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Effects of Girls' Menstruation Cycles on Sustainable School Attendance, A Study of Mvomero District, Tanzania

ABSTRACT

Poor menstrual hygiene has been associated with serious ill-health, including reproductive tract and urinary tract infections. Inadequate water and sanitation facilities are a major impediment to school attendance for girls during menstruation. The objective of the study was to find out the effects of girls' menstruation cycles on sustainable school attendance in Mvomero district. The purposive sampling and simple random sampling methods were used in the determining the sample size of the study. A total of 116 respondents were involved in the study, i.e. Five heads of schools, five class teachers, six matrons and one hundred teenage girls aged 13-15 years from eighteen public secondary schools within Mvomero district. The data were collected through questionnaires and documentary reviews to determine the current situation on teenage girls' awareness of menstruation as a normal biological function, impacts of menstrual cycles on school attendance and the provision of sanitary towels amongst school girls and their influence on sustained school attendance. Validity of data was tested using the pilot study. Cronbach Coefficient Alpha was used to test the reliability where the coefficient of 0.86 was released and it was considered reliable. The quantitative data were analyzed and presented in the APA tables for discussion whereas the qualitative data were analyzed thematically. The study result revealed that most teenage girls have knowledge on menstruation as a normal biological function that occurs periodically. It was concluded that most teenage girls have knowledge on menstruation as normal biological function. The study further observed that most teenage girls had health challenges during their menstruation which negatively affected their sustainable school attendance.

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Keywords: Menstruation, menstrual cycles, teenage girls, school attendance, sanitary towels.

27 1. INTRODUCTION

28
29 Menstruation is a cyclic bleeding
30 occurring in all women under reproductive
31 age. It is characterized by blood flow
32 through female genital organs; normally
33 starts at puberty and stops at menopause
34 [1]. The menstrual hygiene management
35 is crucial for both physical and mental
36 health, education, and dignity of
37 adolescent school girls [2]. When good
38 menstrual hygiene practices are observed
39 they results into good menstrual health.
40 On the other hand, when menstrual
41 management practices are not well
42 controlled the ill effects are likely to be
43 encountered by females. Poor menstrual
44 hygiene has been associated with serious
45 ill-health, including reproductive tract and
46 urinary tract infections [3]. Inadequate
47 water and sanitation facilities are a major
48 impediment to school attendance for girls
49 during menstruation, compromising their
50 ability to maintain proper hygiene and
51 privacy [4]. More than half of schools in
52 low-income countries either have
53 insufficient toilets for girls or are
54 frequently not very clean. Inadequate
55 knowledge on menstruation and poor
56 sanitation at schools greatly affects girls,
57 especially menstruating girls, and further
58 creates unfriendly school environment for
59 them [5]. The challenges caused by poor
60 hygiene management will continue to
61 jeopardize the potentials of girls if they
62 are not properly addressed.

63 In many parts of the world, menstruation
64 was considered a secrecy issue which is
65 associated with taboo, and only women
66 could discuss it with their matured girls.
67 This led menstruation to be associated
68 with taboos. Literature review has
69 demonstrated the limits that menstruation
70 puts on school attendance and academic
71 attainment for girls [6]. Furthermore,
72 Mahon & Fernandes [7] concluded that
73 poor management of menstruation affects
74 many girls globally, and especially in Low-
75 and Middle-Income Countries. The
76 absenteeism seriously impacted girls'
77 achievements at schools. In essence
78 menstrual cycles should be taken as a

79 normal biological function of any female
80 who is at the puberty to maturity age.

81 However poor menstrual hygiene
82 management caused by lack of enough
83 information on menstruation, privacy,
84 washing facilities, and sanitary facilities
85 has caused the girls to be truant. An
86 observation by Bobel & Winkler [8] in
87 Western Africa revealed that the concept
88 of menstruation is considered as the
89 female issue and that it is the
90 responsibility of the women to educate
91 girls about it. On the other hand, lack of
92 awareness on menstruation among
93 teenage girls and ineffective menstrual
94 hygiene management in schools are
95 serious issues that lead to school
96 absenteeism for most girls. Chandra-
97 Mouli, et. al. [9] in Low and Middle Income
98 Countries observed that, many girls
99 across the world enter the adolescence
100 period with knowledge gaps on
101 menstruation thus being unprepared to
102 cope with it.

103 In Tanzania, menstruation is still a
104 debatable issue. Several Non-government
105 Organizations (NGOs) show their
106 concerns in raising the awareness on
107 menstruation, making various researches
108 on menstrual hygiene management,
109 advising the government on the
110 importance of policy formulation regarding
111 menstruation as well as supporting the
112 school girls through provision of sanitary
113 pads [9]. Furthermore, the Tanzanian
114 government has made several strategies
115 towards the MHM. In the year 2019, the
116 ministry of health agreed to incorporate
117 menstrual hygiene management as a
118 specific policy issue in the revised
119 National health policy which commits to
120 continue reform and resources towards
121 menstrual hygiene issues into the future
122 [10]. The measures help the marginalized
123 groups to have accessibility to sanitary
124 products thus influencing their sustainable
125 school attendance. Management of
126 menstruation is still a challenging issue
127 among secondary school girls in
128 Tanzania, and it involves psycho-social
129 and physical challenges. The findings by
130 Guya, et. al. [11] & Gabrielson [12] focused
131 on menstrual hygiene management

132 among secondary school girls in
133 Tanzania. This leaves the gaps on the
134 sustained school attendance by girls and
135 effects of truancy or irregular school
136 attendance.

137 The objectives of the study was to
138 determine if teenage girls in Mvomero
139 District are aware of their menstruation
140 cycles as a normal biological function, to
141 find out if menstrual cycles have an
142 impact on girls' sustainable school
143 attendance and to determine if girls in
144 Mvomero District are provided with
145 sanitary towels during their menstruation
146 for sustainable school attendance.
147 Further, the study would highlight the
148 effects of menstrual cycles on girls
149 sustained school attendance as well as
150 making suggested remedial measures.

151

152 1.1 Analytical and Theoretical 153 Framework

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155 The study was guided by the social
156 learning theory by Albert Bandura. The
157 theory explains the development of
158 behavioral pattern for humans. Bandura
159 considered stimuli as a source of
160 behavior; an individual is likely to develop
161 a pattern of behavior following the
162 external environment/ behavioral models.
163 According to this theory, behavior is
164 termed as a broad sense to include
165 motoric, cognitive and physiological sense
166 of response. It has been shown in a
167 series of studies that self-monitoring
168 reinforcement system can be readily
169 transmitted to children through exposure
170 of the self-reinforcement patterns
171 displayed by adults and peers [13]. The
172 theory assumes stimulus contiguity as a
173 necessary, but not a sufficient condition
174 for acquisition and performance of
175 modeled pattern of behavior. Inter-
176 personal relationship factors are
177 necessary preconditions for identificatory
178 learning; that parents serve as a decisive
179 role models during early developmental
180 period. (Children adapt behavior exhibited
181 by parents but not vice versa). During the
182 later stages of development, people adopt

183 behavior from peers, media and
184 surrounding community. The theory
185 further explains that observational
186 learning involves two representational
187 systems- an imaginal and verbal one.

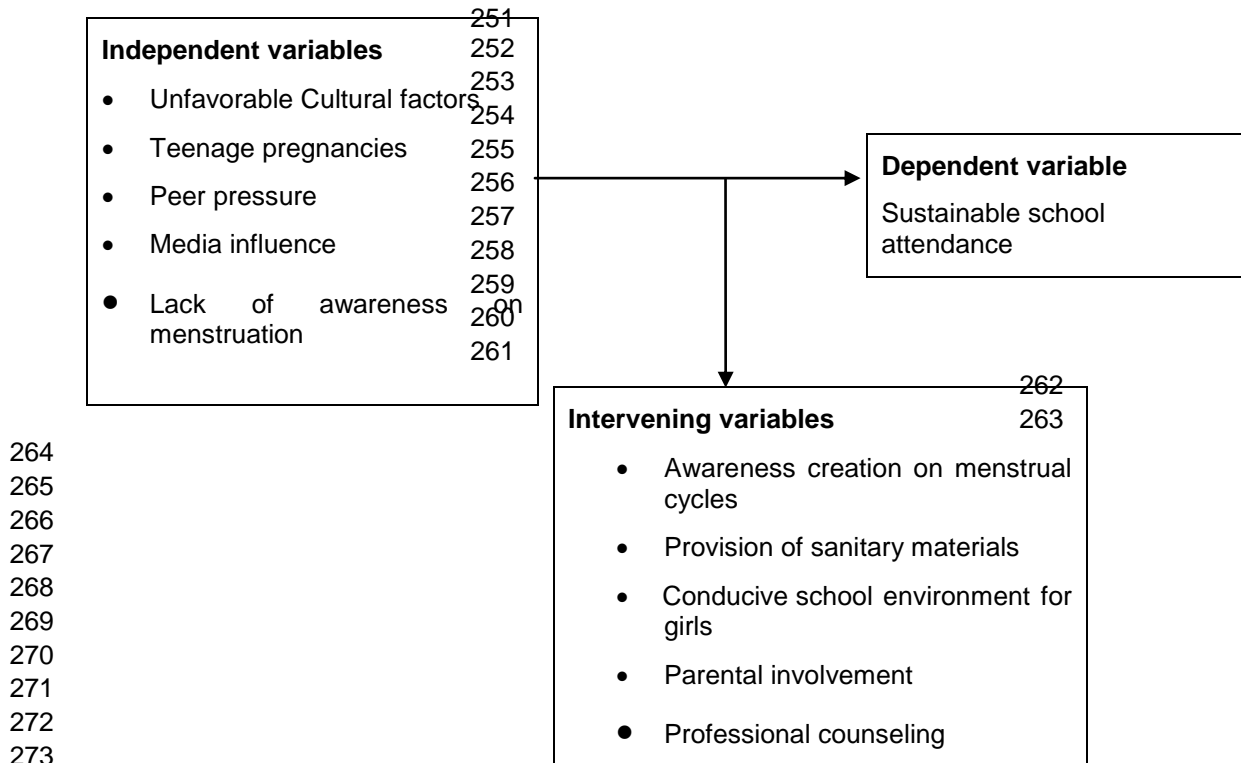
188 In this study the social learning theory is
189 relevant in determining the awareness of
190 adolescent girls in menstrual cycles and
191 its impacts on sustainable school
192 attendance. It implies that parents are
193 expected to be primary source of
194 information on menstrual cycles to their
195 children followed by peers, mass media
196 and school. According to this theory the
197 adolescent girls would learn about
198 menstruation through verbal explanation
199 and seeing their parents and community
200 at large considering menstruation as a
201 normal biological phenomenon and it
202 should not impede girls from attending to
203 school to acquire knowledge and attaining
204 their carriers. If the parents, peers and
205 the entire community have wrong
206 perception on menstruation as it is
207 secrecy and should be hidden, the
208 concept will be inherited to the coming
209 generations. The current study was set to
210 find out the effects of teenage girls'
211 menstrual cycles on their sustained
212 school attendance as described in the
213 developmental pattern of behavior in
214 social learning theory.

215 1.2 Conceptual Framework

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218 In the conceptual framework, it is
219 hypothesized that; lack of awareness
220 on menstruation, unfavorable cultural
221 factors, teenage pregnancies, lack of
222 sanitary materials in schools, poor
223 school environment for girls, lack of
224 parental involvement and professional
225 counseling are independent variables
226 that negatively affect sustainable
227 school attendance for girls. However,
228 awareness creation towards
229 menstruation, provision of sanitary
230 materials and hygienic environment
231 for girls, parental involvement and
232 professional counseling would
233 enhance sustainability to school
234 attendance.

235 Biljon and Burger [14] in South Africa 243
 236 observed that menstruation does 244
 237 have the repercussions for girls aged 245
 238 between 12-13 years' school 246
 239 attendance. However, the study 247
 240 observed that older girls do not have 248
 241 a higher probability of being absent 249
 242 during their menses. Thus,
 250

encountering menstruation for the first 243
 time presents challenges for girls in 244
 relation to school attendance. It is 245
 therefore imperative that effects of 246
 girls' menstrual cycles be highlighted 247
 and intervened on to avoid hindrance 248
 to regular school attendance. 249



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Figure 1: Conceptual framework on Factors affecting sustainable school attendance for teenage girls.

277 *Source: Researcher's construct in this study, (2022).*

278
 279 **2. RESEARCH METHODS AND**
 280 **METHODOLOGY**

281
 282 The study adopted the descriptive
 283 design based on the mixed
 284 methods approaches. Both
 285 quantitative and qualitative
 286 research approaches were used.
 287 This is due to its relativity to
 288 the study as the researcher
 289 investigated the effects of girls'
 290 menstrual cycles and its impacts

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to the sustainable school
 attendance. Thus, in employing
 this design, the researcher went
 to collect data in order to see the
 picture of the situation as could
 be. That is, to find out if the
 menarche has any impact on the
 sustained school attendance. The
 respondents were to say what
 happens and would not
 manipulate or treat the data but
 give it as the situation prevails.
 The purposive sampling and

304 simple random sampling methods 332
 305 were used in the determining the 333
 306 sample size of the study. A total 334
 307 of 116 respondents were selected 335
 308 i.e. five heads of schools, five 336
 309 class teachers, six matrons and 337
 310 one hundred teenage girls aged 338
 311 13-15 years from eighteen public 339
 312 secondary schools within 340
 313 Mvomero district. The data were 341
 314 collected through questionnaires 342
 315 and documentary reviews to 343
 316 determine the current situation on 344
 317 teenage girls' awareness of 345
 318 menstruation as a normal 346
 319 biological function, impacts of 347
 320 menstrual cycles on school 348
 321 attendance and the provision of 349
 322 sanitary towels amongst school 350
 323 girls and their influence on 351
 324 sustained school attendance. 352
 325 Validity of data was tested using 353
 326 the pilot study. Cronbach 354
 327 Coefficient Alpha was used to test 355
 328 the reliability where the coefficient 356
 329 of 0.86 was released and it was 357
 330 considered reliable. The 358
 331 quantitative data were analyzed

using Statistical Packages for
 Social Sciences (SPSS v.28) and
 presented in the APA tables for
 discussion whereas the
 qualitative data were analyzed
 and coded thematically for easier
 interpretation.

3. RESULTS AND DISCUSSION

3.1 Teenage Girls' Awareness on their Menstruation Cycles as a Normal Biological Function

The study was set to determining the girls' awareness on their menstruation cycles as a normal biological function. The respondents were asked to indicate by choosing the appropriate answer of the level of their awareness on menstruation by selecting the same on the alternatives provided. Table 1 presents the summary of the respondents' views on the awareness of their menstruation as a normal biological function.

359 **Table 1. Teenage Girls' Awareness of Menstruation as a Normal Biological**
 360 **Function (n=100)**

Item	Yes F (%)	No F (%)	Total F (%)
Menstruation is a normal biological function	89(89%)	11 (11%)	100 (100%)

361 *Source: Field Study 2022*

362
 363 Table 1 show that the girls who proved 377
 364 their knowledge on menstruation as a 378
 365 normal biological function that occurs 379
 366 monthly or periodically were 89(89%). 380
 367 While those who displayed ignorance that 381
 368 menstrual cycle is not a normal biological 382
 369 function were 11(11%). It seems that the 383
 370 majority of the teenage girls are aware of 384
 371 the meaning of the menstruation cycles 385
 372 though this knowledge might not be 386
 373 sufficient because the other 11(11%) 387
 374 indicated their lack of knowledge of the 388
 375 same. It is the role of all and sundry that,
 376 the school management and parents to

ensure that the girls obtain the correct information about menstruation so that

they are prepared to handle the situation appropriately.

Findings by Schmitt, et. al. [15] in USA show that majority of teenage girls across three cities in USA have some basic knowledge on menstruation, Bhattacharjee, et. al. [16] in West Bengal-India, found that only 23.4% (187 out of 798) knew about menstruation before menarche. Another study by Abreu-

389 Sánchez, et. al. [17] in Spain highlights the
 390 gaps in knowledge and/or self-evaluation
 391 among young people in relation to their
 392 menstrual normality or abnormality.

393 Furthermore, Cheng, et. al. [18] in Taiwan
 394 observed that most women knew about
 395 menstruation cycle before their first
 404 menstruation and enhance their comfort
 405 ability while at schools.

406 For the few girls who were not aware of
 407 the menstruation as a normal biological
 408 function could have been blinded by the
 409 misconception towards menstruation in
 410 the society or being taken as a taboo
 411 associated with it. Many girls across the
 412 world enter puberty with knowledge gaps
 413 and misconceptions about menstruation,
 414 therefore being unprepared to cope with it
 415 and unsure of when and where to seek
 416 help is a challenge to their attending to
 417 school daily [8].

418 It is observed that, much emphasis is
 419 needed to help them be aware of the
 420 menstruation as a normal biological
 421 function and that it should not create any
 422 hindrance in the attainment of their
 423 educational goals. Jain, et. al. [19] in India
 424 concluded that, a comprehensive
 425 awareness program has to be started
 426 among all levels of the society to remove
 427 misconception and taboos related to

396 period. However, the findings indicate that
 397 the girls and or women were not well-
 398 prepared to manage the emotions
 399 accompanied by it and accept
 400 menstruation cycle experiences. Thus,
 401 from the current study it is profound that,
 402 more efforts are required to make the
 403 teenage girls fully prepared to handle
 428 menstruation to make it pleasant. The
 429 basic knowledge on menstruation for
 430 teenage girls was necessary for the
 431 current research study which was set to
 432 determine the effects of menstrual cycles
 433 on the sustainable school attendance.

3.2 Teenage Girls' Training on Menstruation as a Normal Biological Function

439 In the current research study, the
 440 assessment on the training about teenage
 441 girls' menstrual cycles was established.
 442 The respondents, who comprised of
 443 school head teachers, matrons and class
 444 teachers, were asked to indicate if there
 445 are any training that are conducted at
 446 school to help the girls be aware of the
 447 menstruation as a normal biological
 448 function. Table 2 presents the summary of
 449 the respondents' ideas on the training that
 450 are given to teenage girls about menstrual
 451 cycles.
 452

453 **Table 2 Teenage Girls' Training on Menstruation at Schools (n=16)**

Item	Yes F (%)	No F (%)	Total (%)
Menstrual cycles training for girls	13(81.25%)	3(18.75%)	16 (100%)
Menstrual cycles training efforts to girls	12(75%)	4(25%)	16 (100%)
Programs for education girls about menstruation	8(50%)	8(50%)	16 (100%)

454 *Source: Field Study 2022*

455

456 Table 2 above shows that majority of the
 457 respondents 13(81.25%) agreed that the
 458 girls are trained about their menstrual
 459 cycle in their schools while 3(18.75%)
 460 disagreed to have such training in their

461 schools. Further; most respondents
 462 12(75%) agreed to have efforts made by
 463 the school to ensure that girls get
 464 awareness towards their menstruation
 465 cycles while 4(25%) respondents

466 disagreed on the presence of such efforts.
467 Lastly a half the number of respondents
468 8(50%) showed that there were programs
469 that educate girls about menstruation in
470 schools while the second half 8(50%) of
471 the respondents disagreed on the
472 presence such programs.

473 Educating girls about their menstrual
474 cycles in schools is very essential as it
475 prepares the girls to handle the situation
476 and can minimize the truancy rate in
477 schools. An observation by Alam, et. al.
478 [20] in Bangladesh showed that enabling
479 girls to manage menstruation at school by
480 providing knowledge and management
481 methods prior to menarche, privacy and a
482 positive social environment around
483 menstrual issues has the potential benefit
484 to students by reducing school
485 absenteeism.

486 Despite the claim of the 13(81.25%)
487 respondents that the menstrual education
488 is provided in schools it seems that this
489 education is inadequate or is not
490 continuous so that its impact is known to
491 others who disagreed. A report by
492 Tanzania Water and Sanitation Network
493 (TAWASANET) [21] on improvement of
494 menstrual hygiene management in
495 schools in Tanzania; revealed that
496 adolescent girls still need more
497 information on Menstrual Hygiene
498 Management (MHM) which should be
499 provided in schools. Knowing the status of
500 education concerning menstruation for
501 girls in schools is relevant to the current
502 research study which was set to
503 investigate the effects of girls'
504 menstruation cycles on sustainable
505 school attendance. In some schools there
506 are some efforts made to ensure that girls
507 get awareness on menstruation cycles.
508 This can be done during extra curriculum
509 activities like subject clubs, plays and
510 visiting trainers. Mkumbo [22] opined that
511 this is done following the existence of the
512 gap in the curriculum content concerning
513 the menstruation.

514 In the sub item on menstrual cycles
515 training efforts to girls 12(75%) the

516 respondents admitted that there are extra
517 efforts which are made within their
518 schools to train girls to the knowledge of
519 the menstruation. The efforts are very
520 useful to minimize the number of girls who
521 miss classes due to menstruation factors.
522 However, this should be done in all
523 schools to help teenage girls with the
524 similar challenge. The information on the
525 efforts done in schools to help girls about
526 menstruation is appropriate to the current
527 research study which was set to
528 investigate the effects of girls' menstrual
529 cycles on sustainable school attendance.

530 In the sub item of Programs for education
531 girls about menstruation 8(50%), it was
532 found that there are some NGOs that
533 offer support to school girls by providing
534 education and sanitary facilities. The
535 Netherlands development organization
536 (SNV) implements school girls' menstrual
537 hygiene management projects in eight
538 districts in Tanzania named; Chato,
539 Magu, Sengerema, Karatu, Babati, Siha,
540 Njombe and Mufindi [9]. A half of the
541 respondents 8(50%) admitted to have
542 such programs though they did not
543 specify the existing programs. Usually,
544 these programs are geared to help in
545 bridging the knowledge gaps that exists in
546 schools and support girls thereby
547 minimizing truancy rates in schools.

549 **3.3 Impacts of menstruation on** 550 **girls' sustainable school** 551 **attendance**

552
553 The study aimed at finding out if
554 menstrual cycles have any impact on
555 girls' sustainable school attendance in
556 Mvomero district. Respondents were
557 asked to express by choosing among the
558 given responses how they felt at the onset
559 of their first menstruation. It was assumed
560 during this study that the first onset of the
561 menstrual cycle would set the trend for
562 girls' behavior on whether to attend
563 school during the menarche or not. Table
564 3 presents the summary of respondents'
565 perception at the onset of their first
566 menstruation.

567

568 **Table 3 Respondent's Perception on the onset of First Menstruation (n=100)**

Feelings	F (%)
Normal	12 (12%)
Scared	53 (53%)
Perceived to be Sick	35 (35%)
Total	100 (100%)

569 *Source: Field Study 2022*

570

571 Table 3 above shows that majority of
572 respondents 53(53%) were scared during
573 the onset of their first menstruation
574 followed by those who had sickness
575 thoughts 35(35%) while a handful of the
576 respondents 12(12%) felt normal. It is
577 evident that majority of teenage girls
578 53(53%) were scared during their first
579 menstruation because probably they were
580 not prepared to handle that situation in
581 which they found themselves. This implies
582 that most of teenage girls experience their
583 first menstrual periods with little or no
584 knowledge about the body change. Thus,
585 they don't know how to perceive or
586 behave during this vital change in their
587 teenage and or adolescence age. This
588 might have consequences on girls'
589 attendance to school as they may decide
590 to escape going to school due to fear of
591 unknown, shame and or the perception
592 that they are actually sick. Biljon and
593 Burger [14] observed that menstruation
594 does have the repercussions for girls
595 aged between 12-13 years. However, the
596 study observed that older girls do not

622 towards menstruation as it is considered
623 to be one of the many causes of the
624 increased truancy for school's girls. This
625 forms the necessity of this study which
626 was set to determine if menstrual flows
627 have any impact on girls' sustainable
628 school attendance.

629 On the other hand, few respondents
630 12(12%) considered their first
631 menstruation with normal perception
632 might. It seems that the girls might have

597 have a higher probability of being absent
598 during their menses. Basically,
599 menstruation should remain as a natural
600 phenomenon thus should not create any
601 disturbance towards the girls' activities
602 including normal school routine.

603 The study revealed that teenage girls who
604 had sickness thoughts 53(35%) held the
605 second position. The girls who thought
606 that they were sick could have decide to
607 stay at home and ultimately miss classes
608 during the menstruation days while others
609 could remain passively sitting in the back
610 row of their classes due to fear of leakage
611 and then being teased by boys at school.
612 Studies by Sommer, et. al. [23] in Kenya
613 and Adimna & Admna [24] in Nigeria
614 opined that lack of suitable changing
615 opportunities, ineffective sanitary
616 products, fear of leaking, shame and
617 stigma impedes girls' fullest participation
618 in their schooling. It is therefore
619 imperative that the government and
620 community members should break the
621 silence

633 obtained the menstrual information from
634 some reliable sources and thus prepared
635 them enough to manage menstruation. A
636 study by Bhattacharjee, et. al. [16] in West
637 Bengal found that only girls, who knew
638 about the menstruation before menarche,
639 would not be scared and or fail to perform
640 their daily activities including school
641 attendance. It is therefore recommended
642 that it is significant for the teenage girls to
643 have a prior knowledge on their
644 biochemical changes so that on the

645 menarche they don't get shocked at what
 646 has befallen them, instead manage the
 647 situation appropriately for their comfort
 648 and progress. Furthermore, additional
 649 interventions need to be employed to help

650 these teenage girls. Such help should
 651 range from awareness creation,
 652 menstrual facilities accessibility as well as
 653 supportive infrastructure for menstruation
 654 management at schools.

655

656

657 **3.4 Respondent's Sources of**
 658 **Sanitary Materials in a Month**

659

660 In the current research study, the
 661 respondent's source of sanitary material
 662 in a month was established. The

663 respondents, who were composed of
 664 school girls only, were asked to outline by
 665 choosing among the given alternatives
 666 the sources of their sanitary materials
 667 monthly. Table 4 presents the distribution
 668 summary of the respondent's source of
 669 sanitary materials in a month.

670

671 **Table 4 Respondent's Source of Sanitary Material in a Month (n=100)**

Source	F (%)
Par Parents	85 (85%)
Friends	9 (9%)
School	2 (2%)
Pocket money	4 (4%)
Total	100 (100%)

672 *Source: Field Study 2022*

673

674 From table 4 above it was found that
 675 respondents who obtained sanitary
 676 materials from their parents formed the
 677 majority 85(85%), whereas few
 678 respondents obtained sanitary materials
 679 from their friends 9(9%) while least
 680 respondents 4(4%) and 2(2%) obtained
 681 them from their own pocket money and
 682 schools respectively. It is evident from the
 683 table that parents 85(85%) acts as the
 684 major sources of sanitary materials for
 685 their girls. This shows that parents play
 686 their great roles in supporting their girls
 687 with sanitary materials. However, it is not
 688 stated what kind of sanitary materials
 689 parents offer to their girls. If parents offer
 690 poor sanitary materials to their girls, the
 691 girls might not use them and find those of
 692 their preference. On the other hand, there
 693 is variation in the economic level among
 694 the families; this may create classes
 695 among the girls at school as some girls
 696 might afford to buy expensive sanitary

697 towels while others would not. The same
 698 way some girls are living with their
 699 parents while others are not; thus, those
 700 who are not living with their parents may
 701 find difficulties in obtaining the sanitary
 702 materials of their preferences.

703 A similar observation was made by
 704 Malhotra, et. al. [25] in Uttar Pradesh, India
 705 revealed that parents' socio-economic
 706 status played a great role in
 707 comprehensive menstrual hygiene. The
 708 parents' education and financial status
 709 can influence knowledge and monetary
 710 support to girls during menstruation. The
 711 variation might create bias among the
 712 teenage girls at schools, as the result the
 713 girls may respond differently to such
 714 condition; some girls may decide to
 715 engage themselves to unsafe sexual
 716 relationships so that they can get sanitary
 717 materials, while others may decide to stay

718 at home during their menses due to
719 inferiority complex.

720 Furthermore, it was observed that 9(9%)
721 of the respondents obtain their sanitary
722 material from their friends. It is good for
723 the friends to help one another in different
724 circumstances. However, this might bring
725 temptation for the girls as they may
726 involve themselves in unsafe sexual
727 relationships which in turn it may lead to
728 early pregnancies and or diseases
729 transmission. A study by Nabikindu [26] in
730 Uganda claimed that the health problems
731 due to unsafe sex amongst youths
732 including sexually transmitted diseases,
733 unplanned early pregnancies and related
734 health complications. In addition, Phillips-
735 Howard, et. al. [27] in Kenya observed that
736 lack of adequate sanitary hygiene
737 products forces some girls to use un-
738 hygienic materials, potentially increasing
739 urogenital infections. New but limited
740 evidence also suggest that this need
741 leads adolescent girls to engage in
742 transactional sex in order to buy
743 menstrual products.

744 Furthermore, 4(4%) of respondents
745 indicated that they obtained their sanitary
746 materials from their pocket money. It
747 seemed that girls are comfortable once
748 they obtain sanitary towels of their own
749 preference. However, the socio-economic
750 factors influence the choice for sanitary
751 materials. A study by Garikipati, et. al. [28]
752 in India found out that a significant
753 proportion of young girls entering
754 menarche are directly adopting
755 disposable sanitary pads.

756 Lastly, schools were proved to have least
757 involvement 2(2%) on the support for
758 teenage girls' menstrual management. It
759 seemed that the current policies on
760 hygiene management in schools did not
761 put much emphasis on the importance of
762 sanitary facilities for school girls. It is
763 suggested that teenage girls should
764 obtain safe and quality sanitary materials
765 from reliable sources. Thus, the
766 government should work out on the
767 policies that would ensure the availability
768 of sanitary towels for girls and this should
769 be included in the government capitation.
770 The policy would help to reduce bias
771 among girls at schools, ensure
772 sustainable school attendance and hence
773 promote learning. A study by House, et.
774 al. [29] in Tanzania suggested that
775 menstrual hygiene management need to
776 be integrated into programs and policies
777 across key sectors including water,
778 sanitation and hygiene (WASH).

780 **3.3 The Help that Girls Need at** 781 **Start of their Menstrual Flows at** 782 **Schools**

783
784 In the current research study, the help
785 that girls need at the start of their
786 menstrual flow at school was established.
787 Teachers who formed the bulk of the
788 respondents were asked to give their
789 views by choosing among the given
790 alternatives on how they help girls who
791 start their menstrual flow at school. Table
792 5 presents the distribution summary of the
793 respondents' responses on how they help
794 girls who start their menstrual flow at
795 school.

796 **Table 5 Help that Girls need at the start of their Menstrual flow at School**
797 **(n=16)**

Help	F (%)
Sanitary towel provision	12 (75%)
Permission for going home	2 (12.5%)
No any consideration	1 (6.3%)
Consideration for needy students	1 (6.3%)
Total	16 (100%)

799

800 From table 5 above it is revealed that
801 respondents who said that they help girls by
802 providing sanitary towels formed the majority
803 12(75%), followed by few respondents
804 2(12.5%) who said that they help girls by
805 allowing them to go back home whereas equal
806 number of least respondents 1(6.3%) said that
807 they have no any consideration and they have
808 consideration for needy students only. It
809 seemed that in many schools there were
810 sanitary towels kept for girls who experience
811 their menstrual flows at school. This was
812 evident in the study as majority of the
813 respondents 12(75%) proved that they
814 provided sanitary towels for girls who started
815 their menstrual flow at school. This is very
816 useful as it reduces the fear of leakage among
817 the girls who start their menstrual flow at
818 school. Moreover, menstrual hygiene
819 management in schools is a great challenge
820 as it needs diverse strategies like availability of
821 water, soap as well as changing rooms. Lack
822 of suitable changing opportunities, ineffective
823 sanitary products, fear of leaking, shame and
824 stigma impedes girls' fullest participation in
825 their schooling [23, 24]. Furthermore, few
826 respondents admitted that they allowed girls to
827 go back home 2(12.5%). It seems that in some
828 schools there is no any help for girls who start
829 their menstrual flow at school. Sending them
830 back home might be good for girls as it keeps
831 them away from shame. However, this is not
832 right since it creates loop hole for truancy in
833 schools also girls fail to attend the on-going
834 lessons. It was further observed by Miiri, et.
835 al. [30] in Uganda that substantial
836 embarrassment, fear of teasing, menstrual

837 pain, and lack of effective materials for
838 menstrual hygiene management led to school
839 absenteeism among adolescent girls.

840 It was evident that in some schools there is no
841 any consideration made to girls who start their
842 menstrual flows at school as it was proved by
843 least respondents 1(6.3%). It seemed that in

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4. CONCLUSIONS

844 some schools the school management does
845 not have any kind of help for teenage girls who
846 start their periods at school. This might be due
847 to the fear or lack of awareness amongst girls
848 that they do not ask for such help and or the
849 school managements do not prepare
850 materials for girls. Patabendi [31] in Sri
851 Lanka revealed that most schools were faced
852 with difficulties in menstrual hygiene
853 management such as lack of facilities for
854 changing and safe disposal of used sanitary
855 napkins.

856 Lastly, the study has revealed that in some
857 schools only the needy students were
858 considered for help during their menstrual
859 flows 1(6.3%). Considering the needy students
860 might be good idea as it ensures that every
861 needy student gets the menstrual help.
862 However, it might create classes and be the
863 source of inequality among girls at schools. It
864 is noted that for effective performance of
865 students at schools, the equality concept
866 should be considered in the provision of social
867 services. Equality of opportunity is generally
868 considered to maximize the total social good,
869 increases social gains, and can lead to
870 diffusion of power to individuals [32].

871 It is suggested that there should be fair
872 treatment for girls to avoid bias at schools.
873 Menstruation should be considered as an
874 important issue for school girls thus policies
875 should be formulated to help girls on menstrual
876 management. The policies should focus on
877 awareness creation, facilities accessibility as
878 well as supportive school infrastructure for
879 proper and hygienic sanitation. By so doing it
880 would enhance sustainable school attendance
881 for girls and hence promote their learning.
882 Providing better sanitary care and puberty
883 education for school girls is one intervention
884 that might provide rapid effects with long
885 lasting positive consequences and thus should
886 be considered seriously by policy makers [33].

893 From the current study it can be 942
894 concluded that most teenage girls have 943
895 knowledge on menstruation as normal 944
896 biological function whereas they learned 945
897 the information from schools. However, 946
898 majority of the girls were scared during 947
899 the onset of their first menstruation due to 948
900 either fear, or the taboo associated with 949
901 the menarche or a mere fear due to new 950
902 development and life experience. The 951
903 study further concluded that, menstruation 952
904 cycles have negative impacts on 953
905 sustainable school attendance for 954
906 teenage girls; the impacts are resulted 955
907 from health challenges that most teenage 956
908 girls face during their menstrual flows as 957
909 well as the menstrual flows management 958
910 challenges. To ensure sustainable school 959
911 attendance for teenage girls, on the basis 960
912 of the study findings the following 961
913 recommendations are made: the 962
914 government should ensure that the 963
915 budget for sanitary towels is included in 964
916 the government capitation for schools. 965
917 The school management should ensure 966
918 that the 10% of the current budget in the 967
919 free education policy for helping girls who 968
920 start their menstrual flows at schools be 969
921 used as planned. The teenage girls 970
922 should be made aware and consider the 971
923 menstrual cycles as a normal biological 972
924 phenomenon for any maturing woman. 973
925 Thus, it should not hinder their attendance 974
926 to school. 975

927 **SUGGESTIONS FOR FURTHER** 928 **STUDIES**

- 929 1. Efficacy of boys awareness of the 976
930 girls' bio-physical conditions 977
931 978
- 932 2. The impacts of menarche on 979
933 female students' academic 980
934 performance. 981
982
- 935 3. The effectiveness of the supply of 983
936 disposable sanitary towels in 984
937 influencing girls' school 985
938 attendance. 986
987

939 **COMPETING INTERESTS**

940
941 No competing interests exists

942 **AUTHORS' CONTRIBUTIONS**

943 All authors read and approved the final
944 manuscript.”

945 **CONSENT**

946 As per international standard of university
947 standard, respondents written consent
948 has been collected and kept by the
949 authors(s)

950 **ETHICAL APPROVAL**

951 A number of ethical considerations were
952 considered during the study. All
953 respondents were informed about the
954 study in order to have their willingness to
955 cooperate. The participants were not
956 harmed psychologically and were assured
957 of anonymity and confidentiality of the
958 information which they provided.
959

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