

## PSYCHOLOGICAL BIRTH ORDER, SELF-EFFICACY AND ACHIEVEMENT MOTIVATION IN STUDENTS

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### ABSTRACT

The study was conducted to find out the relationship among Psychological Birth Order, Self-Efficacy and Achievement Motivation in university students. It also investigated the role of Self-Efficacy in mediating the relationship between Psychological Birth Order and Achievement Motivation. Correlational research design was used. For data collection, purposive sampling technique was used from sample of 440 undergraduate and graduate students with age 17-25 years from college and universities. Psychological Birth Order Inventory (Campbell & Alan, 1991), Hermans Scale of Achievement Motivation (Hermans, 1970) and Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) were used for data collection. Pearson Product Moment Correlation Analysis and PROCESS were used to find out correlation and mediation of variables. The results of the study showed that first Psychological Birth Order (men and women) significantly positively correlated with Self-Efficacy and significantly negatively correlated with Achievement Motivation. Middle and only Psychological Birth Order (men and women) significantly negatively correlated with Self-Efficacy. Middle. Significant negative relationship was found between youngest Psychological Birth Order (men and women) and Achievement Motivation. The results of mediation showed that Self-Efficacy was mediating the relationship between middle; only Psychological Birth Order and Achievement Motivation in both men and women. Furthermore, result of the t-test analysis showed that gender difference was found in Achievement Motivation with males having more Achievement Motivation than females.

**Keywords:** Psychological Birth Order, Self-Efficacy, Achievement Motivation, PROCESS.

### INTRODUCTION

Every child comes into the world according to his order of birth. The child spends time with his family throughout the life and share experiences with them. Parents teach their children how to interact with others. Adler (1946) described two kinds of Birth Order i.e. Actual and Psychological Birth Order. Actual Birth Order is the order of birth of an individual in a family. Other terms have been used to represent Actual Birth Order, such as actual place, ordinal place, or sometimes just natural order. Psychological Birth Order is explained as a way in which an individual recognizes his or her position in his or her family. It can also be called as perceived Birth Order. According to Adler (1946) Birth Order is one of the many ways in which a child comprehends his or her supposed place in the family. The Psychological Birth Order is vital as it greatly influences the development of a child's personality. It sheds light on the idea that children often recognize themselves to have a particular part other than their real Birth Order (Kalkan, 2008). Psychological Birth Order is a place in which a child recognizes his place along with his Actual Birth Order. For instance, if

the actual first born is incapable somehow, the second born may secure the role of the first born. Another example is that the adoptive child may have the first born but grown up as a middle child position. The view that the biological impact of one's birth when compared with the environment in which one was born, had little influence (Adler, 1927). Psychological Birth Order was previously been categorized into five overall positions: first, second, middle, youngest, and only child (Adler, 1946; Ansbacher & Ansbacher, 1956). The Psychological Birth Order classified by Adlerian falls into four major positions: first, middle, youngest, and only child. The second child position is not used in current Psychological Birth Order because second child can be thought of as the younger of the two children in the family or as a middle child with a family of 3 or more children (Campbell, White & Stewart, 1991).

The first born gets the limelight and care. First born are also under the strain to perform well and satisfy/meet their parent's expectations and aspirations. Middle born may feel ordinary, neglected and unable to fit into their family. The middle born becomes the mediator and conflict resolver. Individuals who effectively overwhelmed these insights may appear with strong social skills and an improved sense of self-worth (Adler, 1927). The youngest child remains the baby of the family forever. He is thought of someone as less capable and is often doted and spoiled. On the other hand, some individuals motivated in the youngest character may encounter prospects in their relations that put them into situations of significant importance and regard. The only child, in some ways, has personality facets identical to that of the first born e.g. highly accomplishing but have their own unique personality characteristics. The only child tends to look collected and confident on the outside but deep down, they are often insecure. On the other hand, those in the only child role as the result of the care and consideration of their parents could experience feelings of dependence or privilege outside of their family (Adler, 1927).

Bandura (1983) defined Self-Efficacy as the trust the individual has in his own abilities to handle a situation effectively, to attain mastery in the coping skills he uses and finally to gain outcome he desired. Self-Efficacy is not an attribute that is inherited rather it is a trait that is attained through learning. It is achieved at the time of birth and then is maintained till death. Self-Efficacy influences individual when they are reasoning and evaluating a situation and completing a task. Higher level of Self-Efficacy often is related with better performance because individuals who think that they can achieve a goal are expected to use necessary effort and continue against hardships. Self-Efficacy is generally explained as a trust of an individual in his skills in achieving a target or an outcome (Luszczynska & Schwarzer, 2005). The evaluation of Self-Efficacy is influenced by environment and environmental responses and these responses will determine the kind of adjustment that will happen due to Self-Efficacy. Evaluation of Self-Efficacy influences the individual's behavior (Bandura, 1986).

Achievement Motivation is explained as the individual's struggle to accomplish his or her aims in public setting (Elliot & Church, 1997). Achievement Motivation is the want for accomplishment, It is very significant element in goals determination especially when a person realizes that his presentation will be assessed to standard of superiority (McClelland, 1961). Achievement naturally pressures the importance of accomplishment in which effort involved in each skills and body of knowledge (Mandel & Marcus, 1988). Motivation can be defined as an individual's motive to engaging in different activity and the different steps to which a person follows the action, and the determination of the person (Graham & Weiner, 1996). According to Atkinson (1964) Achievement Motivation can be explained as contrast of performances with other performances and against usual activities. Achievement Motivation is a mixture of two personality variables the one is to reach Achievement and the

other is to evade disappointment. Achievement Motivation plays an important role in individuals life. Motivated individuals achieve their goals easily. Motivation keeps people's self-worth high. Individuals having high level of Achievement Motivation have desire to work on a problem and find its solution. Such individuals are more interested in their personal accomplishments as compared to the prizes of Achievement (Singh, 2011).

According to Social Cognitive Theory, three main factors affect Self-Efficacy. They all influence one another. Self-Efficacy emerging through mastery experiences in which aims are reached through determination and disabling problems and from noticing others prosper through continual struggle. High Self-Efficacy can influence Motivation in either good or bad way. According to the theory, Self-Efficacy is one of the greatest significant factors impacting the academic performance and Achievement (Bandura, 1977).

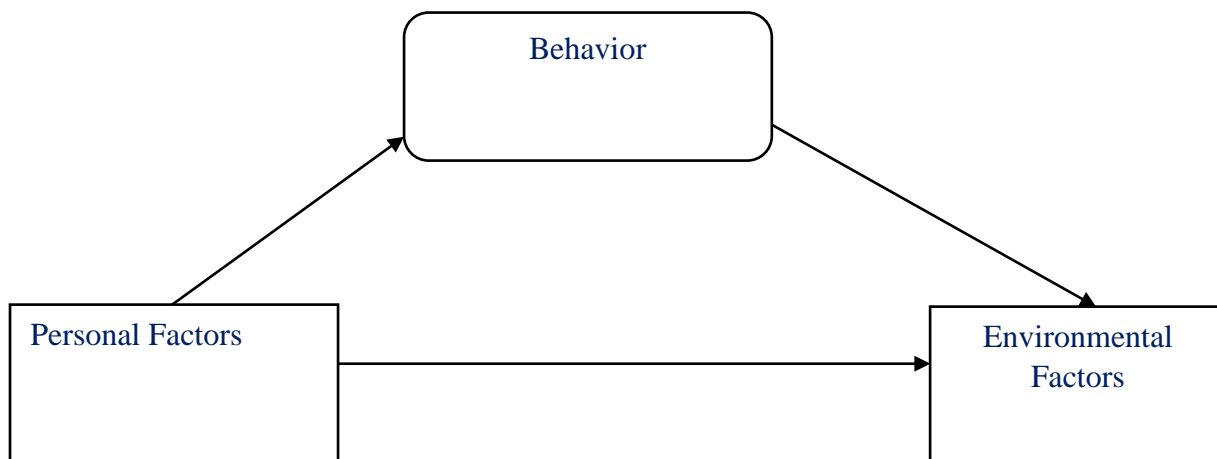


Figure 1 Social Cognitive Theory Model

## LITERATURE REVIEW

Previous researches on Birth Order have been conducted with different variables (Tam & Ha, 2011; Nash, 2009; Sharma & Maheshwari, 2013 ). Herndon (2012) conducted a study to investigate the association between the Adlerian lifestyle and Psychological Birth Order constructs by career decision Self-Efficacy. The sample of the study was 156 undergraduate's students of southeastern university. Instruments used for data collection were the BASIS-A Inventory, the PBOI and the CDSE Scale. Result of the study showed that the Psychological Birth Order factors had lesser substantial association with Career decision Self-Efficacy and other related features not establish important analytical ability with career decision Self-Efficacy. Draughn (2012) conducted a research to examine the directly Influence of Psychological Birth Orders on student's Achievement and Motivation. Psychological Birth Order, Motivation and academic Achievement were measures through online survey. Samples of 183 students of public and private colleges were selected through criterion sampling technique. The study showed that Psychological Birth Order predicted scholar Motivation in search of seeking enjoyable and also predicted student Motivation in prize seeking reaction.

Dauids (2015) research showed that significant association was found among Self-Efficacy and settings of ambition and Self-Efficacy and Attainment drive. 128 students were selected for the study. Three Questionnaires were used for data collection form the last year scholars. The conclusions of the study showed that significant association was found among Self-Efficacy and goal setting and Self-Efficacy and Attainment Motivation. Additionally, the

outcomes showed that Self-Efficacy and settings of ambition are important forecasters of Achievement Motivation. Hussain (2014) study aims to determine gender differences and correlation in Self-Efficacy and academic Motivation. Through random sampling, 135 participants from different business schools in Karachi were selected. The research was carried out on the two Questionnaires of Self-Efficacy and Achievement Motivation . It was concluded that significant correlation was found in Self-Efficacy and Motivation. Result also indicated no gender difference in academic Motivation and Self-Efficacy. Akram and Ghazanfar (2014) examine the association of Self-Efficacy and the academic presentation in relations of CGPA of the scholars of Gujrat university. A sample of 193 students from 3rd semester was selected through simple random sampling. The result showed that significant association among Self-Efficacy and Academic presentation of the scholars. Result also showed difference in academic Self-Efficacy level with respect to gender. According to previous researches Self-Efficacy and Achievement Motivation play a significant part in education.

### **Rationale**

Many researches have been conducted on Actual Birth Order (Tam & Ha 2011; Nash, 2009 ) but the phenomenon of Psychological Birth Order has never been investigated in past regarding its role and influence on a person. Through current study, the effect of Psychological Birth Order on Self-Efficacy and Achievement Motivation was determined. Psychological Birth Order and Self-Efficacy play significant role in students' Achievement Motivation, so their Achievement Motivation can be enhanced in future by those factors in different settings for example home, school and training centers.

### **Objectives**

- The study will examine the relationship among Psychological Birth Order, Self-Efficacy and Achievement Motivation in students.
- The study will determine the role of Self-Efficacy in mediating the relationship between Psychological Birth Order and Achievement Motivation.

### **Hypotheses**

- There is likely to be significant positive relationship among first Psychological Birth Order (pleaser), Self-Efficacy and Achievement Motivation.
- There is likely to be significant negative relationship among middle Psychological Birth Order (neglected), Self-Efficacy and Achievement Motivation.
- There is likely to be significant positive relationship among youngest Psychological Birth Order (initiator), Self-Efficacy and Achievement Motivation.
- There is likely to be significant negative relationship among only Psychological Birth Order (scrutinized), Self-Efficacy and Achievement Motivation.
- Self-Efficacy is likely to mediate the relation between Psychological Birth Order and Achievement Motivation.

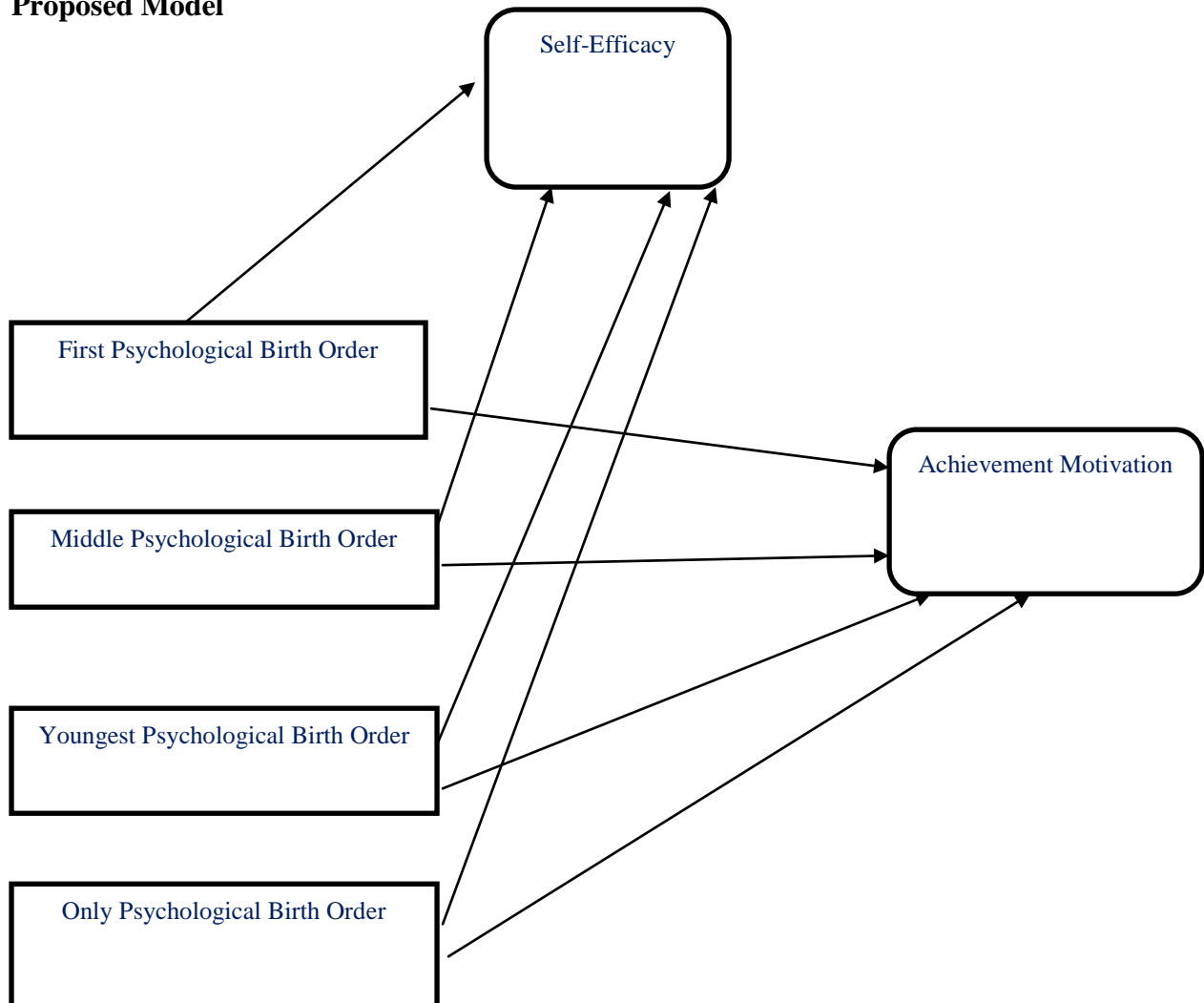
**Proposed Model**

Figure 2 showing proposed Model of Mediation Analysis

**METHODOLOGY**

**Research Design:** Correlational research design was used in the study.

**Sample:** Sample contained 220 males and 220 females students from different universities and colleges of Lahore.

**Sampling Technique:** The purposive sampling technique was used.

**Operational Definitions****Psychological Birth Order**

Psychological Birth Order is explained according to Birth Order in which one character is thoroughly classified, regardless of one's natural place (Campbell & Stewart, 1991).

**Self-Efficacy**

Self-Efficacy can be defined as faith in one's capability to respond to and control environmental difficulties and challenges (Schwarzer, 1992).

### **Achievement Motivation**

Achievement Motivation ascribes to expectation and sometimes ascribes to a stimulus for hold and high level of performance and Motivation to Achieve something (Hermans, 1970).

### **Measures**

#### **Demographic Information Sheet**

It included the information related to age, gender, Birth Order, family system and other variables encompassing detailed information about participants.

#### **Psychological Birth Order Inventory (White & Campbell, 1991)**

Psychological Birth Order Inventory was used that measured one's Psychological Birth Order. This inventory has different no of items. The instrument has 46 questions with either Yes or No in responses.

#### **Self-Efficacy Scale (Schwarzer, 1995)**

Self-Efficacy Scale was used for data collection. Self-efficacy scale has 10 items. The scale was arranged to measure a person's supposed Self-Efficacy as well as his capability to manage everyday difficulties, although evaluating his capability to accustom after a worrying life incident happened.

#### **Achievement Motivation Scale (Hermans, 1970)**

It is a self-report Achievement Motivation Questionnaire. The instrument has 29 items with multiple options. Achieving high scores in this scale would indicate having high Achievement Motivation.

### **Procedure**

Study was start after getting topic approved from synopsis Department Board of Advance Studies and Research (BASAR). Permission of the measuring instruments using in the study was taken from authors to use Scale. Permission was sought from the heads of different universities and colleges. Each participant was provided detailed information sheet regarding the research to guide them about research proposal. Participants also provided Consent form to make sure that they are willingly to participate in the study. They were informed about ethical considerations and their rights. After that pilot a main study was conducted, and data was collected from different colleges and universities students through demographic sheet and questionnaires.

**RESULTS**

Data was analyzed using Statistical Packages for Social Science (SPSS.21).

Table 1: *Descriptive Statistics of Demographic Variables*

<i>Variables</i>	<i>M (SD)</i>	<i>f (%)</i>
Age	21.04 (2.683)	
No of Siblings	3.82 (1.863)	
Gender		
Male		225 (50.0)
Female		225 (50.0)
Family System		
Joint family		156 (34.7)
Nuclear		294 (65.3)
Socioeconomic Status		
Upper class		43 (9.6)
Middle class		377 (83.8)
Lower class		30 (6.7)
Support from Siblings		
Very less		20 (4.4)
Less		15 (3.3)
Moderate		78 (17.3)
Much		133 (29.6)
Very much		204 (45.3)
Support from Parents		
Very less		12 (2.7)
Less		7 (1.6)
Moderate		63 (14.0)
Much		137 (30.4)
Very Much		231 (51.3)

Note. *M*= Mean, *SD*= Standard Deviation, *f*= Frequency.

Table 1 shows that majority of the participants had a mean age of 21.04. Most of the participants were living in a nuclear family system, belonging to middle class and receiving a lot of support from their parents and siblings.

Table 2: *Descriptive Statistics of Scales and Sub Scales (N=440)*

<i>Variables</i>	<i>k</i>	<i>M</i>	<i>SD</i>	<i>Range</i>		<i>α</i>
				<i>Potential</i>	<i>Actual</i>	
Psychological Birth Order	46	48.4	10.7	0-46	6-83	.74
First PBOI-W	12	9.2	1.1	0-12	1-12	.55
Middle PBOI-W	13	5.0	3.5	0-13	0-13	.82
Youngest PBOI -W	9	5.9	1.9	0-9	0-9	.53
Only PBOI -W	10	5.6	2.0	0-10	0-10	.52
FIRST PBOI -M	9	7.7	1.9	0-9	0-10	.51
Middle PBOI- M	10	3.6	2.1	0-10	0-10	.82
Youngest PBOI- M	9	5.7	1.1	0-9	0-9	.51
Only PBOI -M	10	5.6	2.0	0-10	1-10	.52
Self-Efficacy Scale	10	28.8	6.1	10-40	11-40	.84
AMS	29	70.0	10.3	29-145	36-104	.70

Note. *k*= Scales items, *M*= Mean, *SD*=Standard Deviation, *α*= Reliability, PBOI-W= Psychological Birth Order Inventory for Women, PBOI-M= Psychological Inventory for Male, AMS= Achievement Motivation Scale.

Table 2 shows that Psychological Birth Order Inventory showed high reliability. Psychological Birth Order Inventory subscales like Middle PBOI (women/men) reliability were high. Self-Efficacy and Achievement Motivation Scales shows high reliability.

Table 3: Relationship of Psychological Birth Order and their Sub Scales, Self-Efficacy and Achievement Motivation with Demographic Variables (N= 440)

Variables	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1-FPBOW	-.13**	.35**	.11*	.87**	-.16**	.33**	.21*	.19**	-.26**	.10*	-.02	-.02	.04	.14**
2-MPBOW		-.09	.42**	-.17**	.97**	-.04	.42**	-.33**	.01	-.09	-.05	-.00	.27**	-.26**
3-YPBOW			.16**	.33**	-.11*	.95**	.17**	.09	-.18**	.13**	.04	.06	.21**	.21**
4-OPBOW				.07	.39**	.17**	1.0**	-.17**	-.06	-.09*	-.06	-.06	-.15**	-.06
5-FPBOM					-.19**	.31**	.07	.20**	-.24**	.11*	.00	-.05	.05	.13**
6-MPBOM						-.06	.38**	-.33**	.02	-.01*	-.06	.02	-.27**	-.25**
7-YPBOM							.18**	.09	-.17**	.11*	.03	.05	.19**	.26**
8-OPBOM								-.17**	-.06	-.10*	-.06	-.05	-.15**	-.06
9-S-E									-.10*	-.01	.14**	.21**	.05	.05
10-AM										-.14**	.02	-.08	-.11*	-.01*
11-Gender											.16**	.11*	.01	.11*
12-FS												-.00	-.06	-.01
13-CL													.18**	.11*
14-PS														.59**
15-SS														

Note. F-PBOI-W= First Psychological Birth Order Women, M-PBOI-W= Middle Psychological Birth Order Women, Y-PBOI-W= Youngest Psychological Birth Women, O-PBOI-W= Only Psychological Birth Order Women, F-PBOI-M= First Psychological Birth Order Men, M-PBOI-M= Middle Psychological Birth Order Men, Y-PBOI-M= Youngest Psychological Birth Men, O-PBOI-M= Only Psychological Birth Order Men, S-E, Self-Efficacy, AM= Achievement Motivation, FS= Family system, CL= Confident Level, PS= Parents Support, SS= Siblings Support.

\* p < 0.05. \*\*p < 0.01. \*\*\* < 0.001

Table 3 shows that first Psychological Birth Order (women/men) significantly positively correlated with Self-Efficacy. So, the hypothesis was proved. First Psychological Birth Order (women/men) significantly negatively linked with Achievement Motivation the hypothesis proved false. Middle and only Psychological Birth Order (women/men) were significantly negatively linked with Self-Efficacy. So, the hypothesis of the study was proved. Significant negative relationship found in youngest Psychological Birth Order (women/men) with Achievement Motivation so the hypothesis was proved false. Self-Efficacy was significantly negatively correlated with Achievement Motivation and significantly positively linked with family system and confidence level. Achievement Motivation was significantly negatively correlated with gender, parents and siblings support.

### Mediation Analysis

Mediation analysis was performed with the help of PROCESS developed by Hayes (2013). It was hypothesized that Self-Efficacy is likely to mediate the relationship between Psychological Birth Order (women) and Achievement Motivation. It was carried out in different steps. Control variables were also included.



Table 4: Showing Direct Pathways Between First Psychological Birth Order (Women/Men), Self-Efficacy and Achievement Motivation (N=440)

	Women				Men			
	Self-Efficacy		AM		Self-Efficacy		AM	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
F-PBOI	.61***	.14	-1.2***	.24	.69***	.14	-1.2***	.26
Self-Efficacy			-.07	.08			-.07	.08
<b>Controls</b>								
Gender	-.41	.56	-2.7**	.96	-.43	.56	-2.6**	.96
Family System	1.9**	.58	.59	.99	1.9**	.58	.69	.99
Confidence Level	1.3***	.29	-.87	.50	1.4***	.29	-.96	.50
Parents Support	.01	.36	-1.1*	.62	.04	.36	-1.1	.62
Siblings Support	-.02	.32	.25	.55	.01	.32	.16	.55
R <sup>2</sup>	.10***		.10***		.11***		.09***	

Note. F-PBOI= First Psychological Birth Order, AM= Achievement Motivation, B= Coefficients, SE= Standard Error.

Table 4 shows that in both women and men, first Psychological Birth Order significantly predicted Self-Efficacy as ( $b = .61, p < .001$ ), ( $b = .69, p < .001$ ) with 10% variance explained in Self-Efficacy by first Psychological Birth Order,  $F(6, 443) = 8.60, p < .001$  and  $F(6, 443) = 9.13, p < .001$ , respectively. Furthermore, first Psychological Birth Order also significantly predicted Achievement Motivation in both women and men as ( $b = -1.2, p < .001$ ), ( $b = -1.2, p < .001$ ) with 11% variance explained in Achievement Motivation by first psychological birth order,  $F(7, 442) = 6.94, p < .01$  and  $F(6, 442) = 7.46, p < .01$ , respectively.

Table 5: Showing Direct Pathways Between Middle Psychological Birth Order (Women/Men), Self-Efficacy and Achievement Motivation (N=440)

	Women				Men			
	Self-Efficacy		AM		Self-Efficacy		AM	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
M-PBOI	-.59***	.08	-.22	.15	-.71***	.09	-.21	.18
Self-Efficacy			-.10*	.09			-.19*	.09
<b>Controls</b>								
Gender	-.45	.54	-3.2***	.98	-.46	.53	-3.19***	.99
Family System	1.62**	.5	.73	1.02	1.54**	.55	.74	1.02
Confidence Level	1.4***	.28	-.82	.52	1.46***	.28	-.82	.51
Parents Support	-.43	.35	-1.1*	.65	-.44	.35	-1.05	.65
Siblings Support	-.09	.31	-.19	.56	-.09	.30	-.17	.56
R <sup>2</sup>	.17***		.05***		.17***		.05***	

Note. M-PBOI= Middle Psychological Birth Order, AM= Achievement Motivation, B= Coefficients, SE= Standard Error.

Table 5 shows that in both women and men middle Psychological Birth Order was significantly negatively predicting Self-Efficacy as ( $b = -.59, p < .001$ ), ( $b = -.71, p < .001$ ) with 17% variance explained in Self-Efficacy by middle Psychological Birth Order,  $F(6, 443) = 15.44, p < .001$  and  $F(6, 443) = 15.72, p < .001$ . Further, Self-Efficacy was negatively predicting Achievement Motivation as ( $b = -.10, p < .05$ ) with 5% variance explained in Achievement Motivation by Self-Efficacy.

Table 6: Showing Direct Pathways Between Youngest Psychological Birth Order (Women/Men), Self-Efficacy and Achievement Motivation (N=440)

	Women		AM		Men		AM	
	B	SE	B	SE	B	SE	B	SE
Y-PBOI	.22	.15	-.77**	.26	.22	.15	-.71**	.26
Self-Efficacy			-.14	.08			-.14	.08
<b>Controls</b>								
Gender	-.27	.57	-2.84*	.98	-.26	.57	-2.9**	.98
Family System	1.81**	.59	.86	1.01	1.82**	.59	.83	1.01
Confidence Level	1.30***	.30	-.54	.52	1.30***	.30	-.79	.51
Parents Support	-.01	.37	-.90	.62	-.01	.30	-.91	.63
Siblings Support	.07	.33	.20	.56	.09	.33	.13	.56
R <sup>2</sup>	.07***		.07***		.07***		.06***	

Note. Y-PBOI= Youngest Psychological Birth Order, AM= Achievement Motivation, B= Coefficients, SE= Standard Error.

Table 6 shows that youngest Psychological Birth Order was significantly negatively predicting Achievement Motivation in both women and men as (b= -.77, p<.01), (b= -.71, p<.01) with 7% variance explained in Achievement Motivation by Self-Efficacy, F (6, 443) = 5.56, p<.001 and F (7, 442) = 4.38, p<.001, respectively.

Table 7: Showing Direct Pathways Between Only Psychological Birth Order (Women/Men), Self-Efficacy and Achievement Motivation (N=440)

	Women		AM		Men		AM	
	B	SE	B	SE	B	SE	B	SE
O-PBOI	-.47***	.14	-.57*	.24	-.46***	.14	-.58*	.24
Self-Efficacy			-.19*	.08			-.19*	.08
<b>Controls</b>								
Gender	-.37	.57	-3.35***	.97	-.37	.57	-3.36***	.98
Family System	1.73**	.59	.66	1.02	1.74**	.59	.67	1.02
Confidence Level	1.3***	.21	-.87	.52	1.28***	.21	-.87	.52
Parents Support	-.17	.37	-1.20	.64	-.17	.37	-1.21	.64
Siblings Support	.23	.32	-.09	.56	.23	.32	-.08	.56
R <sup>2</sup>	.09***		.06***		.09***		.06***	

Note. O-PBOI= Only Psychological Birth Order, AM= Achievement Motivation, B= Coefficients, SE= Standard Error.

Table 7 shows that in both women and men only Psychological Birth Order was negatively predicting Self-Efficacy as (b= -.47, p<.001), (b= -.46, p<.001) with 9% variance explained in Self-Efficacy by only Psychological Birth Order, F (6, 443) = 8.25, p<.001 and , F (6, 443) = 7.18, p<.001. Further, only Psychological Birth Order (women and men) was also negatively predicting Achievement Motivation as (b= -.57, p<.05), (b= -.58, p<.05) with 6% variance explained in Achievement Motivation by only Psychological Birth Order, F (7, 442) = 4.29, p<.001 and F (7, 442) = 4.10, p<.001. Self-Efficacy was also negatively predicting Achievement Motivation. Self-Efficacy was also negatively predicting Achievement Motivation (b= -.19, p<.05) with 6% variance explained in Achievement Motivation by Self-Efficacy.

Table 8: Showing Indirect Effects of Psychological Birth Order (Women/Men) on Achievement Motivation through Self-Efficacy (N=440)

	Achievement Motivation			
	B	SE	95% CI	
F-PBOI-W	-.05	.05	-.17	.05
M-PBOI-W	.12	.06	.00	.23
Y-PBOI-W	-.03	.03	-.13	.01
O-PBOI-W	.09	.05	.01	.11
F-PBOI-M	-.06	.06	-.19	.05
M-PBOI-M	.14	.07	.02	.29
Y-PBOI-M	-.03	.03	-.14	.01
O-PBOI-M	.09	.05	.02	.21

Note. F-PBOI-W= First Psychological Birth Order Women, M-PBOI-W= Middle Psychological Birth Order Women, Y-PBOI-W= Youngest Psychological Birth Order Women, O-PBOI-W= Only Psychological Birth Order Women, F-PBOI-M= First Psychological Birth Order Men, M-PBOI-M= Middle Psychological Birth Order Men, Y-PBOI-M= Youngest Psychological Birth Order Men, O-PBOI-M= Only Psychological Birth Order Men, B= Coefficients, SE= Standard Error.

Table 8 shows that Self-Efficacy was mediating the association between middle Psychological Birth Order and Achievement Motivation in both men and women. Further, Self-Efficacy was also mediating the relationship between only Psychological Birth Order and Achievement Motivation in both men and women.

Model with values of mediation analysis through PROCESS

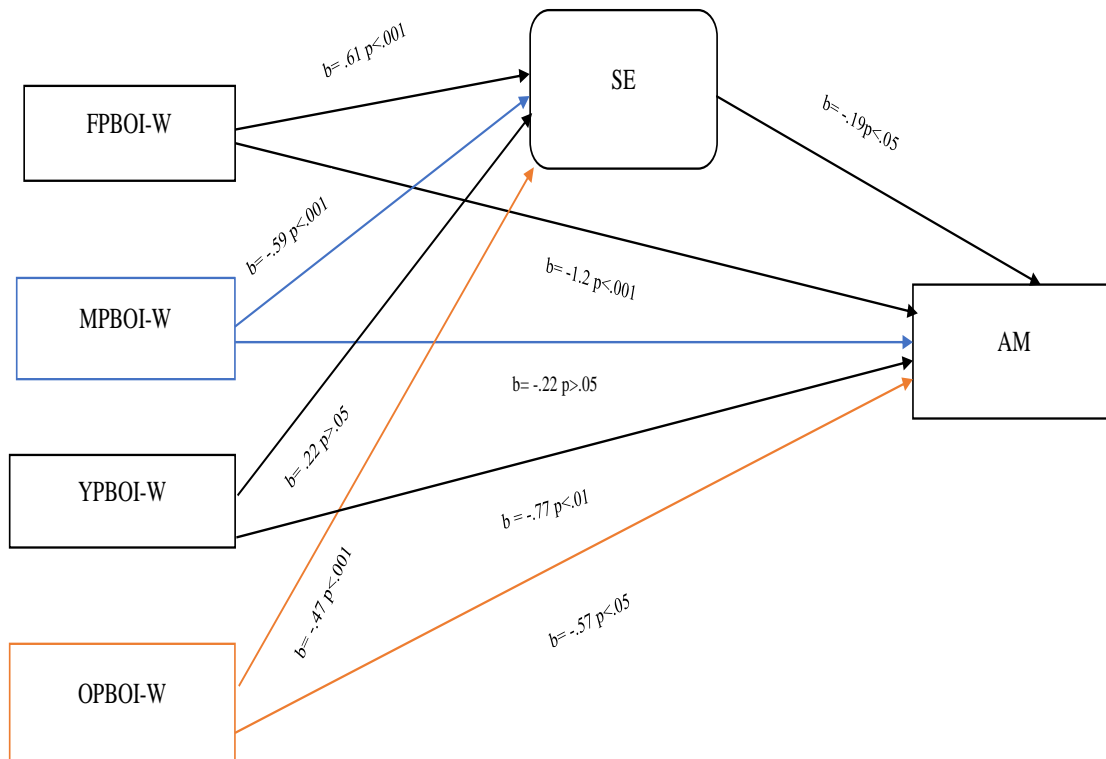


Figure 3 showing result of PROCESS when hypothesized model was tested with Self-Efficacy as mediator between Psychological Birth Order and Achievement Motivation.

Note. FBOI-W= First Psychological Birth Order Women, MPBOI-W= Middle Psychological Birth Order Women, YPBOI-W= Youngest Psychological Birth Order Women, OPBOI-W= Only Psychological Birth Order Women, SE= Self-Efficacy, AM= Achievement Motivation

Model with values of mediation analysis through PROCESS

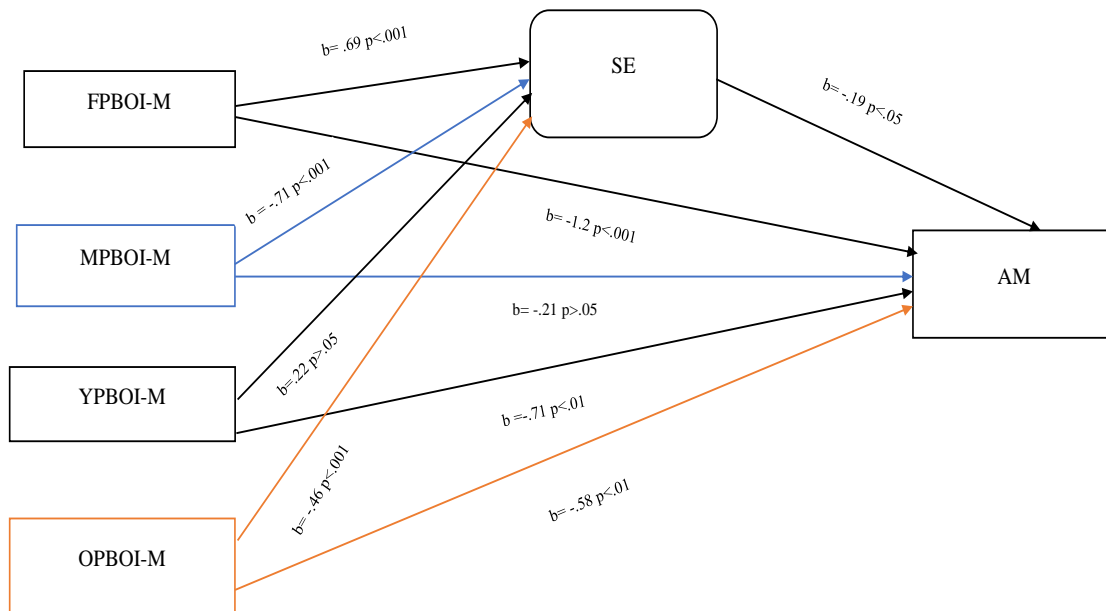


Figure 4 showing result of PROCESS when hypothesized model was tested with Self-Efficacy as mediator between Psychological Birth Order and Achievement Motivation.

Note. FBOI-M= First Psychological Birth Order Men, MPBOI-M= Middle Psychological Birth Order Men, YPBOI-M= Youngest Psychological Birth Order Men, OPBOI-M= Only Psychological Birth Order Men, SE= Self-Efficacy, AM= Achievement Motivation

Table 9: Independent Sample t-test for Gender differences in Achievement Motivation Scale (N=440)

Variables	Male		Female		t(448)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
AMS	71.5	10.6	68.6	9.8	3.0	.003	1.0	4.8	2.9

Note. M= Means, SD= Standard deviation, t= computed test statistic, CI= Confidence interval; LL= lower limit; UL= Upper limit., Cohens d = Standardized mean differences, AMS= Achievement Motivation Scale.

The above Table 9 shows comparison among males and females on Achievement Motivation scale. There was a major difference in Achievement Motivation for male (M= 71.5, SD= 10.6) and (M= 68.6, SD= 9.8) for female  $t(448), 3.0, p = .003$ . It was indicated that females showed high Achievement Motivation as compare to males.

## DISCUSSION

First Psychological Birth order has significantly positive correlation with Self-Efficacy and significantly predicted Self-Efficacy. These conclusions are linked with the previous study carried out by Herndon (2012) which found link between first Psychological Birth Order and career decision Self-Efficacy and signifying those participants who reported more first child psychological characteristics stated higher Self-Efficacy in the assessment task for their career decision process. The previous study also showed that youngest child scale significant non-predictors of career decision Self-Efficacy. These previous findings are linked with the present study findings. Youngest born are pampered and spoiled by their family members and they are dependent on their elder sibling (Adler, 1927; Kalkan, 2008; & Kluger, 2011). Herndon (2012) study support the findings as middle child scale was significantly negatively

associated with overall career decisions Self-Efficacy. The study suggests that participants with psychological middle child characteristics reported less Self-Efficacy in the planning of tasks for making career decisions and overall career decisions. Some evidence supports that Achievement Motivational patterns differ in accordance with the Birth Order place. Draughn (2016) study explored that Psychological Birth Order (first, middle, youngest, only child) predicted student Motivation part of fun seeking which is a domain of Achievement Motivation. Also, Psychological Birth Order (first, middle, youngest child) forecasted student Motivation in part of prize responsiveness i.e. another aspect of the Achievement Motivation scale. According to previous researches (Adams & Phillips, 1972; Leman, 2009; & Sulloway, 1997) first born siblings have been explored to be overrepresented in domains which usually involve larger levels of education and Achievement.

Fakouri (2003) stated that Middle born children have lesser need for Achievement and Motivation than other siblings. Adler (1927) research showed that middle born established unattainable goals and standard to evade the risk of outdoing and distressing the older siblings. Eckstein (2010) research on Birth Order showed that youngest born very dependent on others not only in the family but also outside the family. Youngest born had low level of Achievement Motivation. These findings support the results of current study. Previous research Vancouver and Kendall (2006) findings linked with the present study results that Self-Efficacy had negative correlation with Self-Efficacy. Individuals with high Efficacy beliefs may contribute less struggle in Achieving their goals than individuals with low Efficacy beliefs. If persons have confidence that they are making additional progress than is required (due to high Efficacy beliefs) they may decrease their efforts in pursuing their ambitions. Previous researches (Turner & Chandler, 2009; Bao & Zhou, 2017) results favor the mediating role of Self-Efficacy on Achievement Motivation.

## CONCLUSIONS

The study was conducted to find out the relationship among Psychological Birth Order, Self-Efficacy and Achievement Motivation in students. The study also finds out the role of Self-Efficacy in mediating the relationship between Psychological Birth Order, and Achievement Motivation. The result of the mediation showed that Self-Efficacy was mediating the relationship between middle and only Psychological Birth order and Achievement Motivation in both genders.

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