Knowledge, Beliefs and Attitude towards Sickle Cell Disease among University Students

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Abstract

Background: Sickle cell disease (SCD) is one of the most prevalent genetic disorders among the African descent. SCD is associated with intermittent excruciating pain, increased morbidity and mortality yet has received less recognition in the public domain. There is growing evidence on the need to increase awareness to reduce the disease incidence. This study aimed to elicit student's knowledge, beliefs and attitude of SCD.

Method: A descriptive cross-sectional study design was employed. A total of 380 university students at all levels were invited to participate in the study. Of these, 350 successfully completed the study (response rate, 92.10%). A semi structured questionnaire was used to collect information on participant's demographic characteristics, general knowledge of SCD, beliefs and attitudes of students towards SCD.

Results: Almost all the students were aware of SCD (98.6%) with the main source of information being school (84.6%) and the media (12.6%). Knowledge level of respondents on SCD based on scores revealed a mean score of 9.8 ± 4.2 with 45.1%, 47.8%, and 7.1% for poor, moderate and excellent respectively. Most of the respondents strongly agreed that they feel worried (52.9%) and sympathetic (51.4%) for people affected with SCD. Participants had the belief that it is an inherited disease acquired from parents (48.3%) but not a punishment from God (76.3%).

Methodology

The study is a descriptive cross-sectional survey involving students at the University of Ghana campus. Five halls of residence (Akuafo, Legon, Mensah Sarbah, Jubilee, Volta hall) were conveniently selected for the survey. A total of 380 students were approached in these halls to complete the questionnaire.

The purpose of the study was explained to participants and those who volunteered to participate were enrolled in the study. Of these, 350 successfully completed the questionnaire giving a response rate of 92.10%. The initial version of the questionnaire was pretested on 10 students at University for professional studies (UPSA), a nearby university and modified thereafter. Validity of the questionnaire was checked using Cronbach's alpha (r=0.7).

The questionnaires captured information on participant's demographics, awareness and testing of SCD, and genotype status. A 5-point Likert scale ranging from 'strongly agree to strongly disagree' was used to explore respondent's knowledge, attitudes, and beliefs of SCT/SCD. A total of 10 questions were asked to ascertain respondent's knowledge of SCD which included general information of SCD

Knowing a family member with SCT/SCD was also significantly associated with increased knowledge scores of participants (p=0.01). All other variables were not significantly different from each other (p>0.05).

Variables	N	Mean ± SE	p-value
Age (yrs)			
18-24	294	9.93 ± 0.23	
≥25	56	9.05 ± 0.73	0.15
Sex			
Male	157	9.25 ± 0.30	
Female	193	10.46 ± 0.33	0.08
Marital status			
Married	332	9.76 ± 0.23	
Single	18	8.78 ± 0.69	0.5
Educational level$			
Undergraduates	285	8.78 ± 0.69	
Post graduates	65	10.02 ± 0.23	0.03
Had SCD test*			
Yes	137	9.75 ± 0.34	
No	213	9.82 ± 0.29	0.88
Knows genotype			
Yes	106	10.15 ± 0.41	
No	244	9.63 ± 0.27	0.296
Knows relative with SCT/SCD			
Yes	14	12.64 ± 1.18	
No	336	9.67 ± 0.23	0.01

marriage because of fear of losing prospective life partner by knowing their carrier/SCD status.

Majority of the students had strong belief that SCD is not an evil disease (70.6%) but inherited disease (48.3%) and not a punishment from God (76.3%). This is similar to the findings of Olakunke et al. [26] and Treadwell et al. [24] where majority of the respondents correctly believed that sickle was inherited from parents. Past experiences, beliefs, and attitudes have been reported to influence the way individuals approach new knowledge, learning, and decision-making [27]. In general, most participants demonstrated positive attitude towards people affected with SCD. Most strongly expressed worry (52.9%) and felt sympathetic (51.4%) for sufferers of the genetic disorder. This positive attitude is similar to the work of Olatona et al. [18], Ameade et al. [9]. Contrast to the positive attitudes by most of the respondents, close to one third strongly agreed (28.3%) and agreed (27.7%) not to marry someone with SCT/SCD irrespective of their genotype and that they will end their relationship if they discover their genotypes predispose them to having children with SCD. Similar report has been reported in Ghana where 78.0% of public servants agreed to call off marriage if they become aware of genetic incompatibility [9]. This could possibly be due to the fact that respondents maybe aware of the associated painful and psychosocial trauma affected children go through and would not want to put themselves into such dilemma. A limitation of this study is the small sample size which may make generalizability questionable. However, the results from this survey points to the inadequate knowledge and misunderstanding of SCD among the students.

Conclusion

Almost all the students were aware of SCD with the main source of information being schools and the media (radio and Television). Majority of the respondents demonstrated positive attitude towards SCD and had the belief that it is an inherited disease acquired from parents but not a punishment from God. In general, there was poor understanding and inadequate knowledge of SCD particularly on the pattern of inheritance. To reduce the incidence of SCD, we suggest effective public health education for SCT and SCD in strategic places such as schools, media (radio/Television), health centres and churches to address misconceptions and increase knowledge level as well as understanding of the risks of having a child with SCD and influence personal reproductive decisions.

References

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