

Big Sibling Size And Access To Kabul University Ahmad DAANISH¹

Introduction : A number of researches have been carried out in the past studying relationship between family size and its impact on educational achievements that have shown contradictory results (Chernichovsky,1985; Gomes,1984; Jæger , 2006; Guo &VanWey, 1999). No published study has been found about the student’s sibling size and access to universities in Afghanistan

Objective: To estimate the average sibling size and sibship composition in students at Kabul University and compare it to the sibling size at national level.

Background: Studies show contradictory results regarding the relationship between the sibling size and access to education (Marteletto & de Souza, 2012; Schmeer, 2009; Lam & Marteletto, ,2008; Eloundou-Enyegue & Williams, 2006). Similarly, the relationship between the genders compositions of family members in various researches has been reported differently (Amin, 2009 ; Kaestner,1997 ; Butcher& Case, 1994).

A number of studies claimed a negative relationship between the number of family members and educational achievements (Marteletto, 2012; Jæger , 2006; Kalmijn& Werfhorst, 2016), others reject this finding (Guo &VanWey, 1999) and some researchers report a positive relationship(Chernichovsky,1985; Gomes,1984).

There are studies that show positive , neutral and negative association, depending on the context (Maralani, 2008). Marteletto and de Souza (2012) see that “the causal effect of family size on adolescents’ schooling resembles a gradient that ranges from positive to no effect, trending to negative.”

Some studies have reported positive impact of having a sister on female student’s education, some showed negative effects and others showed no difference (Amin, 2009). Kaestner (1997) found that sibling sex composition had little effect on educational achievement of child and teen, while black teens with sisters had higher educational achievement levels than those with brothers. The result of another study suggests that the opposite sexes have a negative impact on educational access (Butcher, 1994).

The terms sibsize /sibling’s size, family size and household’s size have different meanings. In this study, the number of siblings /sibling’s size has been used. The average number of siblings for the age group of 15 to 24 years olds is reported to be 6.9 in Afghanistan (Central Statistics Organization and Ministry Of Public Health.2017). The average sibling size among students in Pakistan was reported to be about 4.6 (within a family) (Parpio et al, 2012) and in Turkey about 4 (excluding the student) (Aslan, 2015).

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METHODOLOGY

Participants

A cross sectional descriptive study that includes all students of 2nd to 5th year students of Kabul University (N=11447) was designed. Kabul University is the oldest and most populous university in Afghanistan comprising a wide range of community strata. The first class was not formed at the time of the execution of the research . A simple and short questionnaire was designed.

Procedure

Before the distribution of the questionnaire, a meeting was held with the teaching staff of the relevant faculties in which the purpose of the research and the method of distribution and collection of questionnaires were explained. The student participation was announced to be voluntarily , and anyone who did not want to participate in this study could return the questionnaire without any information. A brief questionnaire containing three questions, i.e., gender, number of brothers and number of sisters, was distributed to students in the classroom at a convenient time. Data collectors were instructed to explain the aim of the study to the students and to ask them if they agreed to participate, return the filled questionnaire without mentioning their names. Collected questionnaires were packed and labeled with the class, department and faculty names. The acquired information were entered in MS excel and then transported and analyzed by SPSS 16.0. Only descriptive statistics were used.

From the accessible students, 8695 (75.9%) filled the questionnaires. All gathered data were entered into worksheets, but due to incompleteness or invalid information, 277(2.4%) questionnaires were not processed.

Table 1

Total number of students and the number of questionnaires studied.

Classes	No. of Stds.	No. (%) of Stds. CQ	No.(%) of EQ ¹	No.(%) of SQ ²
2nd	4364	3509(80.4)	107(3)	3402(77.95)
3rd	3398	2580(75.9)	78(3)	2502(73.63)
4th	3535	2482(70.2)	92(3.7)	2390(67.6)
5th	150	124(82.66)	0	124(82.66)
Total	11447	8695(76)	277(3.2)	8418(73.5)

Note: Stds, students; Stds CQ, students Completed Questionnaires; EQ, Excluded Questionnaires; SQ, Studied Questionnaires. 1: Percentages are based on the No. of students that Completed Questionnaires; 2: Percentages are based on total No. of students.

Table 2
Reasons for the removal of questionnaires

Reason	No.(%)
No. of brothers and sisters not mentioned	17(0.2)
No. of brothers not mentioned	40(0.46)
No. of sisters not mentioned	17(0.2)
Outliers	90(1.04)
Total	277(3.19)

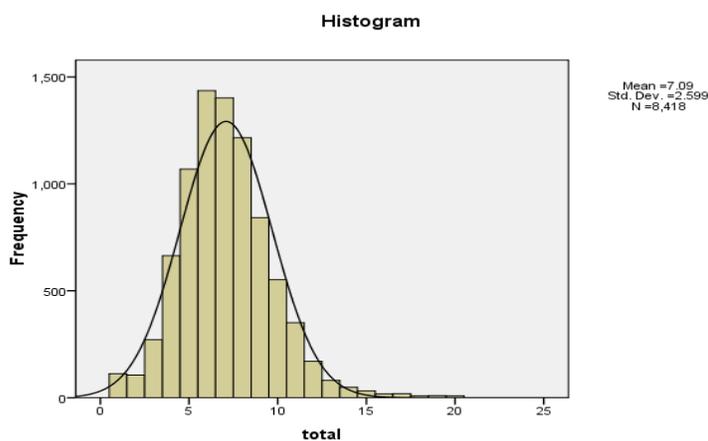
Note: An extra 72 questionnaires in which the gender was not mentioned, were excluded only for gender comparison.

RESULTS

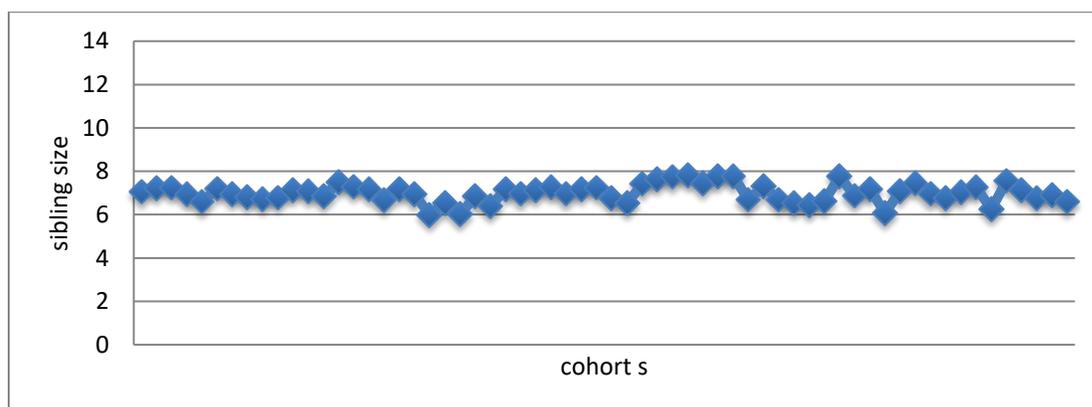
The average sibling size was about 7.09, median 7, mode 6 and SD 2.59. Students from families with one to three siblings consisted only 5.8 % of the study population. The average sibling size between 20 different faculties ranged from 6.37 to 7.71. Male students belonged to families with more male siblings and female students belonged to families with more female siblings than their opposite gender.

Table 3
Descriptive statistics of data from all studied questionnaires

Average number of siblings	7.09
Standard deviation	2.59
Median	7
Mode	6
Percentiles25	5
Percentiles50	7
Variance	6.7



Graph 1. Distribution of sibling size among the 8418 students

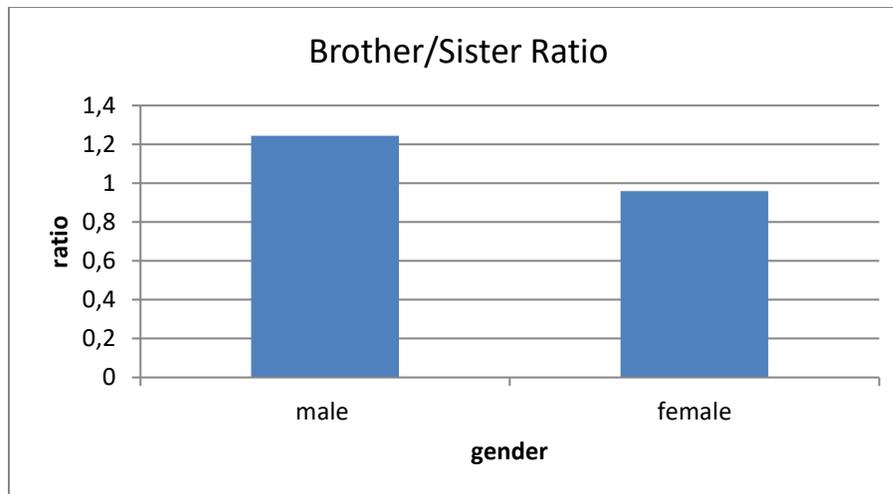


Graph 2. Sibling size among 63 cohorts from 20 faculties

Table 4

Average of sibling size broken down by classes

Classes	No.	Sibling size	Standard deviation
2nd	3402	6.97	2.52
3rd	2502	7.20	2.67
4th	2390	7.15	2.61
5th	124	6.83	2.42
Total	8418	7.09	2.59



Graph 3. Ratio of brother/sister in male and female students

DISCUSSION

The survey was designed to include the entire target population, i.e., census. Out of 11447 students, 8695 (76%) of the students were available and participated to the survey. Students who were not available were classified as Missing Completely At-Random (MCAR). The studied population was almost similar to the absent population from a variety of perspectives, and experience has shown that the effect of the absence of such figures on the outcome is less likely, hence data from absents students were neglected.

Out of the 8695 questionnaires, 277 (2.4%) were not analyzed for a number of reasons listed in Table 2. But these are missing not at random (MNAR) and were item non-response. This failure has been accepted in the study.

From a review of 964 questionnaires, data entry errors estimated to be about 3.18%. Although the inconsistency of the reevaluated questionnaires was corrected, this error was also accepted. Because the error tolerance rate depends to the study's purpose (Wahi& Parks&Skeate and Goldin, 2008), an error of about 14% (equivalent to one student) was tolerable in the average sibling size in this study, but as noted earlier, the error is less than this limit.

The average sibling size between cohorts was between 6.81 to 7.2 and amongst 20 faculties was between 6.37 to 7.71 that shows small variations.

The average sibling size of approximately the same age group at national level has been found to be 6.9 (Central Statistics Organization, 2017) that is very close to that of students. Although there is no clear definition for small and big family size, if one considers small family size as 5 or less (parents + 3 siblings), only less than 6% of the students were from small families.

Regarding the relationship between the gender compositions of family members over education, various researches show different effects (Amin, 2009; Kaestner, 1997;

Butcher, 1994). In this study, it was found that male students came from families with a relatively large number of brothers and female students from families with a relatively large number of sisters.

Conclusion: The average student's sibling size among students at Kabul University was about 7.09 that are close to the national average of sibling size of approximately the same age group (6.9). Although it was a descriptive study, it shows that large sibling size did not prevent students attaining Kabul University; which contradicts the belief that large sibling size is a barrier to education.

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