

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

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.²

Keywords: Menstruation, menstrual cycles, teenage girls, school attendance, sanitary 23 towels. 24

25

26

1. INTRODUCTION 27

28

Menstruation is a cyclic bleeding 29 occurring in all women under reproductive 30 age. It is characterized by blood flow 31 through female genital organs; normally 32 starts at puberty and stops at menopause 33 [1]. The menstrual hygiene management 34 is crucial for both physical and mental 35 health, education, and dignity of 36 adolescent school girls [2]. When good 37 menstrual hygiene practices are observed 38 they results into good menstrual health. 39 On the other hand, when menstrual 40 management practices are not well 41 controlled the ill effects are likely to be 42 encountered by females. Poor menstrual 43 hygiene has been associated with serious 44 ill-health, including reproductive tract and 45 urinary tract infections [3]. Inadequate 46 water and sanitation facilities are a major 47 impediment to school attendance for girls 48 during menstruation, compromising their 49 ability to maintain proper hygiene and 50 privacy [4]. More than half of schools

in 51 low-income countries either have 52 insufficient toilets for girls or are 53 frequently not very clean. Inadequate 54 knowledge on menstruation and poor 55 sanitation at schools greatly affects girls, 56 especially menstruating girls, and further 57 creates unfriendly school environment for 58 them [5]. The challenges caused by poor 59 hygiene management will continue to 60 jeopardize the potentials of girls if they 61 are not properly addressed. 62

In many parts of the world, menstruation 63 was considered a secrecy issue which is 64 associated with taboo, and only women 65 could discuss it with their matured girls. 66 This led menstruation to be associated 67 with taboos. Literature review has 68 demonstrated the limits that menstruation 69 puts on school attendance and academic 70 attainment for girls [6]. Furthermore, 71 Mahon & Fernandes [2] concluded that 72 poor management of menstruation affects 73 many girls globally, and especially in Low- 74 and Middle-Income Countries. The 75 absenteeism seriously impacted girls' 76 achievements at schools. In essence 77 menstrual cycles should be taken as a 78 normal biological function of any female 79 who is at the puberty to maturity age. 80

However poor menstrual hygiene 81 management caused by lack of enough 82 information on menstruation, privacy, 83 washing facilities, and sanitary facilities 84 has caused the girls to be truant. An 85 observation by Bobel & Winkler [7] in 86 Western Africa revealed that the concept 87 of menstruation is considered as the 88 female issue and that it is the 89 responsibility of the women to educate 90 girls about it. On the other hand, lack of 91 awareness on menstruation among 92 teenage girls and ineffective menstrual 93 hygiene management in schools are 94 serious issues that lead to school 95 absenteeism for most girls. Chandra-96 Mouli, et. al. [8] in Low and Middle Income 97 Countries observed that, many girls 98 across the world enter the adolescence 99 period with knowledge gaps on 100 menstruation thus being unprepared to 101 cope with it. 102

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

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

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

151

1.1 Analytical and Theoretical 152 Framework 153

154

The study was guided by the social 155 learning theory by Albert Bandura. The 156 theory explains the development of 157 behavioral pattern for humans. Bandura 158 considered stimuli as a source of 159 behavior; an individual is likely to develop 160 a pattern of behavior following the 161 external environment/ behavioral models. 162 According to this theory, behavior is 163 termed as a broad sense to include 164 motoric, cognitive and physiological sense 165 of response. It has been shown in a 166 series of studies that self-monitoring 167 reinforcement system can be readily 168 transmitted to children through exposure 169 of the self-reinforcement patterns 170 displayed by adults and peers [13]. The 171 theory assumes stimulus contiguity as a 172 necessary, but not a sufficient condition 173 for acquisition and performance of 174 modeled pattern of behavior. Inter-175 personal relationship factors are 176 necessary preconditions for identificatory 177 learning; that parents serve as a decisive 178 role models during early developmental 179 period. (Children adapt behavior exhibited 180 by parents but not vice versa). During the 181 later stages of development, people adopt 182 behavior from peers, media and 183 surrounding community. The theory 184 further explains that observational 185 learning involves two representational 186 systems- an imaginal and verbal one. 187

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

215

1.2 Conceptual Framework 216

217

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

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

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

Fig.1. Conceptual framework on Factors affecting sustainable school attendance for 275 teenage girls.
276

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

278

2. METHODOLOGY 279

280

The study adopted the descriptive 281 design based on the mixed 282 methods approaches. Both 283 quantitative and qualitative 284 research approaches were used. 285 This is due to its relativeness to 286 the study as the researcher 287 investigated the effects of girls' 288 menstrual cycles and its impacts 289 to the sustainable school 290 attendance. Thus, in employing 291 this design, the researcher went 292 to collect data in order to see the 293 picture of the situation as could 294 be. That is, to find out if the 295 menarche has any impact on the 296 sustained school attendance. The 297 respondents were to say what 298 happens and would not 299 manipulate or treat the data but 300 give it as the situation prevails. 301 The purposive sampling and 302 simple random sampling methods 303

Independent variables

☒ Unfavorable Cultural factors

☒ Teenage pregnancies

☒ Peer pressure

☒ Media influence

☒ Lack of awareness on menstruation

Dependent variable

Sustainable school attendance

Intervening variables

☒ Awareness creation on menstrual cycles

☒ Provision of sanitary materials

☒ Conducive school environment for girls

☒ Parental involvement

☒ Professional counseling

were used in the determining the 304 sample size of the study. A total 305 of 116 respondents were selected 306 i.e. five heads of schools, five 307 class teachers, six matrons and 308 one hundred teenage girls aged 309 13-15 years from eighteen public 310 secondary schools within 311 Mvomero district. The data were 312 collected through questionnaires 313 and documentary reviews to 314 determine the current situation on 315 teenage girls' awareness of 316 menstruation as a normal 317 biological function, impacts of 318 menstrual cycles on school 319 attendance and the provision of 320 sanitary towels amongst school 321 girls and their influence on 322 sustained school attendance. 323 Validity of data was tested using 324 the pilot study. Cronbach 325 Coefficient Alpha was used to test 326 the reliability where the coefficient 327 of 0.86 was released and it was 328 considered reliable. The 329 quantitative data were analyzed 330 using Statistical Packages for 331 Social Sciences (SPSS v.28) and 332 presented in the APA tables for 333 discussion whereas the 334 qualitative data were analyzed 335 and coded thematically for easier 336 interpretation. 337

338

339

3. RESULTS AND DISCUSSION 340

341

3.1 Teenage Girls' 342 Awareness on their 343 Menstruation Cycles as a 344 Normal Biological Function 345

346

The study was set to determining the girls' 347 awareness on their menstruation cycles 348 as a normal biological function. The 349 respondents were asked to indicate by 350 choosing the appropriate answer of the 351 level of their awareness on menstruation 352 by selecting the same on the

alternatives 353 provided. Table 1 presents the summary 354 of the respondents' views on the 355 awareness of their menstruation as a 356 normal biological function. 357

Table 1. Teenage Girls' Awareness of Menstruation as a Normal Biological 358 Function (n=100) 359

Item

Yes F (%)

No F (%)

Total F (%)

Menstruation is a normal biological function

89(89%)

11 (11%)

100 (100%)

Source: Field Study 2022 360

361

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

Findings by Schmitt, et. al. [15] in USA 380 show that majority of teenage girls across 381 three cities in USA have some basic 382 knowledge on menstruation, 383 Bhattacharjee, et. al. [16] in West Bengal- 384 India, found that only 23.4% (187 out of 385 798) knew about menstruation before 386 menarche. Another study by Abreu-387

Sánchez, et. al. [17] in Spain highlights the 388 gaps in knowledge and/or self-evaluation 389 among young people in relation to their 390 menstrual normality or abnormality. 391

Furthermore, Cheng, et. al. [18] in Taiwan 392 observed that most women knew about 393 menstruation cycle before their first 394 period. However, the findings indicate that 395 the girls and or women were not well-396 prepared to manage the emotions 397 accompanied by it and accept 398

menstruation cycle experiences. Thus, 399 from the current study it is profound that, 400 more efforts are required to make the 401 teenage girls fully prepared to handle 402

menstruation and enhance their comfort 403 ability while at schools. 404

For the few girls who were not aware of 405 the menstruation as a normal biological 406 function could have been blinded by the 407 misconception towards menstruation in 408 the society or being taken as a taboo 409 associated with it. Many girls across the 410 world enter puberty with knowledge gaps 411 and misconceptions about menstruation, 412 therefore being unprepared to cope with it 413 and unsure of when and where to seek 414 help is a challenge to their attending to 415 school daily [8]. 416

It is observed that, much emphasis is 417 needed to help them be aware of the 418 menstruation as a normal biological 419 function and that it should not create any 420 hindrance in the attainment of their 421 educational goals. Jain, et. al. [19] in India 422 concluded that, a comprehensive 423 awareness program has to be started 424 among all levels of the society to remove 425 misconception and taboos related to 426 menstruation to make it pleasant. The 427 basic knowledge on menstruation for 428 teenage girls was necessary for the 429 current research study which was set to 430 determine the effects of menstrual cycles 431 on the sustainable school attendance. 432

433

3.2 Teenage Girls' Training on 434 Menstruation as a Normal 435 Biological Function 436

437

In the current research study, the 438 assessment on the training about teenage 439 girls' menstrual cycles was established. 440 The respondents, who comprised of 441 school head teachers, matrons and class 442 teachers, were asked to indicate if there 443 are any training that are conducted at 444 school to help the girls be aware of the 445 menstruation as a normal biological 446 function. Table 2 presents the summary of 447 the respondents' ideas on the training that 448 are given to teenage girls about menstrual 449 cycles. 450

451

Table 2. Teenage Girls' Training on Menstruation at Schools (n=16) 452

Source: Field Study 2022 453

454

Table 2 above shows that majority of the 455 respondents 13(81.25%) agreed that the 456 girls are trained about their menstrual 457 cycle in their schools while 3(18.75%) 458 disagreed to have such training in their 459 schools. Further; most respondents 460 12(75%) agreed to have efforts made by 461 the school to ensure that girls get 462 awareness towards their menstruation 463 cycles while 4(25%) respondents 464

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%)

disagreed on the presence of such efforts. 465 Lastly a half the number of respondents 466 8(50%) showed that there were programs 467 that educate girls about menstruation in 468 schools while the second half 8(50%) of 469 the respondents disagreed on the 470 presence such programs. 471

Educating girls about their menstrual 472 cycles in schools is very essential as it 473 prepares the girls to handle the situation 474 and can minimize the truancy rate in 475 schools. An observation by Alam, et. al. 476 [20] in Bangladesh showed that enabling 477 girls to manage menstruation at school by 478 providing knowledge and management 479 methods prior to menarche, privacy and a 480 positive social environment around 481 menstrual issues has the potential benefit 482 to students by reducing school 483 absenteeism. 484

Despite the claim of the 13(81.25%) 485 respondents that the menstrual education 486 is provided in schools it seems that this 487 education is inadequate or is not 488 continuous so that its impact is known to 489 others who disagreed. A report by 490 Tanzania Water and Sanitation Network 491 (TAWASANET) [21] on improvement of 492 menstrual hygiene management in 493 schools in Tanzania; revealed that 494 adolescent girls still need more 495 information on Menstrual Hygiene 496

Management (MHM) which should be 497 provided in schools. Knowing the status of 498 education concerning menstruation for 499 girls in schools is relevant to the current 500 research study which was set to 501 investigate the effects of girls' 502 menstruation cycles on sustainable 503 school attendance. In some schools there 504 are some efforts made to ensure that girls 505 get awareness on menstruation cycles. 506 This can be done during extra curriculum 507 activities like subject clubs, plays and 508 visiting trainers. Mkumbo [22] opined that 509 this is done following the existence of the 510 gap in the curriculum content concerning 511 the menstruation. 512

In the sub item on menstrual cycles 513 training efforts to girls 12(75%) the 514 respondents admitted that there are extra 515 efforts which are made within their 516 schools to train girls to the knowledge of 517 the menstruation. The efforts are very 518 useful to minimize the number of girls who 519 miss classes due to menstruation factors. 520 However, this should be done in all 521 schools to help teenage girls with the 522 similar challenge. The information on the 523 efforts done in schools to help girls about 524 menstruation is appropriate to the current 525 research study which was set to 526 investigate the effects of girls' menstrual 527 cycles on sustainable school attendance. 528

In the sub item of Programs for education 529 girls about menstruation 8(50%), it was 530 found that there are some NGOs that 531 offer support to school girls by providing 532 education and sanitary facilities. The 533 Netherlands development organization 534 (SNV) implements school girls' menstrual 535 hygiene management projects in eight 536 districts in Tanzania named; Chato, 537 Magu, Sengerema, Karatu, Babati, Siha, 538 Njombe and Mufindi [9]. A half of the 539 respondents 8(50%) admitted to have 540 such programs though they did not 541 specify the existing programs. Usually, 542 these programs are geared to help in 543 bridging the knowledge gaps that exists in 544 schools and support girls thereby 545 minimizing truancy rates in schools. 546

547

3.3 Impacts of menstruation on 548 girls' sustainable school 549 attendance 550

551

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

566

Table 3. Respondent's Perception on the onset of First Menstruation (n=100) 567

Feelings

F (%)

Normal 12 (12%)

Scared 53 (53%)

Perceived to be Sick 35 (35%)

Total 100 (100%)

Source: Field Study 2022 568

569

Table 3 above shows that majority of 570 respondents 53(53%) were scared during 571 the onset of their first menstruation 572 followed by those who had sickness 573 thoughts 35(35%) while a handful of the 574 respondents 12(12%) felt normal. It is 575 evident that majority of teenage girls 576 53(53%) were scared during their first 577 menstruation because probably they were 578 not prepared to handle that situation in 579 which they found themselves. This implies 580 that most of teenage girls experience their 581 first menstrual periods with little or no 582 knowledge about the body change. Thus, 583 they don't know how to perceive or 584 behave during this vital change in their 585 teenage and or adolescence age. This 586 might have consequences on girls' 587 attendance to school as they may decide 588 to escape going to school due to fear of 589 unknown, shame and or the perception 590 that they are actually sick. Biljon and 591 Burger [14] observed that menstruation 592 does have the repercussions for girls 593 aged between 12-13 years. However, the 594 study observed that older girls do not 595 have a higher probability of being absent 596 during their menses. Basically, 597 menstruation should remain as a natural 598 phenomenon thus should not create any 599 disturbance towards the girls' activities 600 including normal school routine. 601

The study revealed that teenage girls who 602 had sickness thoughts 53(35%) held the 603 second position. The girls who thought 604 that they were sick could have decide to 605 stay at home and ultimately miss classes 606 during the menstruation days while others 607 could remain passively sitting in the back 608 row of their classes due to fear of leakage 609 and then being teased by boys at school. 610 Studies by Sommer, et. al. [23] in Kenya 611 and Adimna & Admna [24] in Nigeria 612 opined that lack of suitable changing 613 opportunities, ineffective sanitary 614 products, fear of leaking, shame and 615 stigma impedes girls' fullest participation 616 in their schooling. It is therefore 617 imperative that the government and 618 community members should break the 619 silence 620

towards menstruation as it is considered 621 to be one of the many causes of the 622 increased truancy for school's girls. This 623 forms the necessity of this study which 624 was set to determine if menstrual flows 625 have any impact on girls' sustainable 626 school attendance. 627

On the other hand, few respondents 628 12(12%) considered their first 629 menstruation with normal perception 630 might. It seems that the girls might have 631 obtained the menstrual information from 632 some reliable sources and thus prepared 633 them enough to manage menstruation. A 634 study by Bhattacharjee, et. al. [16] in West 635 Bengal found that only girls, who knew 636 about the menstruation before menarche, 637 would not be scared and or fail to perform 638 their daily activities

including school 639 attendance. It is therefore recommended 640 that it is significant for the teenage girls to 641 have a prior knowledge on their 642 biochemical changes so that on the 643

menarche they don't get shocked at what 644 has befallen them, instead manage the 645 situation appropriately for their comfort 646 and progress. Furthermore, additional 647 interventions need to be employed to help 648 these teenage girls. Such help should 649 range from awareness creation, 650 menstrual facilities accessibility as well as 651 supportive infrastructure for menstruation 652 management at schools.653

654

655

3.4 Respondent's Sources of 656 Sanitary Materials in a Month 657

658

In the current research study, the 659 respondent's source of sanitary material 660 in a month was established. The 661 respondents, who were composed of 662 school girls only, were asked to outline by 663 choosing among the given alternatives 664 the sources of their sanitary materials 665 monthly. Table 4 presents the distribution 666 summary of the respondent's source of 667 sanitary materials in a month.668

669

Table 4. Respondent's Source of Sanitary Material in a Month (n=100) 670

Source

F (%)

Par Parents 85 (85%)

Friends 9 (9%)

School 2 (2%)

Pocket money 4 (4%)

Total 100 (100%)

Source: Field Study 2022 671

672

From table 4 above it was found that 673 respondents who obtained sanitary 674 materials from their parents formed the 675 majority 85(85%), whereas few 676 respondents obtained sanitary materials 677 from their friends 9(9%) while least 678 respondents 4(4%) and 2(2%) obtained 679 them from their

own pocket money and 680 schools respectively. It is evident from the 681 table that parents 85(85%) acts as the 682 major sources of sanitary materials for 683 their girls. This shows that parents play 684 their great roles in supporting their girls 685 with sanitary materials. However, it is not 686 stated what kind of sanitary materials 687 parents offer to their girls. If parents offer 688 poor sanitary materials to their girls, the 689 girls might not use them and find those of 690 their preference. On the other hand, there 691 is variation in the economic level among 692 the families; this may create classes 693 among the girls at school as some girls 694 might afford to buy expensive sanitary 695 towels while others would not. The same 696 way some girls are living with their 697 parents while others are not; thus, those 698 who are not living with their parents may 699 find difficulties in obtaining the sanitary 700 materials of their preferences. 701

A similar observation was made by 702 Malhotra, et. al. [25] in Uttar Pradesh, India 703 revealed that parents' socio-economic 704 status played a great role in 705 comprehensive menstrual hygiene. The 706 parents' education and financial status 707 can influence knowledge and monetary 708 support to girls during menstruation. The 709 variation might create bias among the 710 teenage girls at schools, as the result the 711 girls may respond differently to such 712 condition; some girls may decide to 713 engage themselves to unsafe sexual 714 relationships so that they can get sanitary 715 materials, while others may decide to stay 716

at home during their menses due to 717 inferiority complex. 718

Furthermore, it was observed that 9(9%) 719 of the respondents obtain their sanitary 720 material from their friends. It is good for 721 the friends to help one another in different 722 circumstances. However, this might bring 723 temptation for the girls as they may 724 involve themselves in unsafe sexual 725 relationships which in turn it may lead to 726 early pregnancies and or diseases 727 transmission. A study by Nabikindu [26] in 728 Uganda claimed that the health problems 729 due to unsafe sex amongst youths 730 including sexually transmitted diseases, 731 unplanned early pregnancies and related 732 health complications. In addition, Phillips-733 Howard, et. al. [27] in Kenya observed that 734 lack of adequate sanitary hygiene 735 products forces some girls to use un-736 hygienic materials, potentially increasing 737 urogenital infections. New but limited 738 evidence also suggest that this need 739 leads adolescent girls to engage in 740 transactional sex in order to buy 741 menstrual products. 742

Furthermore, 4(4%) of respondents 743 indicated that they obtained their sanitary 744 materials from their pocket money. It 745 seemed that girls are comfortable once 746 they obtain sanitary towels of their own 747 preference. However, the socio-economic 748 factors influence the choice for sanitary 749 materials. A study by Garikipati, et. al. [28] 750 in India found out that a significant 751 proportion of young girls entering 752 menarche are directly adopting 753 disposable sanitary pads. 754

Lastly, schools were proved to have least 755 involvement 2(2%) on the support for 756 teenage girls' menstrual management. It 757 seemed that the current policies on 758 hygiene management in schools did not 759 put much emphasis on the importance of 760 sanitary facilities for school girls. It is 761 suggested that teenage girls should 762 obtain safe and quality sanitary materials 763 from reliable sources. Thus, the 764 government should work out on the 765 policies that would ensure the

availability 766 of sanitary towels for girls and this should 767 be included in the government capitation. 768 The policy would help to reduce bias 769 among girls at schools, ensure 770 sustainable school attendance and hence 771 promote learning. A study by House, et. 772 al. [29] in Tanzania suggested that 773 menstrual hygiene management need to 774 be integrated into programs and policies 775 across key sectors including water, 776 sanitation and hygiene (WASH). 777

778

3.5 The Help that Girls Need at 779 Start of their Menstrual Flows at 780 Schools 781

782

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

Table 5. Help that Girls need at the start of their Menstrual flow at School 795 (n=16) 796

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%)

Source: Field Study 2022 797

798

From table 5 above it is revealed that 799 respondents who said that they help girls by 800 providing sanitary towels formed the majority 801 12(75%), followed by few respondents 802 2(12.5%) who said that they help girls by 803 allowing them to go back home whereas equal 804 number of least respondents 1(6.3%) said that 805 they have no any consideration and they have 806 consideration for needy students only. It 807 seemed that in many schools there were 808 sanitary towels kept for girls who experience 809 their menstrual flows at school. This was 810 evident in the study as majority of the 811 respondents 12(75%) proved that they 812 provided sanitary towels for girls who started 813 their menstrual flow at school. This is very 814 useful as it reduces the fear of leakage among 815 the girls who start their menstrual flow at 816 school. Moreover, menstrual hygiene 817 management in schools

is a great challenge 818 as it needs diverse strategies like availability of 819 water, soap as well as changing rooms. Lack 820 of suitable changing opportunities, ineffective 821 sanitary products, fear of leaking, shame and 822 stigma impedes girls' fullest participation in 823 their schooling [23, 24]. Furthermore, few 824 respondents admitted that they allowed girls to 825 go back home 2(12.5%). It seems that in some 826 schools there is no any help for girls who start 827 their menstrual flow at school. Sending them 828 back home might be good for girls as it keeps 829 them away from shame. However, this is not 830 right since it creates loop hole for truancy in 831 schools also girls fail to attend the on-going 832 lessons. It was further observed by Miiro, et. 833 al. [30] in Uganda that substantial 834 embarrassment, fear of teasing, menstrual 835

pain, and lack of effective materials for 836 menstrual hygiene management led to school 837 absenteeism among adolescent girls. 838

It was evident that in some schools there is no 839 any consideration made to girls who start their 840 menstrual flows at school as it was proved by 841 least respondents 1(6.3%). It seemed that in 842 some schools the school management does 843 not have any kind of help for teenage girls who 844 start their periods at school. This might be due 845 to the fear or lack of awareness amongst girls 846 that they do not ask for such help and or the 847 school managements do not prepare 848 materials for girls. Patabendi [31] in Sri 849 Lanka revealed that most schools were faced 850 with difficulties in menstrual hygiene 851 management such as lack of facilities for 852 changing and safe disposal of used sanitary 853 napkins. 854

Lastly, the study has revealed that in some 855 schools only the needy students were 856 considered for help during their menstrual 857 flows 1(6.3%). Considering the needy students 858 might be good idea as it ensures that every 859 needy student gets the menstrual help. 860 However, it might create classes and be the 861 source of inequality among girls at schools. It 862 is noted that for effective performance of 863 students at schools, the equality concept 864 should be considered in the provision of social 865 services. Equality of opportunity is generally 866 considered to maximize the total social good, 867 increases social gains, and can lead to 868 diffusion of power to individuals [32]. 869

It is suggested that there should be fair 870 treatment for girls to avoid bias at schools. 871 Menstruation should be considered as an 872 important issue for school girls thus policies 873 should be formulated to help girls on menstrual 874 management. The policies should focus on 875 awareness creation, facilities accessibility as 876 well as supportive school infrastructure for 877 proper and hygienic sanitation. By so doing it 878 would enhance sustainable school attendance 879 for girls and hence promote their learning. 880 Providing better sanitary care and puberty 881 education for school girls is one intervention 882 that might provide rapid effects with long 883 lasting positive consequences and thus should 884 be considered seriously by policy makers [33].885

886

887

4. CONCLUSIONS 888

889

From the current study it can be 890 concluded that most teenage girls have 891 knowledge on menstruation as normal 892 biological function whereas they learned 893 the information from schools. However, 894 majority of the girls were scared during 895 the onset of their first menstruation due to 896 either fear, or the taboo associated with 897 the menarche or a mere fear due to new 898 development and life experience. The 899 study further concluded that, menstruation 900 cycles have negative impacts on 901 sustainable school attendance for 902 teenage girls; the impacts are resulted 903 from health challenges that most teenage 904 girls face during their menstrual flows as 905 well as the menstrual flows management 906 challenges. To ensure sustainable school 907 attendance for teenage girls, on the basis 908 of the study findings the following 909 recommendations are made: the 910 government should ensure that the 911 budget for sanitary towels is included in 912 the government capitation for schools. 913 The school management should ensure 914 that the 10% of the current budget in the 915 free education policy for helping girls who 916 start their menstrual flows at schools be 917 used as planned. The teenage girls 918 should be made aware and consider the 919 menstrual cycles as a normal biological 920 phenomenon for any maturing woman. 921 Thus, it should not hinder their attendance 922 to school. 923

Suggestions for Further Studies 924

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. 934

COMPETING INTERESTS 935

936

No competing interests exists 937

938

939

AUTHORS' CONTRIBUTIONS 940

941

All authors read and approved the final 942 manuscript." 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

962

963

REFERENCES 964

965

1. Adhikari P, Kadel B, Dhungel SI, 966 & Mandal A. Knowledge and 967 Practice Regarding Menstrual 968 Hygiene in Rural Adolescent Girls 969 of Nepal. Kathmandu Univ. Med. 970 J. (Kumj). 2007; 5: 382-6. 971

2. Mahon T, & Fernandes M. 972 Menstrual Hygiene in South Asia. 973 A Neglected Issue for WASH 974 (Water, Sanitation and Hygiene) 975 Programmes. 2010; 18:99-113. 976

3. Dasgupta A, & Sarkar M. 977 Menstrual Hygiene: How Hygienic 978 is the Adolescent Girl? Indian J. 979 Community. 2008; 33:77-80. 980

4. Emily O, & Rebecca T. 981 Menstruation, Sanitary Products, 982 and School Attendance. Evidence 983 from a Randomized Evaluation. 984 Am. Econ. J. Appl. Econ. 2011; 985 3:91-100. 986

5. Agarwal AK, & Agarwal A. A 987 Study of Dysmenorrheal During 988 Menstruation in Adolescent Girls. 989

Indian J. Community Med. 2010; 990 35:159-64. 991

6. Adams J, Bartram J, Chartier Y, 992 & Sims J. Water, Sanitation and 993 Hygiene Standards for Schools in 994 Low-Cost Settings. Geneva: 995 World Health Organization; 2009. 996

997

7. Bobel C, Winkler IT, Fahs B, 998 Hasson KA, Kissling EA, Roberts 999 TA. The Palgrave Handbook of 1000 Critical Menstruation Studies. 1001 [Internet]. Singapore: Palgrave 1002 Macmillan; 2020. PMID: 1003 33347099. 1004

1005

1006

1007

1008

1009

8. Chandra-Mouli V, & Patel SV. 1010 Mapping the Knowledge and 1011 Understanding of Menarche, 1012 Menstrual Hygiene and Menstrual 1013 Health among Adolescent Girls in 1014 Low-and Middle-Income 1015 Countries. *Reproductive Health 1016 Journal*. 2017; 14:30. DOI: 10. 1017 1186/S12978-017-0293-6. 1018

9. Netherlands Development 1019 Organization (SNV). Baseline 1020 Survey Report On School Girls' 1021 Menstrual Hygiene Management. 1022 2014. Retrieved From 1023 [Https://snv.org](https://snv.org) 1024

10. Foundation of Netherlands 1025 Volunteers. Girls in control-1026 Tanzania: Menstrual health 1027 hygiene 2021. Retrieved from: 1028 <https://snv.org/assets/expolre/dow1029nload/2021-menstrual-health-1030hygiene-i4id.pdf> 1031

11. Guya E, Mayo AW, & Kimwaga R, 1032 Menstrual Hygiene Management 1033 in Secondary Schools in 1034 Tanzania. *International Journal of 1035 Science and Technology*. 2014; 1036 3(1): 27-39. 1037

12. Gabrielson S. Towards 1038 Sustainable Menstrual Health 1039 Management in Tanzania, Lund 1040 University, 2018. Retrieved From 1041 [Https://www. Lucsus.Lu.Se](https://www.lucsus.lu.se) 1042

13. Bandura A. The Stormy Decade: 1043 Fact or Fiction? *Psychology in the 1044 Schools*. 1964; 1 (3): 224-231. 1045

14. Biljon C, & Burger C. The Period 1046 Effect: the Effects of Menstruation 1047 on Absenteeism of School Girls in 1048 Limpopo, Stellenbosch Economic 1049 Working Papers: Wp20/2019. 1050

15. Schmitt ML, Hagstrom C, 1051 Nowara A, Gruer C, Adenu-1052 Mensah NE, Katie K, et al. The 1053 Intersection of Menstruation, 1054 School and Family: Experiences 1055 of Girls Growing up in Urban 1056 Areas in the U.S.A. *International 1057 Journal of Adolescence and 1058 Youth*. 2021; 26:1, 94-109, Doi: 1059 10.1080/02673843.2020.18672071060 . 1061

16. Bhattacharjee S, Ray K, Biswas 1062 R, & Chakraborty M. 1063 Menstruation: Experiences of 1064 Adolescent Slum Dwelling Girls of 1065 Siliguri City, West Bengal, India 1066 2013. Doi: 10.4103/2278 1067 960x.118646. 1068

17. Abreu-Sánchez A, Parra-1069 Fernández ML, Onieva-Zafra MD, 1070 & Fernández-Martínez E. 1071 Perception of Menstrual normality 1072 and abnormality in Spanish 1073 female nursing students: 1074 *International Journal of 1075 Environmental Research and 1076 Public Health*. 2020; 17: 6432. 1077

18. Cheng Rn C, Yang Rn K, & Lion 1078 Rn S. (2007). Taiwanese 1079 Adolescents' Gender Differences 1080 in Knowledge and Attitudes 1081 towards Menstruation. 2007. 1082 Retrieved From 1083 [Https://Doi.Org/10.1111/lj. 1442-1084 2018.2007. 00312.X](https://doi.org/10.1111/lj.1442-10842018.2007.00312.X) 1085

19. Jain R, Anand P, Dhyani A, & 1086 Bansal D. Knowledge and 1087 Awareness Regarding 1088 Menstruation and HIV/AIDS 1089 among School Going Adolescent 1090 Girls: *Journal of Family Medicine* 1091

and *Primary Care*. 2017; 6: 47-51. 1092 Doi 10.4103/2249-4863.214970 1093

20. Alam MU, Luby SP, Halder AK, 1094 Islam K, Opel A, Shoab AK, et. al. 1095 Menstrual Hygiene Management 1096 among Bangladesh Adolescent 1097 School Girls and Risk Factors 1098 Affecting School Absence: 1099 Results from a Cross-Sectional 1100 Survey. *Bmj Open*. 2017; 7(7), 1101 E015508. Retrieved From 1102 <https://doi.org/10.1136/bmjopen-2016-015508> Amenorrhoea. *Ann N Y Acad Sci* 1205:23-32. Doi: 1105 10.1111/j.1749-1106.6632.2010.05669.x.Pmid: 1107 20840249. 1108

21. Tanzania Water and Sanitation 1109 Network (TAWASANET). 1110 Improvement of Menstrual 1111 Hygiene Management in Schools 1112 in Tanzania study report. 2015. 1113 Retrieved from: 1114 www.tawasnet.or.tz 1115

22. Mkumbo KA. Content Analysis of 1116 the Status and Place of Sexuality 1117 Education in the National School 1118 Policy and Curriculum in 1119 Tanzania. *Educational Research and Reviews*. 2010; 4(12): 616-1121 625. 1122

23. Sommer M, Caruso B, Sahin M, 1123 Calderon T, Cavill S, Mahon T, et 1124 al. Action: Addressing Girls' 1125 Menstrual Hygiene Management 1126 Needs in Schools. *Plos. Med*. 1127 2016; 13(2) E1001962. 1128

24. Adinma ED, & Adinma JI. 1129 Perceptions and Practices on 1130 Menstruation amongst Nigerian 1131 Secondary School Girls. *African Journal of Reproductive Health*. 1133 2008. 1134

1135

25. Malhotra A, Goli S, Coates S, 1136 Mosquera-Vasquez M. Factors 1137 Associated with Knowledge, 1138 Attitudes, and Hygiene Practices 1139 during Menstruation among 1140 Adolescent Girls in Uttar Pradesh. 1141 *Waterlines*. 2016; 35(3): 277-1142 305. 1143

26. Nabikindu NR. Health Problems 1144 due to Unsafe Sex among 1145 Youths: Condom Use Negotiation 1146 and Consistent Use, One Way to 1147 address them. *Moj. Public Health*. 1148 2014; 1(1):4-5, 1149 Doi:10.15406/Mojph.2014.01.0001150 02 1151

27. Philips-Howard PA, Caruso B, 1152 Torondel B, Zulaika G, Sahin M, 1153 & Sommer M. Menstrual Hygiene 1154 Management among Adolescent 1155 Schoolgirls in Low-and Middle-1156 Income Countries: Research 1157 Priorities. *Global Health Action*. 1158 2016; 9 (1): 33032. 1159

28. Garikipati S, & Boudot C. To Pad 1160 or not to Pad: Towards Better 1161 Sanitary Care for Women in 1162 Indian Slums: *Journal of International Development*. 2017; 1164 29: 32-51. Doi: 10.1002/Jid.3266 1165

29. House S, Mahon T. & Cavill S. 1166 Menstrual Hygiene Matters: A 1167 Resource for Improving Menstrual 1168 Hygiene around the World. 1169 Wateraid Publisher, 2012. 1170 Retrieved From: 1171 <https://www.Suzana.Org/Resourc1172 es/Documents/Default/3-2210-21-1173 1426498269.Pdf>. 1174

30. Miiro M, Rutakumwa R, 1175 Nakiyingi-Miiro J, Nakuya K, 1176 Musoke S, Namakula S, et al. 1177 Menstrual Health and School 1178 Absenteeism among Adolescent 1179 Girls in Uganda: BMC Women's 1180 Health. 2018; Doi 1181 10.1186/S12905-017-0502-Z 1182

31. Patabendi NL. An Issue in 1183 Managing Menstrual Hygiene in 1184 Rural Schools of Sri Lanka, 1185 WASH, For Everyone, 1186 Everywhere Conference. 2014. 1187

32. Ismail S. Equity and Education. 1188 International Encyclopedia of the 1189 Social & Behavioural Sciences, 1190 2nd Ed. Vol.7. Oxford: Elsevier; 1191 2015: 918–923. 1192

33. Scott L, Dopson S, Montgomery 1193 P, Dolan C, and Ryus C. Impact 1194 of Providing Sanitary Pads to 1195 Poor Girls in Africa. University of 1196

Oxford in Africa. University Of 1197

Oxford. 2013.1198

1199

1200

1201