

EFFECTS OF GIRLS MENSTRUATION CYCLES ON SUSTAINABLE SCHOOL ATTENDANCE A Study of Mvomero District, Tanzania

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18 ABSTRACT

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The study was set to investigate the effects of girls' menstrual cycles on sustainable school attendance in Mvomero district, Tanzania. 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. That is, 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, the impacts of menstrual cycles on sustained 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 reveals that most teenage girls have knowledge on menstruation as a normal biological function that occurs periodically. However, most respondents were scared during the onset of their first menstruation. The study further observed that most teenage girls have health challenges during their menstruation which negatively affect their sustained school attendance. It was found out that in most schools girls were provided with sanitary towels if their periods started while they are at school. This is done to address a crisis at hand to keep the girls in school.

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

23

24 1. INTRODUCTION

25

26 Menstruation is a cyclic bleeding
27 occurring in all women under reproductive
28 age. It is characterized by blood flow
29 through female genital organs; normally
30 starts at puberty and stops at menopause
31 [1]. The menstrual hygiene management
32 is crucial for both physical and mental

33 health, education, and dignity of
34 adolescent school girls [2]. When good
35 menstrual hygiene practices are observed
36 they results into good menstrual health.
37 On the other hand, when menstrual
38 management practices are not well
39 controlled the ill effects are likely to be
40 encountered by females. Poor menstrual
41 hygiene has been associated with serious
42 ill-health, including reproductive tract and

43 urinary tract infections [3]. Inadequate
44 water and sanitation facilities are a major
45 impediment to school attendance for girls
46 during menstruation, compromising their
47 ability to maintain proper hygiene and
48 privacy [4]. More than half of schools in
49 low-income countries either have
50 insufficient toilets for girls or are
51 frequently not very clean. Inadequate
52 knowledge on menstruation and poor
53 sanitation at schools greatly affects girls,
54 especially menstruating girls, and further
55 creates unfriendly school environment for
56 them [5]. The challenges caused by poor
57 hygiene management will continue to
58 jeopardize the potentials of girls if they
59 are not properly addressed.

60 In many parts of the world, menstruation
61 was considered a secrecy issue which is
62 associated with taboo, and only women
63 could discuss it with their matured girls.
64 This led menstruation to be associated
65 with taboos. Literature review has
66 demonstrated the limits that menstruation
67 puts on school attendance and academic
68 attainment for girls [6]. Furthermore,
69 Mahon & Fernandes [2] concluded that
70 poor management of menstruation affects
71 many girls globally, and especially in Low-
72 and Middle-Income Countries. The
73 absenteeism seriously impacted girls'
74 achievements at schools. In essence
75 menstrual cycles should be taken as a
76 normal biological function of any female
77 who is at the puberty to maturity age.

78 However poor menstrual hygiene
79 management caused by lack of enough
80 information on menstruation, privacy,
81 washing facilities, and sanitary facilities
82 has caused the girls to be truant. An
83 observation by Bobel & Winkler [7] in
84 Western Africa revealed that the concept
85 of menstruation is considered as the
86 female issue and that it is the
87 responsibility of the women to educate
88 girls about it. On the other hand, lack of
89 awareness on menstruation among
90 teenage girls and ineffective menstrual
91 hygiene management in schools are
92 serious issues that lead to school
93 absenteeism for most girls. Chandra-
94 Mouli, et. al. [8] in Low and Middle Income
95 Countries observed that, many girls

96 across the world enter the adolescence
97 period with knowledge gaps on
98 menstruation thus being unprepared to
99 cope with it.

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

137 138 **1.1 Analytical and Theoretical** 139 **Framework**

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141 The study was guided by the social
142 learning theory by Albert Bandura. The
143 theory explains the development of
144 behavioral pattern for humans. Bandura
145 considered stimuli as a source of
146 behavior; an individual is likely to develop
147 a pattern of behavior following the
148 external environment/ behavioral models.

149 According to this theory, behavior is
 150 termed as a broad sense to include
 151 motoric, cognitive and physiological sense
 152 of response. It has been shown in a
 153 series of studies that self-monitoring
 154 reinforcement system can be readily
 155 transmitted to children through exposure
 156 of the self-reinforcement patterns
 157 displayed by adults and peers [13]. The
 158 theory assumes stimulus contiguity as a
 159 necessary, but not a sufficient condition
 160 for acquisition and performance of
 161 modeled pattern of behavior. Inter-
 162 personal relationship factors are
 163 necessary preconditions for identificatory
 164 learning; that parents serve as a decisive
 165 role models during early developmental
 166 period. (Children adapt behavior exhibited
 167 by parents but not vice versa). During the
 168 later stages of development, people adopt
 169 behavior from peers, media and
 170 surrounding community. The theory
 171 further explains that observational
 172 learning involves two representational
 173 systems- an imaginal and verbal one.

174 In this study the social learning theory is
 175 relevant in determining the awareness of
 176 adolescent girls in menstrual cycles and
 177 its impacts on sustainable school
 178 attendance. It implies that parents are
 179 expected to be primary source of
 180 information on menstrual cycles to their
 181 children followed by peers, mass media
 182 and school. According to this theory the
 183 adolescent girls would learn about
 184 menstruation through verbal explanation
 185 and seeing their parents and community
 186 at large considering menstruation as a
 187 normal biological phenomenon and it
 188 should not impede girls from attending to
 189 school to acquire knowledge and attaining
 190 their carriers. If the parents, peers and
 191 the entire community have wrong
 192 perception on menstruation as it is

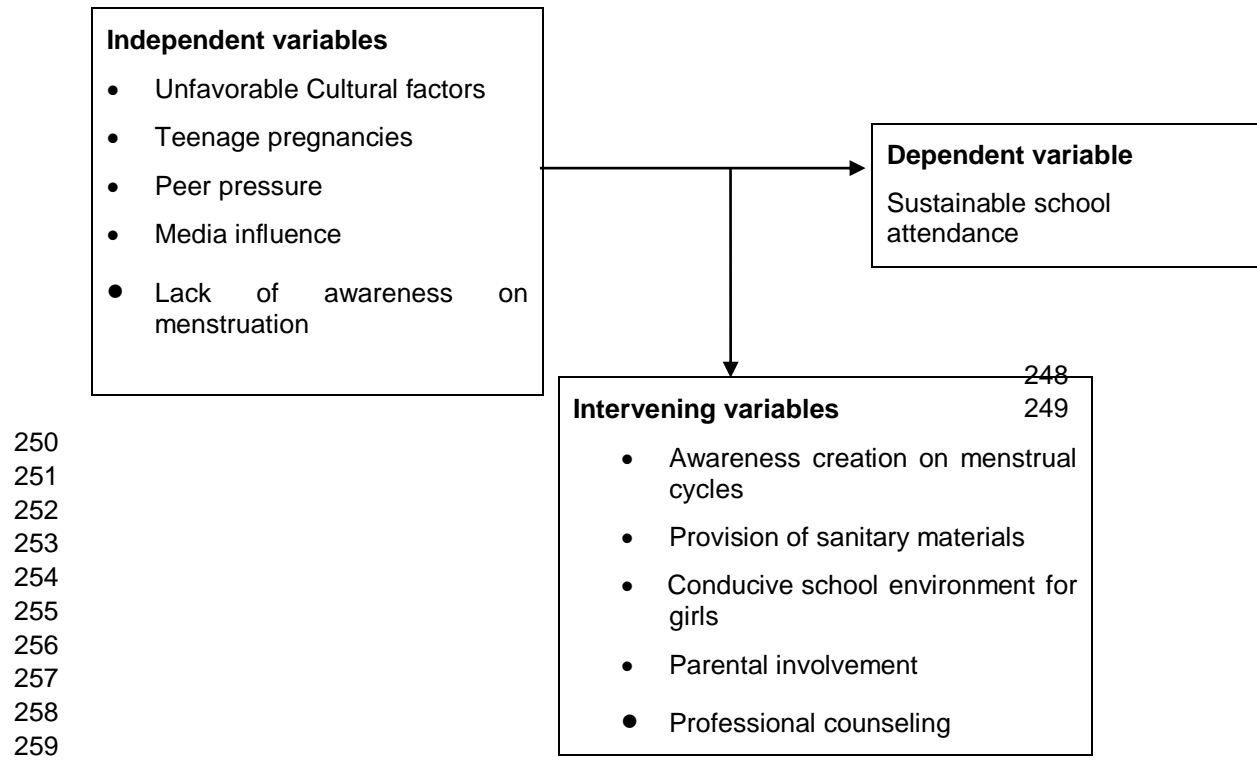
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193 secrecy and should be hidden, the
 194 concept will be inherited to the coming
 195 generations. The current study was set to
 196 find out the effects of teenage girls'
 197 menstrual cycles on their sustained
 198 school attendance as described in the
 199 developmental pattern of behavior in
 200 social learning theory.

1.2 Conceptual Framework

In the conceptual framework, it is hypothesized that; lack of awareness on menstruation, unfavorable cultural factors, teenage pregnancies, lack of sanitary materials in schools, poor school environment for girls, lack of parental involvement and professional counseling are independent variables that negatively affect sustainable school attendance for girls. However, awareness creation towards menstruation, provision of sanitary materials and hygienic environment for girls, parental involvement and professional counseling would enhance sustainability to school attendance.

Biljon and Burger [14] in South Africa observed that menstruation does have the repercussions for girls aged between 12-13 years' school attendance. However, the study observed that older girls do not have a higher probability of being absent during their menses. Thus, encountering menstruation for the first time presents challenges for girls in relation to school attendance. It is therefore imperative that effects of girls' menstrual cycles be highlighted and intervened on to avoid hindrance to regular school attendance.



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

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

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2. RESEARCH METHODS AND METHODOLOGY

The study adopted the descriptive design based on the mixed methods approaches. Both quantitative and qualitative research approaches were used. This is due to its relativeness to the study as the researcher investigated the effects of girls' menstrual cycles and its impacts 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

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happens and would not manipulate or treat the data but give it as the situation prevails. 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 selected 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

308 sanitary towels amongst school
 309 girls and their influence on
 310 sustained school attendance.
 311 Validity of data was tested using
 312 the pilot study. Cronbach
 313 Coefficient Alpha was used to test
 314 the reliability where the coefficient
 315 of 0.86 was released and it was
 316 considered reliable. The
 317 quantitative data were analyzed
 318 using Statistical Packages for
 319 Social Sciences (SPSS v.28) and
 320 presented in the APA tables for
 321 discussion whereas the
 322 qualitative data were analyzed
 323 and coded thematically for easier
 324 interpretation.
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3. RESULTS AND DISCUSSION

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

334 The study was set to determining the girls'
 335 awareness on their menstruation cycles
 336 as a normal biological function. The
 337 respondents were asked to indicate by
 338 choosing the appropriate answer of the
 339 level of their awareness on menstruation
 340 by selecting the same on the alternatives
 341 provided. Table 1 presents the summary
 342 of the respondents' views on the
 343 awareness of their menstruation as a
 344 normal biological function.

345 **Table 1 Teenage Girls' Awareness of Menstruation as a Normal Biological**
 346 **Function (n=100)**

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

347 *Source: Field Study 2022*

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 349 Table 1 show that the girls who proved
 350 their knowledge on menstruation as a
 351 normal biological function that occurs
 352 monthly or periodically were 89(89%).
 353 While those who displayed ignorance that
 354 menstrual cycle is not a normal biological
 355 function were 11(11%). It seems that the
 356 majority of the teenage girls are aware of
 357 the meaning of the menstruation cycles
 358 though this knowledge might not be
 359 sufficient because the other 11(11%)
 360 indicated their lack of knowledge of the
 361 same. It is the role of all and sundry that,
 362 the school management and parents to
 363 ensure that the girls obtain the correct
 364 information about menstruation so that
 365 they are prepared to handle the situation
 366 appropriately.
 367 Findings by Schmitt, et. al. [15] in USA
 368 show that majority of teenage girls across
 369 three cities in USA have some basic

370 knowledge on menstruation,
 371 Bhattacharjee, et. al. [16] in West Bengal-
 372 India, found that only 23.4% (187 out of
 373 798) knew about menstruation before
 374 menarche. Another study by Abreu-
 375 Sánchez, et. al. [17] in Spain highlights
 376 the gaps in knowledge and/or self-
 377 evaluation among young people in
 378 relation to their menstrual normality or
 379 abnormality.
 380 Furthermore, Cheng, et. al. [18] in Taiwan
 381 observed that most women knew about
 382 menstruation cycle before their first
 383 period. However, the findings indicate that
 384 the girls and or women were not well-
 385 prepared to manage the emotions
 386 accompanied by it and accept
 387 menstruation cycle experiences. Thus,
 388 from the current study it is profound that,
 389 more efforts are required to make the
 390 teenage girls fully prepared to handle

391 menstruation and enhance their comfort
392 ability while at schools.

393 For the few girls who were not aware of
394 the menstruation as a normal biological
395 function could have been blinded by the
396 misconception towards menstruation in
397 the society or being taken as a taboo
398 associated with it. Many girls across the
399 world enter puberty with knowledge gaps
400 and misconceptions about menstruation,
401 therefore being unprepared to cope with it
402 and unsure of when and where to seek
403 help is a challenge to their attending to
404 school daily [8].

405 It is observed that, much emphasis is
406 needed to help them be aware of the
407 menstruation as a normal biological
408 function and that it should not create any
409 hindrance in the attainment of their
410 educational goals. Jain, et. al. [19] in India
411 concluded that, a comprehensive
412 awareness program has to be started
413 among all levels of the society to remove
414 misconception and taboos related to

415 menstruation to make it pleasant. The
416 basic knowledge on menstruation for
417 teenage girls was necessary for the
418 current research study which was set to
419 determine the effects of menstrual cycles
420 on the sustainable school attendance.
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422 3.2 Teenage Girls' Training on 423 Menstruation as a Normal 424 Biological Function

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426 In the current research study, the
427 assessment on the training about teenage
428 girls' menstrual cycles was established.
429 The respondents, who comprised of
430 school head teachers, matrons and class
431 teachers, were asked to indicate if there
432 are any training that are conducted at
433 school to help the girls be aware of the
434 menstruation as a normal biological
435 function. Table 2 presents the summary of
436 the respondents' ideas on the training that
437 are given to teenage girls about menstrual
438 cycles.
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440 **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%)

441 *Source: Field Study 2022*

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443 Table 2 above shows that majority of the
444 respondents 13(81.25%) agreed that the
445 girls are trained about their menstrual
446 cycle in their schools while 3(18.75%)
447 disagreed to have such training in their
448 schools. Further; most respondents
449 12(75%) agreed to have efforts made by
450 the school to ensure that girls get
451 awareness towards their menstruation
452 cycles while 4(25%) respondents
453 disagreed on the presence of such efforts.
454 Lastly a half the number of respondents
455 8(50%) showed that there were programs
456 that educate girls about menstruation in

457 schools while the second half 8(50%) of
458 the respondents disagreed on the
459 presence such programs.

460 Educating girls about their menstrual
461 cycles in schools is very essential as it
462 prepares the girls to handle the situation
463 and can minimize the truancy rate in
464 schools. An observation by Alam, et. al.
465 [20] in Bangladesh showed that enabling
466 girls to manage menstruation at school by
467 providing knowledge and management
468 methods prior to menarche, privacy and a
469 positive social environment around

470 menstrual issues has the potential benefit
 471 to students by reducing school
 472 absenteeism.

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

501 In the sub item on menstrual cycles
 502 training efforts to girls 12(75%) the
 503 respondents admitted that there are extra
 504 efforts which are made within their
 505 schools to train girls to the knowledge of
 506 the menstruation. The efforts are very
 507 useful to minimize the number of girls who
 508 miss classes due to menstruation factors.
 509 However, this should be done in all
 510 schools to help teenage girls with the
 511 similar challenge. The information on the

512 efforts done in schools to help girls about
 513 menstruation is appropriate to the current
 514 research study which was set to
 515 investigate the effects of girls' menstrual
 516 cycles on sustainable school attendance.

517 In the sub item of Programs for education
 518 girls about menstruation 8(50%), it was
 519 found that there are some NGOs that
 520 offer support to school girls by providing
 521 education and sanitary facilities. The
 522 Netherlands development organization
 523 (SNV) implements school girls' menstrual
 524 hygiene management projects in eight
 525 districts in Tanzania named; Chato,
 526 Magu, Sengerema, Karatu, Babati, Siha,
 527 Njombe and Mufindi [9]. A half of the
 528 respondents 8(50%) admitted to have
 529 such programs though they did not
 530 specify the existing programs. Usually,
 531 these programs are geared to help in
 532 bridging the knowledge gaps that exists in
 533 schools and support girls thereby
 534 minimizing truancy rates in schools.

535 3.3 Impacts of menstruation on
536 girls' sustainable school
537 attendance

538 The study aimed at finding out if
 539 menstrual cycles have any impact on
 540 girls' sustainable school attendance in
 541 Mvomero district. Respondents were
 542 asked to express by choosing among the
 543 given responses how they felt at the onset
 544 of their first menstruation. It was assumed
 545 during this study that the first onset of the
 546 menstrual cycle would set the trend for
 547 girls' behavior on whether to attend
 548 school during the menarche or not. Table
 549 3 presents the summary of respondents'
 550 perception at the onset of their first
 551 menstruation.

554

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

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

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Source: Field Study 2022

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558 Table 3 above shows that majority of
 559 respondents 53(53%) were scared during
 560 the onset of their first menstruation
 561 followed by those who had sickness
 562 thoughts 35(35%) while a handful of the
 563 respondents 12(12%) felt normal. It is
 564 evident that majority of teenage girls
 565 53(53%) were scared during their first
 566 menstruation because probably they were
 567 not prepared to handle that situation in
 568 which they found themselves. This implies
 569 that most of teenage girls experience their
 570 first menstrual periods with little or no
 571 knowledge about the body change. Thus,
 572 they don't know how to perceive or
 573 behave during this vital change in their
 574 teenage and or adolescence age. This
 575 might have consequences on girls'
 576 attendance to school as they may decide
 577 to escape going to school due to fear of
 578 unknown, shame and or the perception
 579 that they are actually sick. Biljon and
 580 Burger [14] observed that menstruation
 581 does have the repercussions for girls
 582 aged between 12-13 years. However, the
 583 study observed that older girls do not

609 towards menstruation as it is considered
 610 to be one of the many causes of the
 611 increased truancy for school's girls. This
 612 forms the necessity of this study which
 613 was set to determine if menstrual flows
 614 have any impact on girls' sustainable
 615 school attendance.

616 On the other hand, few respondents
 617 12(12%) considered their first
 618 menstruation with normal perception
 619 might. It seems that the girls might have
 620 obtained the menstrual information from
 621 some reliable sources and thus prepared
 622 them enough to manage menstruation. A
 623 study by Bhattacharjee, et. al. [16] in
 624 West Bengal found that only girls, who

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644 **3.4 Respondent's Sources of** 645 **Sanitary Materials in a Month**

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647 In the current research study, the
 648 respondent's source of sanitary material
 649 in a month was established. The

584 have a higher probability of being absent
 585 during their menses. Basically,
 586 menstruation should remain as a natural
 587 phenomenon thus should not create any
 588 disturbance towards the girls' activities
 589 including normal school routine.

590 The study revealed that teenage girls who
 591 had sickness thoughts 53(35%) held the
 592 second position. The girls who thought
 593 that they were sick could have decide to
 594 stay at home and ultimately miss classes
 595 during the menstruation days while others
 596 could remain passively sitting in the back
 597 row of their classes due to fear of leakage
 598 and then being teased by boys at school.
 599 Studies by Sommer, et. al. [23] in Kenya
 600 and Adimna & Admna [24] in Nigeria
 601 opined that lack of suitable changing
 602 opportunities, ineffective sanitary
 603 products, fear of leaking, shame and
 604 stigma impedes girls' fullest participation
 605 in their schooling. It is therefore
 606 imperative that the government and
 607 community members should break the
 608 silence

625 knew about the menstruation before
 626 menarche, would not be scared and or fail
 627 to perform their daily activities including
 628 school attendance. It is therefore
 629 recommended that it is significant for the
 630 teenage girls to have a prior knowledge
 631 on their biochemical changes so that on
 632 the menarche they don't get shocked at
 633 what has befallen them, instead manage
 634 the situation appropriately for their
 635 comfort and progress. Furthermore,
 636 additional interventions need to be
 637 employed to help these teenage girls.
 638 Such help should range from awareness
 639 creation, menstrual facilities accessibility
 640 as well as supportive infrastructure for
 641 menstruation management at schools.

650 respondents, who were composed of
 651 school girls only, were asked to outline by
 652 choosing among the given alternatives
 653 the sources of their sanitary materials
 654 monthly. Table 4 presents the distribution
 655 summary of the respondent's source of
 656 sanitary materials in a month.

658 **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%)

659 *Source: Field Study 2022*

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662 From table 4 above it was found that
 663 respondents who obtained sanitary
 664 materials from their parents formed the
 665 majority 85(85%), whereas few
 666 respondents obtained sanitary materials
 667 from their friends 9(9%) while least
 668 respondents 4(4%) and 2(2%) obtained
 669 them from their own pocket money and
 670 schools respectively. It is evident from the
 671 table that parents 85(85%) acts as the
 672 major sources of sanitary materials for
 673 their girls. This shows that parents play
 674 their great roles in supporting their girls
 675 with sanitary materials. However, it is not
 676 stated what kind of sanitary materials
 677 parents offer to their girls. If parents offer
 678 poor sanitary materials to their girls, the
 679 girls might not use them and find those of
 680 their preference. On the other hand, there
 681 is variation in the economic level among
 682 the families; this may create classes
 683 among the girls at school as some girls
 684 might afford to buy expensive sanitary
 685 towels while others would not. The same
 686 way some girls are living with their
 687 parents while others are not; thus, those
 688 who are not living with their parents may
 689 find difficulties in obtaining the sanitary
 690 materials of their preferences.

691 A similar observation was made by
 692 Malhotra, et. al. [25] in Uttar Pradesh,
 693 India revealed that parents’ socio-
 694 economic status played a great role in
 695 comprehensive menstrual hygiene. The
 696 parents’ education and financial status
 697 can influence knowledge and monetary
 698 support to girls during menstruation. The
 699 variation might create bias among the
 700 teenage girls at schools, as the result the
 701 girls may respond differently to such
 702 condition; some girls may decide to

703 engage themselves to unsafe sexual
 704 relationships so that they can get sanitary
 705 materials, while others may decide to stay
 706 at home during their menses due to
 707 inferiority complex.

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

732 Furthermore, 4(4%) of respondents
 733 indicated that they obtained their sanitary
 734 materials from their pocket money. It
 735 seemed that girls are comfortable once
 736 they obtain sanitary towels of their own
 737 preference. However, the socio-economic
 738 factors influence the choice for sanitary
 739 materials. A study by Garikipati, et. al.
 740 [28] in India found out that a significant
 741 proportion of young girls entering

742 menarche are directly adopting
 743 disposable sanitary pads.

744 Lastly, schools were proved to have least
 745 involvement 2(2%) on the support for
 746 teenage girls' menstrual management. It
 747 seemed that the current policies on
 748 hygiene management in schools did not
 749 put much emphasis on the importance of
 750 sanitary facilities for school girls. It is
 751 suggested that teenage girls should
 752 obtain safe and quality sanitary materials
 753 from reliable sources. Thus, the
 754 government should work out on the
 755 policies that would ensure the availability
 756 of sanitary towels for girls and this should
 757 be included in the government capitation.
 758 The policy would help to reduce bias
 759 among girls at schools, ensure
 760 sustainable school attendance and hence
 761 promote learning. A study by House, et.
 762 al. [29] in Tanzania suggested that

763 menstrual hygiene management need to
 764 be integrated into programs and policies
 765 across key sectors including water,
 766 sanitation and hygiene (WASH).

768 **3.3 The Help that Girls Need at the**
 769 **Start of their Menstrual Flows at**
 770 **Schools**

771
 772 In the current research study, the help
 773 that girls need at the start of their
 774 menstrual flow at school was established.
 775 Teachers who formed the bulk of the
 776 respondents were asked to give their
 777 views by choosing among the given
 778 alternatives on how they help girls who
 779 start their menstrual flow at school. Table
 780 5 presents the distribution summary of the
 781 respondents' responses on how they help
 782 girls who start their menstrual flow at
 783 school.

784 **Table 5 Help that Girls need at the start of their Menstrual flow at School**
 785 **(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%)

786 *Source: Field Study 2022*

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790 From table 5 above it is revealed that
 791 respondents who said that they help girls by
 792 providing sanitary towels formed the majority
 793 12(75%), followed by few respondents
 794 2(12.5%) who said that they help girls by
 795 allowing them to go back home whereas equal
 796 number of least respondents 1(6.3%) said that
 797 they have no any consideration and they have
 798 consideration for needy students only. It
 799 seemed that in many schools there were
 800 sanitary towels kept for girls who experience
 801 their menstrual flows at school. This was
 802 evident in the study as majority of the
 803 respondents 12(75%) proved that they
 804 provided sanitary towels for girls who started
 805 their menstrual flow at school. This is very
 806 useful as it reduces the fear of leakage among
 807 the girls who start their menstrual flow at
 808 school. Moreover, menstrual hygiene

809 management in schools is a great challenge
 810 as it needs diverse strategies like availability of
 811 water, soap as well as changing rooms. Lack
 812 of suitable changing opportunities, ineffective
 813 sanitary products, fear of leaking, shame and
 814 stigma impedes girls' fullest participation in
 815 their schooling [23, 24]. Furthermore, few
 816 respondents admitted that they allowed girls to
 817 go back home 2(12.5%). It seems that in some
 818 schools there is no any help for girls who start
 819 their menstrual flow at school. Sending them
 820 back home might be good for girls as it keeps
 821 them away from shame. However, this is not
 822 right since it creates loop hole for truancy in
 823 schools also girls fail to attend the on-going
 824 lessons. It was further observed by Miiro, et.
 825 al. [30] in Uganda that substantial
 826 embarrassment, fear of teasing, menstrual
 827 pain, and lack of effective materials for

828 menstrual hygiene management led to school
829 absenteeism among adolescent girls.

830 It was evident that in some schools there is no
831 any consideration made to girls who start their
832 menstrual flows at school as it was proved by
833 least respondents 1(6.3%). It seemed that in
834 some schools the school management does
835 not have any kind of help for teenage girls who
836 start their periods at school. This might be due
837 to the fear or lack of awareness amongst girls
838 that they do not ask for such help and or the
839 school managements do not prepare
840 materials for girls. Patabendi [31] in Sri
841 Lanka revealed that most schools were faced
842 with difficulties in menstrual hygiene
843 management such as lack of facilities for
844 changing and safe disposal of used sanitary
845 napkins.

846 Lastly, the study has revealed that in some
847 schools only the needy students were
848 considered for help during their menstrual
849 flows 1(6.3%). Considering the needy students
850 might be good idea as it ensures that every
851 needy student gets the menstrual help.
852 However, it might create classes and be the

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4. CONCLUSIONS

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888 From the current study it can be
889 concluded that most teenage girls have
890 knowledge on menstruation as normal
891 biological function whereas they learned
892 the information from schools. However,
893 majority of the girls were scared during
894 the onset of their first menstruation due to
895 either fear, or the taboo associated with
896 the menarche or a mere fear due to new
897 development and life experience. The
898 study further concluded that, menstruation
899 cycles have negative impacts on
900 sustainable school attendance for
901 teenage girls; the impacts are resulted

853 source of inequality among girls at schools. It
854 is noted that for effective performance of
855 students at schools, the equality concept
856 should be considered in the provision of social
857 services. Equality of opportunity is generally
858 considered to maximize the total social good,
859 increases social gains, and can lead to
860 diffusion of power to individuals [32].

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

902 from health challenges that most teenage
903 girls face during their menstrual flows as
904 well as the menstrual flows management
905 challenges. To ensure sustainable school
906 attendance for teenage girls, on the basis
907 of the study findings the following
908 recommendations are made: the
909 government should ensure that the
910 budget for sanitary towels is included in
911 the government capitation for schools.
912 The school management should ensure
913 that the 10% of the current budget in the
914 free education policy for helping girls who
915 start their menstrual flows at schools be

916 used as planned. The teenage girls
 917 should be made aware and consider the
 918 menstrual cycles as a normal biological
 919 phenomenon for any maturing woman.
 920 Thus, it should not hinder their attendance
 921 to school.

922 **SUGGESTIONS FOR FURTHER**
 923 **STUDIES**

- 925 1. Efficacy of boys awareness of the
 926 girls' bio-physical conditions
- 927 2. The impacts of menarche on
 928 female students' academic
 929 performance.
- 930 3. The effectiveness of the supply of
 931 disposable sanitary towels in
 932 influencing girls' school
 933 attendance.

943
 944 **CONSENT**

945
 946 As per international standard of university
 947 standard, respondents written consent
 948 has been collected and kept by the
 949 authors(s)

950
 951 **ETHICAL APPROVAL**

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

962 of anonymity and confidentiality of the
 963 information which they provided.
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REFERENCES

1. Adhikari P, Kadel B, Dhungel SI, & Mandal A. Knowledge and Practice Regarding Menstrual Hygiene in Rural Adolescent Girls of Nepal: Kathmandu Univ Med J (Kumj). 2007; 5: 382-6.
2. Mahon T, & Fernandes M. Menstrual Hygiene in South Asia: A Neglected Issue for WASH (Water, Sanitation and Hygiene) Programmes. 2010; 18:99-113.
3. Dasgupta A, & Sarkar M. Menstrual Hygiene: How Hygienic is the Adolescent Girl? Indian J Community. 2008; 33:77-80.
4. Emily O, & Rebecca T. Menstruation, Sanitary Products, and School Attendance: Evidence from a Randomized Evaluation. Am Econ J Appl Econ. 2011; 3:91-100.
5. Agarwal AK, & Agarwal A. A Study of Dysmenorrheal During Menstruation in Adolescent Girls. Indian J Community Med. 2010; 35:159-64.
6. Adams J, Bartram J, Chartier Y, & Sims J. Water, Sanitation and Hygiene Standards for Schools in Low-Cost Settings. Geneva: World Health Organization; 2009.
7. Bobel C, Winkler IT, Fahs B, Hasson KA, Kissling EA, Roberts TA. The Palgrave Handbook of Critical Menstruation Studies [Internet]. Singapore: Palgrave Macmillan; 2020. PMID: 33347099.
8. Chandra-Mouli V, & Patel SV. Mapping the Knowledge and Understanding of Menarche, Menstrual Hygiene and Menstrual Health among Adolescent Girls in Low-and Middle-Income Countries. Reproductive Health Journal. 2017; 14:30. (2017)

965
 966
 967
 968
 969
 970
 971
 972
 973
 974
 975
 976
 977
 978
 979
 980
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 1009
 1010
 1011
 1012
 1013
 1014

- 1015 DOI: 10. 1186/S12978-017-0293- 1066
1016 6. 1067
1068
- 1017 9. Netherlands Development 1069
1018 Organization (SNV), (2014). 1070
1019 Baseline Survey Report On 1071
1020 School Girls' Menstrual Hygiene 1072
1021 Management. Retrieved From 1073
1022 <https://Snv.Org> 1074
- 1023 10. Foundation of Netherlands 1075
1024 Volunteers, (2021). Girls in 1076
1025 control-Tanzania: Menstrual
1026 health hygiene. Retrieved from: 1077
1027 [https://snv.org/assets/expolre/download/2021-menstrual-health-](https://snv.org/assets/expolre/download/2021-menstrual-health-hygiene-i4id.pdf) 1078
1028 [hygiene-i4id.pdf](https://snv.org/assets/expolre/download/2021-menstrual-health-hygiene-i4id.pdf) 1079
1029
- 1030 11. Guya E, Mayo AW, & Kimwaga R, 1081
1031 Menstrual Hygiene Management 1082
1032 in Secondary Schools in 1083
1033 Tanzania. International Journal of 1084
1034 Science and Technology. 2014; 1085
1035 3(1), Pp.27-39. 1086
- 1036 12. Gabrielson S. Towards 1087
1037 Sustainable Menstrual Health 1088
1038 Management in Tanzania, Lund 1089
1039 University, 2018. Retrieved From 1090
1040 <https://www.lucsus.lu.se> 1091
- 1041 13. Bandura A. The Stormy Decade: 1092
1042 Fact or Fiction? Psychology in the 1093
1043 Schools. 1964; Vol.1, No.3, 224- 1094
1044 231. 1095
- 1045 14. Biljon C, & Burger C. The Period 1096
1046 Effect: the Effects of Menstruation 1097
1047 on Absenteeism of School Girls in 1098
1048 Limpopo, Stellenbosch Economic 1099
1049 Working Papers: Wp20/2019. 1100
- 1050 15. Schmitt ML, Hagstrom C, 1101
1051 Nowara A, Gruer C, Adenu- 1102
1052 Mensah NE, Katie K, et al. The 1103
1053 Intersection of Menstruation, 1104
1054 School and Family: Experiences 1105
1055 of Girls Growing up in Urban 1106
1056 Areas in the U.S.A. International 1107
1057 Journal of Adolescence and 1108
1058 Youth. 2021; 26:1, 94-109, Doi: 1109
1059 10.1080/02673843.2020.1867207 1110
1060 . 1111
- 1061 16. Bhattacharjee S, Ray K, Biswas 1112
1062 R, & Chakraborty M. 1113
1063 Menstruation: Experiences of 1114
1064 Adolescent Slum Dwelling Girls of 1115
1065 Siliguri City, West Bengal, India 1116
1117
2013. Doi: 10.4103/2278
960x.118646.
17. Abreu-Sánchez A, Parra-
Fernández ML, Onieva-Zafra MD,
& Fernández-Martínez E.
Perception of Menstrual normality
and abnormality in Spanish
female nursing students:
International Journal of
Environmental Research and
Public Health. 2020; 17:6432.
18. Cheng Rn C, Yang Rn K, & Lion
Rn S. (2007). Taiwanese
Adolescents' Gender Differences
in Knowledge and Attitudes
towards Menstruation. 2007.
Retrieved From
[https://doi.org/10.1111/ij.1442-](https://doi.org/10.1111/ij.1442-2018.2007.00312.x)
2018.2007.00312.X
19. Jain R, Anand P, Dhyani A, &
Bansal D, (2017). Knowledge and
Awareness Regarding
Menstruation and HIV/AIDS
among School Going Adolescent
Girls: Journal of Family Medicine
and Primary Care. 2017; 6: 47-
51.2017. Doi 10.4103/2249-
4863.214970
20. Alam MU, Luby SP, Halder AK,
Islam K, Opel A, Shoab AK, et. al.
Menstrual Hygiene Management
among Bangladesh Adolescent
School Girls and Risk Factors
Affecting School Absence:
Results from a Cross-Sectional
Survey. Bmj Open. 2017; 7(7),
E015508. Retrieved From
[https://doi.org/10.1136/bmjopen-](https://doi.org/10.1136/bmjopen-2016-015508)
2016-015508 Amenorrhoea. Ann N
Y Acad Sci 1205:23-32. Doi:
10.1111/J.1749-
6632.2010.05669.X.Pmid:
20840249.
21. Tanzania Water and Sanitation
Network (TAWASANET), 2015.
Improvement of Menstrual
Hygiene Management in Schools
in Tanzania study report.
Retrieved from:
www.tawasnet.or.tz
22. Mkumbo KA. Content Analysis of
the Status and Place of Sexuality

1118 Education in the National School 1158
 1119 Policy and Curriculum in 1159
 1120 Tanzania. Educational Research 1160
 1121 and Reviews. 2010; 4(12): 616- 1161
 1122 625. 1162
 1123 23. Sommer M, Caruso B, Sahin M, 1163
 1124 Calderon T, Cavill S, Mahon T, et 1164
 1125 al. Action: Addressing Girls' 1165
 1126 Menstrual Hygiene Management 1166
 1127 Needs in Schools. Plos. Med. 1167
 1128 2016; 13(2) E1001962. 1168
 1129 24. Adinma ED, & Adinma JI. 1169
 1130 Perceptions and Practices on 1170
 1131 Menstruation amongst Nigerian 1171
 1132 Secondary School Girls. African 1172
 1133 Journal of Reproductive Health. 1173
 1134 2008. 1174
 1135 1175
 1136 25. Malhotra A, Goli S, Coates S, 1176
 1137 Mosquera-Vasquez M. Factors 1177
 1138 Associated with Knowledge, 1178
 1139 Attitudes, and Hygiene Practices 1179
 1140 during Menstruation among 1180
 1141 Adolescent Girls in Uttar Pradesh. 1181
 1142 Waterlines. 2016; 35(3): 277– 1182
 1143 305. 1183
 1144 26. Nabikindu NR. Health Problems 1184
 1145 due to Unsafe Sex among 1185
 1146 Youths: Condom Use Negotiation 1186
 1147 and Consistent Use, One Way to 1187
 1148 address them. Moj. Public Health. 1188
 1149 2014; 1(1):4–5, 1189
 1150 Doi:10.15406/Mojph.2014.01.000 1190
 1151 02 1191
 1152 27. Philips-Howard PA, Caruso B, 1192
 1153 Torondel B, Zulaika G, Sahin M, 1193
 1154 & Sommer M. (2016). Menstrual 1194
 1155 Hygiene Management among 1195
 1156 Adolescent Schoolgirls in Low- 1196
 1157 and Middle-Income Countries: 1197
 1198
 1199
 Research Priorities. Global Health
 Action. 2016; 9 (1), 33032.
 28. Garikipati S, & Boudot C. To Pad
 or not to Pad: Towards Better
 Sanitary Care for Women in
 Indian Slums: Journal of
 International Development. 2017;
 29, 32–51. Doi: 10.1002/Jid.3266
 29. House S, Mahon T. & Cavill S.
 Menstrual Hygiene Matters: A
 Resource for Improving Menstrual
 Hygiene around the World.
 Wateraid Publisher, 2012.
 Retrieved From:
<https://www.Suzana.Org/Resources/Documents/Default/3-2210-21-1426498269.Pdf>.
 30. Miiro M, Rutakumwa R,
 Nakiyingi-Miiro J, Nakuya K,
 Musoke S, Namakula S, et al.
 Menstrual Health and School
 Absenteeism among Adolescent
 Girls in Uganda: BMC Women's
 Health. 2018; Doi
 10.1186/S12905-017-0502-Z
 31. Patabendi NL. An Issue in
 Managing Menstrual Hygiene in
 Rural Schools of Sri Lanka,
 WASH, 2014, For Everyone,
 Everywhere Conference. 2014.
 32. Ismail S. Equity and Education.
 International Encyclopedia of the
 Social & Behavioural Sciences,
 2nd Ed. Vol.7. Oxford: Elsevier;
 2015 Pp. 918–923.
 33. Scott L, Dopson S, Montgomery
 P, Dolan C, and Ryus C. Impact
 of Providing Sanitary Pads to
 Poor Girls in Africa. University of
 Oxford in Africa. University Of
 Oxford. 2013.