Traditional and Nontraditional Family Structures: Influence on Students' Academic Ability, Achievement, and Readiness

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Abstract

The study aimed to measure the influence of traditional and nontraditional family structures on the academic ability and achievement of students in elementary, and their readiness in high school academic work. The study utilized a descriptive-correlation design which was employed to randomly select 179 students from a basic education institution in Tacurong City. The result of the study showed that there is a significant difference between the standard scores of students in traditional and nontraditional families in terms of their academic ability, achievement, and readiness. It can also be inferred that students who performed well in ability test, also performed well in achievement and readiness tests. Subsequently, those who had high achievement scores in grade six were more ready in their academic works in high school. Thus, it is necessary to increase the involvement of parents in school to monitor their children's progress and performance. It is also integral to nurture an educational environment that supports students from diverse family structures.

Keywords: *family structures, academic ability, achievement, readiness*

Introduction

Education is a fundamental tool that society employs to transmit its social ideals. It has become a priority not only for the government and non-profit organizations, but also for individuals, families, and communities (Ebong, 2015). The family is a basic social unit that is responsible for the care, parenting, and socialization of children. Family systems theories proposed that the family is an organized entity in which children are affected by family-level processes (Maršanić & Kušmić, 2013). However, in this day and age, family structures have been drastically changing and they pose impact on how students perform in school.

The changing family structure has resulted in a decrease in married couples and a shift in family life. The conventional family model of a working father, a stay-at-home mother, and their children is becoming less popular (Cancian & Reed, 2009). It is mostly evident in the union formation that occurs without a marriage, and new ways of living arrangements arise, altering the family's institutional utility as well as its symbolic meaning (Meçe, 2015; Sobotka & Toulemon, 2008). Specifically, the changes have been accounted to several factors of nontraditional family structures such as divorce, marital breakup, out-of-wedlock pregnancy, death (Abedini, Mirnasab & Fathi Azar, 2017), leaving home, imprisonment, adoption, and uncontrollable circumstances such as deployment to war zones (Abedini et al., 2017; Gladding, 2011), desertion and illegitimacy (Egbochuku & Oliha, 2014), and cohabitation (Meçe, 2015).

With and without statistical controls for infant, parent, and family characteristics, the influence of family structure may confound the estimated effects of parental marriage on children's development (Foster & Kalil, 2007; Acs, 2007). It was proven by some research studies that students' performance in school is affected by several factors which include family background (Singh, Malik & Singh, 2016). It was posited that parental involvement strongly supports children's educational performance (Blair, 2013) such as parents' supervision of their children in doing their homework and projects and in reviewing for upcoming tests. On the other hand, regardless of family structures, it is beneficial that they set time to ask about their children's progress in school, aid them in their schoolwork, communicate with their children's teachers regarding their school performance, and attend to their school activities when necessary. It is essential for parents that they look for more ways to increase their involvement in their children's education. This is supported by the studies which reveal that Filipino students earn

statistically higher standardized ability test scores when the school considers individual student characteristics and needs which include students' family structures, parental involvement, and other factors related to family dynamics (Bautista, 2012).

This study had included traditional family structure, and nontraditional family structure that focused on the context of Filipino students who had nonresident-parent family with one parent working overseas. It also included separated-parent family with no legal separation due to the absence of Christian marital separation law (e.g., divorce) in the Philippines. In addition, deceased-parent family and single-parent family by choice or accident (e.g., out-of-wedlock pregnancy) were also of prime interest. There is a dearth in literature about these constructs considering that most studies were conducted in developed countries (Nonoyama-Tarumi, 2017; Santina & Siciliab, 2016; Amato, Patterson, & Beattie, 2015; Woessmann, 2015). These gaps sparked interest in this study that investigate the influence of changing family structures in the Philippines and hypothesized to affect students' ability, achievement, and readiness. Specifically, it sought to prove the following research hypotheses that include (a) traditional family have higher mean scores on academic ability, achievement, and readiness than students from non-traditional family; (b) four non-traditional families have different mean scores on academic ability, achievement, and readiness; (c) students' academic ability positively predict academic achievement and readiness; and (d) students' academic achievement positively influence their academic readiness.

Materials and Methods

Research Design

The study utilized a descriptive-correlation research design. It is descriptive because it sought to provide summary measures to compare the three learning outcomes such as academic ability, achievement, and readiness that were measured through standardized tests. It is correlational because it did not manipulate the independent variable. This design was mainly employed to establish a focus in testing specific hypotheses of the study phenomena that pertain to the relationship and difference of variables in traditional family (group 1) and nontraditional family (group 2).

Population and Sample of the Study

The study was conducted in an elementary school in Tacurong City during the first semester of the academic year 2022 to 2023. Eight intact classes with a total population of 254 students in grade 6 (209 living in a traditional family and 45 living in a nontraditional family) were included to identify the proportionate sample size of the study. The 138 students from group 1 and 41 students from group 2 with distinct characteristics and competencies were randomly selected from the population of the said families through a random sample generator. A total of 179 students were the subjects of the study.

Data Collection Tool

Three standardized test instruments were used by the school and the secondary data were obtained upon the request of the researcher to utilize the results for this study. The instruments were developed to measure the academic ability, academic achievement, and academic readiness of elementary students who are living in traditional and nontraditional families. The academic ability test measures school success and readiness of the students to handle school related tasks. It is a multiple-choice type of test that measures both the aptitude and achievement of grade six students in the elementary curriculum and other related outcomes. The achievement test measures students' knowledge and skills in English, Mathematics and Science for elementary level to help schools in designing intervention programs aimed at enhancing student and overall school performance. Finally, the readiness test measures the extent of preparedness of the grade six students or elementary graduates for high school academic work. It consists of four subject matter tests such as Verbal English, Quantitative, Verbal Filipino, and Science and one mental ability test such as Non-Verbal Reasoning.

Data Analysis

The statistical analyses were performed using the IBM SPSS 24. All hypotheses of the study were tested at .05 level of significance. In order to measure the difference of the mean scores of the traditional and nontraditional family groups in terms of their academic ability, academic achievement, and academic readiness, a t-test for independent samples was used. On the other hand, Kruskal-Wallis test and one-way analysis of variance (ANOVA) were utilized to determine the comparability of the mean scores of four nontraditional family groups in each of the aforementioned constructs. Moreover, to investigate whether student academic ability has positively predicted achievement and readiness, simple linear regression was employed. Consequently, similar test was also applied to determine the extent to which achievement test scores of students influenced their readiness test scores. Pearson's correlation coefficient was also used to test the relationship of the learning outcomes.

Table 1. Means and Standard Deviations of Students' Academic Ability

Group	n	Mean	SD	SE
Traditional	138	535.01	92.89	7.907
Nontraditional	41	474.30	105.64	16.498
Total	179	504.66	99.01	7.400

Results and Discussion

Family Structures on Academic Ability, Achievement, and Readiness

The mean standard scores of students were subjected to a t-test to see if the two groups are comparable in terms of academic ability, achievement, and readiness.

It shows that students in the two groups had an overall mean standard score of 504.66 (SD = 99.01).

This implies that the students based on the quality index, had an average performance in their school ability test that measures their success and readiness in school related work. However, students from the traditional family group (M = 535.01, SD = 92.89) performed better than the nontraditional family group (M = 474.30, SD = 105.64) in terms of academic ability.

In order to measure the significant difference of the two groups on academic ability, t-test was employed. The Levene's test for equality of variances showed a non-significant value, $F(1, 177) = .508$, $p = .477 > .05$, which means that the assumption of homogeneity was not violated. The t-test was found to be statistically significant, $t(177) = 3.559$, $p = .000 < .05$ (Table 2). This explains that there was a sufficient sample evidence to support that there was a significant difference between the traditional and nontraditional family groups in terms of their academic ability.

This is supported by the studies which

Table 2. T-test on Academic Ability

Group	df	t	p
Traditional	177	3.559	.000
Nontraditional			

*p < .05

reveal that students earn higher test scores on their academic ability when the school considers their family structures and other factors related to family dynamics (Bautista, 2012). Moreover, research consistently demonstrates that children living with nontraditional family score lower on measures of academic ability than children living with traditional family (Amato, Patterson & Beattie, 2015; Brown, 2010).

In terms of academic achievement, it reveals that the traditional family group had a moderate mean standard score of 515.58 (SD = 96.57), while the nontraditional family group had a low mean standard score of 457.73 (SD = 99.85). This implies that the students from the traditional family had higher academic achievement than students from nontraditional family.

In order to compare the two groups' academic achievement, t-test was conducted. The Levene's test for equality of variances did not reach statistical significance, $F(1, 177) = .260$, p

Table 3. Means and Standard Deviations of Students' Academic Achievement

Group	n	Mean	SD	SE
Traditional	138	515.58	96.57	8.220
Nontraditional	41	457.73	99.85	15.594
Total	179	486.66	100.06	7.479

Table 4. T-test on Academic Achievement

Group	df	t	p
Traditional	177	3.342	.001
Nontraditional			

*p < .05

= .610 > .05, which indicates that the homogeneity assumption was met.

The t-test was found to be statistically significant, t(177) = 3.342, p = .001 < .05 (Table 4). This reveals that there was a sufficient sample evidence to prove that there was a significant difference between the traditional and non-traditional family groups in terms of their academic achievement. This finding also supports the numerous research studies that children in traditional family typically have better academic achievement than children in nontraditional families such as separated-parent, single-parent, deceased-parent, and non-resident parent households (Amato, 2005; Brown, 2010; Malczyk & Lawson, 2017; Meçe, 2015; Woessmann, 2015).

On the readiness of students in high school academic work, the study reveals that the traditional family group had an above average performance with a mean standard score of 573.47 (SD = 77.94), while the nontraditional family group had a high average performance with a mean standard score of 538.44 (SD = 84.66). This implies that the students from both groups

Table 5. Means and Standard Deviations of Students' Academic Readiness

Group	n	Mean	SD	SE
Traditional	138	573.47	77.94	6.635
Nontraditional	41	538.44	84.66	13.221
Total	179	555.96	80.65	6.028

performed well in the test. However, students from the traditional family were more academically ready than students from nontraditional family.

In order to measure if the two groups are comparable in terms of academic readiness, t-test was performed. The Levene's test for equality of variances showed a non-significant value, F(1, 177) = .322, p = .571 > .05, which indicates that the assumption of homogeneity was observed.
The t-test was found to be statistically significant, t (177) = 2.477, p = .014 < .05 (Table 6). This means that there was a sufficient sample evidence to support that there was a significant difference between the traditional and nontraditional family groups in terms of their academic readiness.

The result is similar to the study about children's academic outcomes in Spain. It was found that there was a significant moderate difference in the grade retention rate in favor of 10-year-old students that were members of traditional families attending public primary schools. In this case, data showed that the probability of being a repeater due to lack of academic readiness in a nontraditional family was around 25% greater than the traditional family for both public and private schools. In secondary education, the probability of a student from nontraditional family being a repeater at public (private) schools was 63.74% (83.33%) greater than a student from a traditional family (Santina & Siciliab, 2016).

Table 6. T-test on Academic Readiness

Group	df	t	p
Traditional	177	2.477	.014
Nontraditional			

*p < .05

Nontraditional Family Structures on Academic Ability, Achievement, and Readiness

The mean standard scores of students were subjected to Kruskal-Wallis test to determine the significant difference of the four groups (separated-parent, deceased-parent, nonresident-parent, and single-parent) from nontraditional family in terms of academic ability. Moreover, the mean standard scores of students were subjected to one-way analysis of variance (ANOVA) to determine if the four groups are comparable in terms of academic achievement.

In terms of academic ability, the Kolmogorov-Smirnov test for normality showed that data for separated-parent family (D(5) = .263, p = .200 > .05), deceased-parent family (D(5) = .237, p = .200 > .05), nonresident-parent family (D(5) = .167, p = .200 > .05), and single-parent family (D(5) = .315, p = .117 > .05) were not significant, which prove that the assumption for

Table 7. Kruskal-Wallis Test on Academic Ability

Group	n	Mean Rank	H	df	p
Separated-parent	6	24.50			
Deceased-parent	5	24.70	1.860	3	.602
Nonresident-parent	19	18.50			
Single-parent	11	21.73			

*p < .05, Minimum = 295.00, Maximum = 733.00

normality was met. However, the Levene's test for equality of variances showed a significant value, F (3, 37) = 6.002, p = .002 < .05, which indicates that the assumption of homogeneity was not met. Therefore, Kruskal-Wallis test was performed to measure the comparability of the four groups in terms of academic ability. The Kruskal-Wallis test was found to be not statistically significant, H(3) = 1.860, p = .602 > .05. This indicates that there was no sufficient sample evidence to support that there was a significant difference between students of the four family groups in the mean ranking of their academic ability.

Moreover, the academic achievement results show that the overall mean standard score of the students is 457.73 (SD = 99.85). It reveals that students in the four groups had low average performance in the achievement test.

In order to measure if the four groups are comparable in terms of academic readiness,

one-way ANOVA was performed. The Levene's test for equality of variances showed a non-significant value, F(3, 37) = 1.863, p = .153 > .05, which indicates that the homogeneity assumption was observed. The ANOVA was found to be statistically non-significant, F(3, 37) = .998, p = .404 > .05; ω = .011 (Table 9). The results indicate that the four groups from nontraditional families were comparably equal in terms of their academic achievement.

On academic readiness, the Shapiro-Wilk test showed that data for separated-parent family (D(5) = .791, p = .069 > .05), deceased-parent family (D(5) = .909, p = .464 > .05), nonresident-parent family (D(5) = .899, p = .405 > .05), and single-parent family (D(5) = .976, p = .913 > .05) were not significant, which prove that the assumption for normality was met. However, the Levene's test for equality of variances showed a significant value, F(3, 37) = 3.425, p = .027

Table 8. Means and Standard Deviations of Students' Academic Achievement under the Nontraditional Family Structure

Family Group	n	Mean	SD	SE
Separated-parent	6	482.33	153.40	62.625
Deceased-parent	5	430.20	104.84	46.886
Nonresident-parent	19	478.21	82.03	18.820
Single-parent	11	421.45	92.84	27.993
Total	41	457.73	99.85	15.594

Table 9. ANOVA on Academic Achievement

	SS	df	MS	F	p
Between Groups	29866.03	3	9955.34	.998	.404
Within Groups	368952.02	37	9971.68		
Total	398818.05	40			

*p < .05, ω = .011

Table 10. Kruskal-Wallis Test on Academic Readiness

Group	n	Mean Rank	H	df	p
Separated-parent	6	21.08			
Deceased-parent	5	24.90	.702	3	.873
Nonresident-parent	19	19.87			
Single-parent	11	21.14			

*p < .05, Minimum = 329.00, Maximum = 694.00

< .05, which indicates that the assumption of homogeneity was not observed.

Kruskal-Wallis test was employed to measure the comparability of the four groups in terms of academic readiness. The Kruskal-Wallis test was found to be not statistically significant, H (3) = .702, p = .873 > .05. This indicates that there was no sufficient sample evidence to support that there was a significant difference between students of the four family groups in the mean ranking of their academic readiness.

In the case of the four nontraditional families, it was found that students from separated-parent, deceased-parent, nonresident-parent, and single-parent families did not differ in their mean standard scores in academic ability, achievement, and readiness due to insufficient sample evidence which can be further studied with a large sample size in more conservative societies like Asia (Amato, 2005; Amerijckz & Humblet, 2014; OECD, 2016; Pollard & Lee, 2003). Understanding of this gap differs because various researchers and authors have adapted it on the subjects under study. Thus, some view it as being a context-specific process located in cultural and historical aspects (Camfield, Steuli, & Woodhead, 2010).

Academic Ability as Predictor of Academic Achievement and Readiness

The following paths were taken in the investigation of the relation of these outcomes: (1) whether academic ability predicts academic achievement; and (2) whether academic ability predicts academic readiness. In order to measure these outcomes, simple linear regression analysis was employed.

The results of the regression indicated that academic ability had accounted for 36.1% of the variation in the academic achievement scores of students (R^2 = .364, F(1, 177) = 101.367, p = .000). Moreover, the regression model was statistically significant as academic ability had positively predicted students' academic achievement (B = .610, p = .000 < .05) (Table 11).

Table 11. Simple Linear Regression for Academic Ability Predicting Academic Achievement

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	SE	Beta		
1 (Constant)	184.535	32.126		5.744	.000
Academic Ability	.610	.061	.283	10.068	.000

*p < .05, R^2 = .364, adjusted R^2 = .361, $F(1, 177)$ = 101.367

In addition, there is a significant and positive substantial relationship between academic ability and academic achievement, $r(179) = .603$, $p = .000 < .05$ (Table 12). This indicates that students who performed well in school ability test, also performed well in the achievement test.

On the other hand, the results of the regression revealed that academic ability had accounted for 65.1% of the variation in the academic readiness scores of students ($R^2 = .653$, F

Table 12. Correlation between Academic Ability and Academic Achievement

Group		Academic Achievement
Academic Ability	Pearson Correlation	.603
	Sig. (1-tailed)	.000
	n	179

$(1, 177) = 333.020$, $p = .000$). Furthermore, the regression model was statistically significant, which indicates that academic ability was a positive predictor of students' academic readiness ($B = .658$, $p = .000 < .05$) (Table 13).

Moreover, academic ability and academic readiness were significantly and positively correlated. It indicates a very strong relationship between the two variables with $r(179) = .808$, $p = .000 < .05$ (Table 14). This further explains that students who performed well in the academic ability test, also performed well in the academic readiness test.

The results hold true to the findings that academic ability can predict academic achievement and readiness of a child in school. Numerous studies and researchers validated that family, who looks after the academic ability of their children, is

Table 13. Simple Linear Regression for Academic Ability Predicting Academic Readiness

Model		Unstandardized Coefficients		Standardized Coefficients	t	p
		B	SE	Beta		
1	(Constant)	222.467	19.129		11.630	.000
	Academic Ability	.658	.036	.808	18.249	.000

*$p < .05$, $R^2 = .653$, adjusted $R^2 = .651$, $F(1, 177) = 333.020$

a strong predictor of children's academic success and also plays a huge role to their cognitive, social and emotional development up to adolescence (Amato, 2005). It was also revealed that there was a significant substantial and positive relationship among academic ability, achievement, and readiness. The findings were similar to the study on the relationship between cognitive ability test and the 4th and 5th grade reading and math achievement and readiness tests in Ohio, where it was shown that there is a significant relationship between the students' cognitive ability test and the achievement test in elementary (Warnimont, 2010) and readiness test in high school (Casillas et al., 2012).

Academic Achievement as Predictor of Academic Readiness

Simple linear regression analysis was utilized to test if academic achievement

Table 14. Correlation between Academic Ability and Academic Readiness

Group		Academic Achievement
Academic Ability	Pearson Correlation	.808
	Sig. (1-tailed)	.000
	n	179

Table 15. Simple Linear Regression for Academic Achievement Predicting Academic Readiness

Model		Unstandardized Coefficients		Standardized Coefficients	t	p
		B	SE	Beta		
1	(Constant)	303.043	23.627		12.826	.000
	Academic Ability	.522	.046	.648	11.323	.000

*p < .05, R^2 = .420, adjusted R^2 = .417, F(1, 177) = 128.211

Table 16. Correlation between Academic Achievement and Academic Readiness

Group		Academic Achievement
Academic Ability	Pearson Correlation	.808
	Sig. (1-tailed)	.000
	n	179

significantly predicted academic readiness. The results of the regression revealed that academic achievement had accounted for 41.7% of the variation in the academic readiness scores of students (R^2 = .420, F(1, 177) = 128.211, p = .000). In addition, the regression model was statistically significant. It reveals that academic achievement significantly predicted students' academic readiness (B = .522, p = .000 < .05) (Table 15).

Subsequently, academic achievement and academic readiness had a significant and positive correlation. It indicates a substantial relationship between the two variables with r(179) = .648, p = .000 < .05 (Table 16). This further explains that students who performed well in the achievement test, also performed well in the academic readiness test.

This result is consistent with the study which reported that academic achievement indicators are among the strongest predictors of future academic success of elementary students in high school related works (Casillas et al., 2012).

Conclusion

Students with different family structures are capable of improving their academic ability, achievement, and readiness depending on how they self-regulate learning as enhanced through motivation from the family. Moreover, success on the performance of students in terms of the abovementioned learning outcomes are more observed from students in a traditional family in comparison to students in a nontraditional family and are found to be related to the family structures which have implications to parents' involvement in academic activities and home supervision of extended school activities. On the other hand, academic deficiencies of students are also associated with family problems and systems such as marital separation, death, and deployment to work overseas resulting to single parenting. Furthermore, academic ability is a good predictor of the success and failure of students in terms of their academic achievement and readiness for higher academic tasks. Achievement also indicates promotion to a higher grade level and influences students' readiness to apply concepts to more advanced topics. As a result, academic performance of students in three assessment measures ranges from below average to above average owing to their varied preparations as related to their family structures in home.

Thus, it is essential for parents that they look for more ways to increase their involvement in their children's education. Regardless of family structures, it is beneficial that they set time to discuss about their children's progress in school, guide them in their curricular activities, communicate with their children's teachers regarding their school performance, and attend to their school activities when necessary. It is also important that they internally motivate their children to study hard and constantly instill in them the value of education. Finally, it is of great importance for everyone to foster a supportive educational environment that recognizes students from diverse family structures.

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