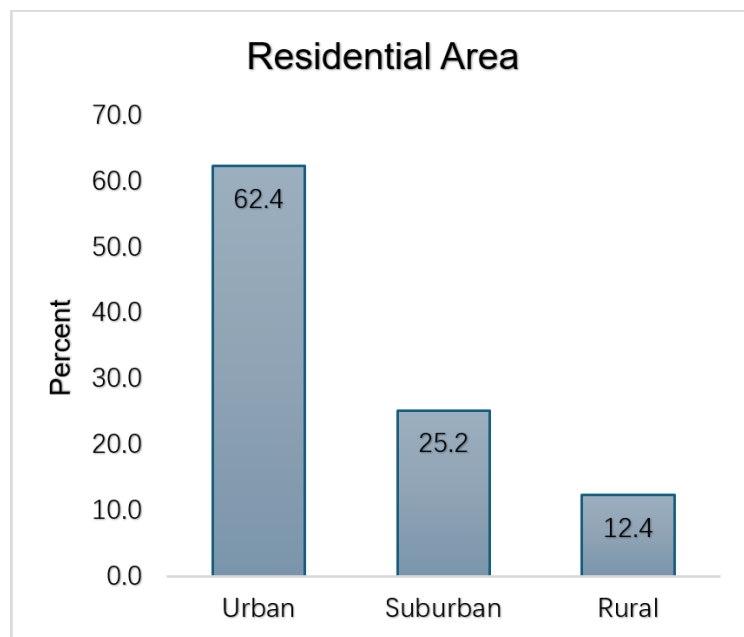


Figure 1. Residential area of respondents

### 3.2. Level of Knowledge on Menstruation and Period Poverty

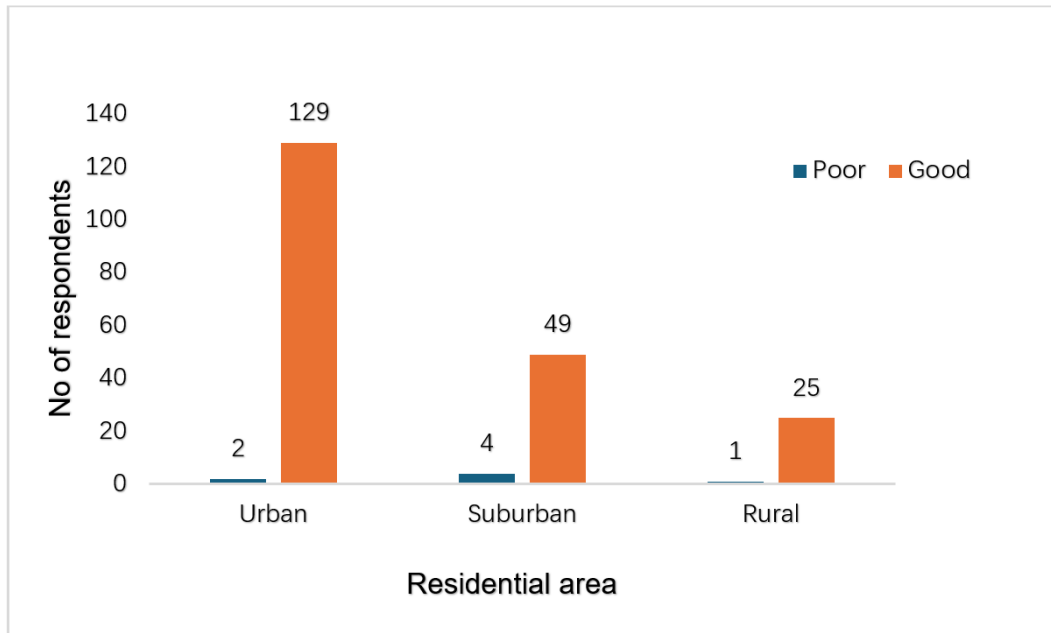
The results showed that 155 (73.81%) of the respondents answered correctly and were aware that period poverty is the lack of access to menstrual products, sanitation facilities, and adequate menstrual health education. In addition, 102 (48.57%) respondents knew that period poverty is not referring to any form of period abnormality like inadequate amount of blood and abnormal color of blood. Above half (71.43%) of respondents were informed that period poverty may lead to clinical implications like genital rash, vaginal discharge and more. Furthermore, 155 (73.81%) of the respondents correctly answered that period poverty can affect people emotionally and make them feel shame for menstruating. However, only 127 (60.48%) respondents were aware that period poverty is actually a crucial issue in Malaysia. A total of 147 (70%) respondents answered correctly that period poverty not only affects families with low household income, but that anyone from any income bracket can experience period poverty. Despite that, only 113 (53.81%) respondents knew that period poverty may negatively affect one's performance in school. Fortunately, 201 (95.71%) of the respondents were correctly informed that menstruation is the normal monthly bleeding from the vagina. However, less than half (31.9%) of respondents knew that menstruating for over 10 days is actually a normal occurrence. Whereas, 168 (80%) of the respondents knew that women will not menstruate their entire life. Additionally, 170 (80.95%) respondents knew that the menstrual cycle lasts an average of 28 days and consists of 4 cycles. Also, 183 (87.14%) of the respondents understand that ovulation is a part of the menstrual cycle. Notably, only 129 (61.43%) of the respondents were aware that menstrual cups are reusable and completely safe to use. Lastly, 188 (89.52%) respondents knew that menstrual products must be changed every 3 to 4 hours.

Results showed that 203 (96.7%) of the total respondents had a "good" understanding of menstruation and period poverty, while only 7 (3.3%) had a "poor" understanding of the matter. Figure 2 showed the results for the level of knowledge on menstruation and period poverty according to the different residential areas. In urban areas, 2 (0.95%) respondents had "poor" knowledge, while 129 (61.43%)

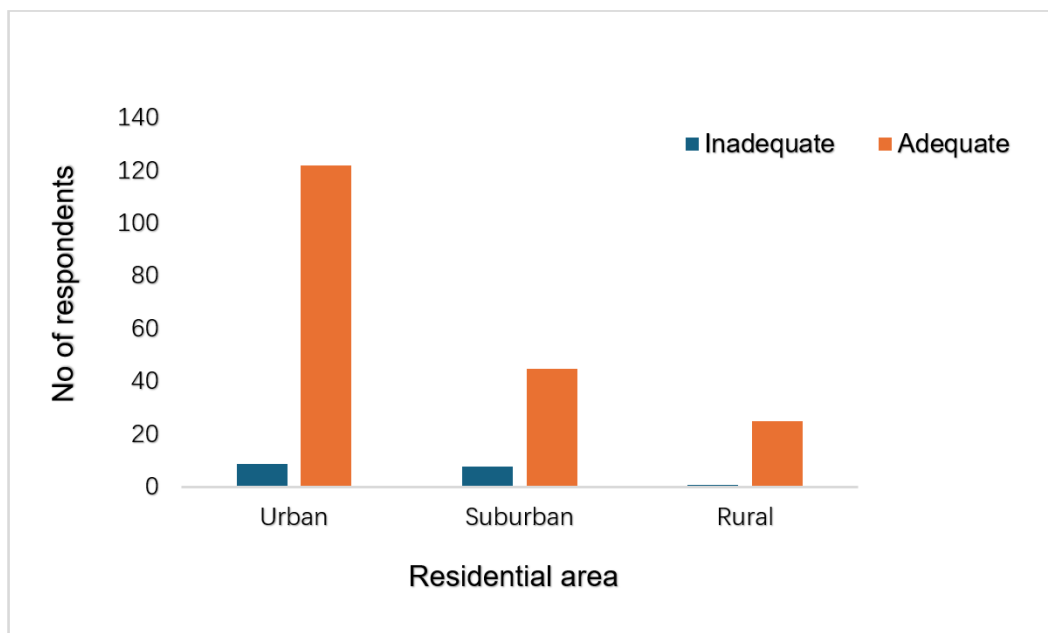
had "good" knowledge. As for suburban areas, 4 (1.9%) respondents had "poor" knowledge, while 49 (23.33%) had "good" knowledge. Lastly, for rural areas, 1 (0.48%) respondent had "poor" knowledge, while 25 (11.9%) had "good" knowledge.

### 3.3. Attitude Adequacy on Menstrual Health Practices

The results showed that 26 (12.38%) respondents don't mind using other menstrual products if they cannot access sanitary pads, 34 (16.19%) respondents don't mind sometimes, and 150 (71.43%) would not use other menstrual products. In addition, 181 (86.19%) respondents dispose of their sanitary pads into sanitary bins, 14 (6.67%) sometimes do it, and 15 (7.14%) do not. Furthermore, 191 (90.95%) respondents wrap their sanitary pads with paper before disposing of them. However, 33 (15.71%) respondents are embarrassed to buy or ask for menstrual products. Also, 152 (72.38%) respondents said that they always changed their menstrual products every 3-4 hours. Despite that, 173 (82.38%) respondents mentioned that they always clean their external genitalia with soap during their period. 194 respondents (92.38%) have no problem gaining access to menstrual products. Additionally, 43 (20.48%) respondents mentioned their prolonged usage of menstrual products due to lack of replacement, 47 (22.38%) sometimes experienced this, and 120 (57.14%) never did. Whereas, 42 (20%) prolonged usage of their menstrual products due to lack of washing facilities, 53 (25.24%) sometimes experienced this, and 115 (54.76%) never did. Lastly, 70 (33.33%) respondents said they would consult a doctor if they noticed any abnormalities in their external genitalia. The results showed that 192 (91.43%) of the total respondents had an "adequate" level of menstrual practices, while only 18 (8.57%) had an "inadequate" level of menstrual practices. Figure 3 showed the attitude adequacy on menstrual health practices according to different residential areas. In urban areas, 9 (4.29%) respondents had "inadequate" practices, while 122 (58.1%) had "adequate" practices. As for suburban areas, 8 (3.81%) respondents had "inadequate" practices, while 45 (21.43%) had "adequate" practices. Lastly, for rural areas, 1 (0.48%) respondent had "inadequate" practices, while 25 (11.9%) had "adequate" practices.



**Figure 2.** Level of knowledge on menstruation and period poverty according to residential areas



**Figure 3.** Attitude adequacy on menstrual health practices according to residential area

### 3.4. Prevalence of Period Poverty

A total of 13 (6.19%) respondents admitted they were struggling to afford menstrual products (such as sanitary pads or tampons) in the past 12 months, while 197 (93.81%) did not. Furthermore, 20 (9.52%) respondents said that they borrowed sanitary pads from friends or others in the past 12 months as they could not afford them, while 190 (90.48%) did not have this problem. Lastly, 9 (4.29%) respondents said that they used other menstrual products (such as toilet paper) in the past 12 months because they lacked sanitary products, while 201 (95.71%) did not experience this. The results showed that a total of 35 (16.67%) respondents experienced period poverty, while 175 (83.33%) did not face any problems with period poverty. As in Figure 4, in urban areas, 26 (12.38%) respondents experienced period poverty, while 105 (50%) did not. As for suburban areas, 7 (3.33%) said they experienced period poverty, while 46 (21.9%) did not. Lastly, for rural areas, 2 (0.95%) respondents experienced

period poverty, while 24 (11.43%) did not.

### 3.5. Consequences of Period Poverty

The results show that 44 (20.95%) respondents would skip school if they have limited menstrual products. Furthermore, 26 (12.38%) respondents suffer from low self-esteem and are embarrassed to ask for menstrual products from others. Also, 79 (37.62%) respondents experience emotional stress and anxiety when they have limited menstrual products. In addition, 82 (39.05%) respondents will not change their menstrual products if there are no clean washing facilities available. Whereas, more than half (54.76%) of respondents feel that their participation in school activities is restricted due to fear of leaking. Lastly, 104 (49.52%) respondents feel that poor maintenance of menstrual hygiene will lead to several kinds of infections (such as genital rash and urinary tract infections) as shown in Figure 5.

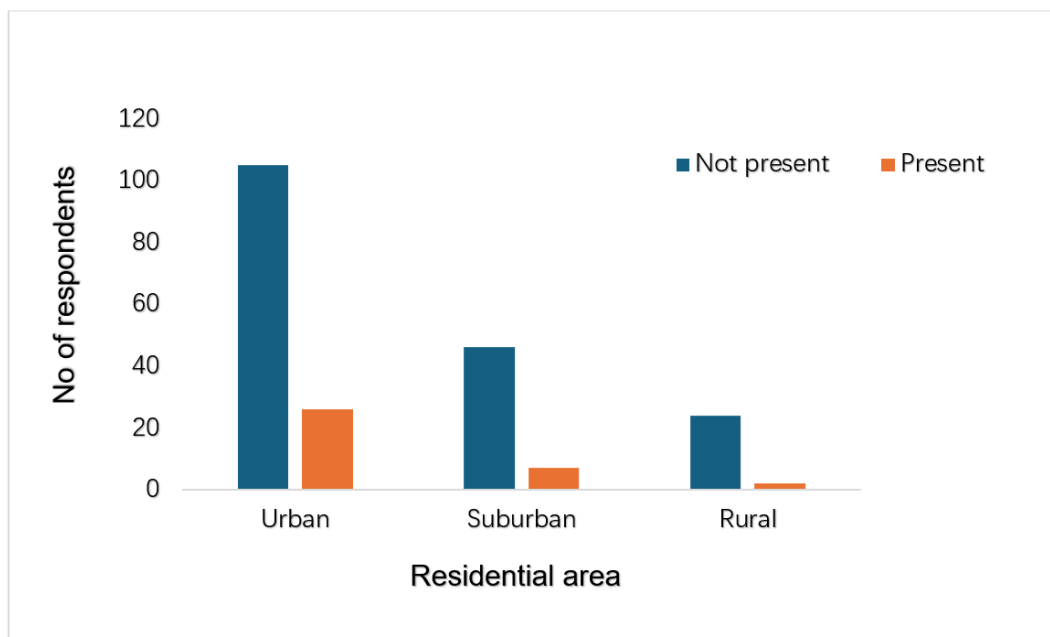


Figure 4. Prevalence of Period Poverty According to Residential Areas

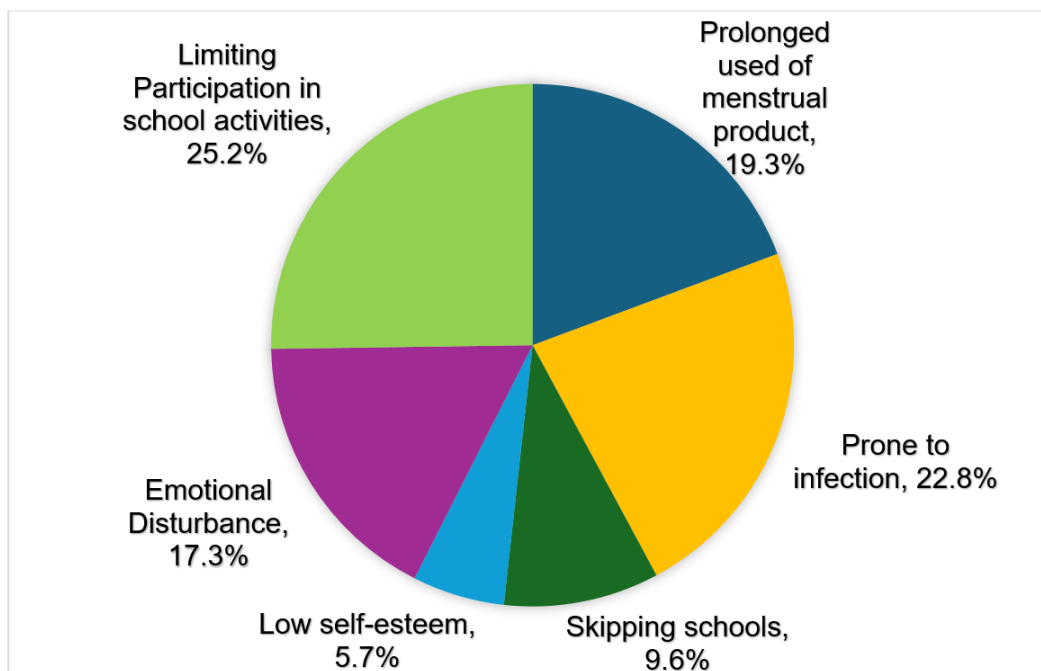


Figure 5. Consequences of period poverty

#### 4. Discussion

The results were discussed based on the respondents' living location in urban, semi-urban and rural areas where the schools were also situated. We thus go for convenience sampling method to select the respondents from the three schools. Apart from the difference in location that the schools are situated, there were no differences between the schools. The resources, infrastructure, learning curriculums are the same for all three national (Government) schools that take part in this study.

Based on the present study, it can be seen that the students who come from urban areas constitute the majority of the respondents (62.4%) followed by suburban (25.2%) and rural (12.4%). Firstly, in terms of the level of knowledge on menstruation and period poverty, we have observed that out of 210 respondents, 203 students have a good level of knowledge on period poverty and menstruation. This is due to several reasons which include effective learning about menstruation in school syllabus, excellent exposure to menstrual health by the parents and also, students' open-mindedness to talk and discuss about menstrual hygiene publicly [13]. This will help them to be aware of menstruation and how it can negatively impact them in their lives if left careless. The remaining seven respondents do not have a very good understanding about menstruation and period poverty. There are several reasons that contribute to this problem which include low exposure to these crucial matters, fear of being vulnerable and also menstruation or topics that are related to it is a taboo in their community [14].

One of the challenges needs to be dealt with throughout

the research period as some people have a mindset that states boys cannot talk about menstruation or the knowledge regarding menstruation and period poverty is only limited to females. In the study reported by Shamsudeen et al. [15], gaining knowledge about menstruation and the difficulties it causes could make the boys and adults to be more sympathetic and empathetic towards women and girls. The majority of the teenage boys in one of the research studies conducted, had heard of menstruation and understood what it means and characterizing it as a normal bodily occurrence. They did not, however, know enough knowledge about the menstrual cycle. Furthermore, with regard to menstruation and period poverty, the majority of responders employ effective procedures or methods to manage their menstrual health. Only 9 respondents from 131 respondents in urban area, 8 respondents from 53 respondents in suburban area and 1 respondent from 26 respondents in rural area do not practice satisfactory methods in maintaining their menstrual hygiene. This is caused by a few things, including period poverty and a lack of awareness of the consequences of poor menstrual hygiene. Period poverty generally refers to the inability to obtain menstruation care supplies as a result of poverty or accessibility issues. Some of the respondents may not be more concerned about maintaining excellent menstrual hygiene because their household income is lower than that of the others. In addition, a number of them reside in rural locations with limited access to supermarkets. Women were exposed to gynecological infections due to limited access to hygiene products and unstable sanitary conditions [16].

Moreover, in terms of the prevalence of period poverty,

our ingrained idea is that pupils from the rural areas will be more affected when compared to those living in urban and suburban areas. This is due to the poor accessibility to obtain the menstrual products. However, our findings clearly state that there is a large number of respondents in urban area that were also affected by this issue. 26 respondents out of 131 respondents in urban area are affected by period poverty whereas in suburban area, 7 respondents out of 53 respondents and in rural area, 2 respondents were affected out of 26 respondents. Furthermore, in terms of the consequences of period poverty, most of the students strongly agree that they would limit their participation in school activities (25.2%) as they fear leakage. This is an important issue as it restricts the students' participation and enthusiasm in joining extracurricular activities or even physical education classes just because they are unable to afford new menstrual products [17]. In contrast, a small number of the respondents strongly agree that low self-esteem (5.7%) is one of the negative impacts that one would experience if one is affected by period poverty. Despite not changing their menstrual products often, they do not have any issues regarding confidence and self-esteem. This indicates that to some of them, personal menstrual hygiene does not play a role in increasing one's confidence [18]. Based on the generated results, there is a large margin between the expected and observed counts for the areas of urban and rural which signifies that there was no strong association between residential area and period poverty. Respondents from all three residential areas were equally affected by period poverty. Comparative results were shown in a study done by Rossouw Laura et al [19], where women in urban settings are much more likely to have access to sanitary pads than women living in rural areas.

## 5. Conclusions

The aim of this study was to evaluate period poverty issues among secondary school girls in Ipoh, Perak. Based on the research that had been made, it shows that most of the students were knowledgeable and well aware regarding period poverty. Based on attitude adequacy on menstrual health practices, students have good practices in maintaining menstrual hygiene. Besides, period poverty was not prevalent among secondary school girls in Ipoh, Perak. However, period poverty clearly affects the student lifestyle including skipping school, experiencing emotional stress and anxiety, unwilling to change their menstrual products if there are no clean washing facilities and a lack of participation in school activities. There is no strong association between residential areas and period poverty.

## Ethical Approval

Ethical approval from University Internal Ethical

Committee was obtained.

## Conflicts of Interest

All contributing authors declare no conflicts of interest.

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