

## CAREER ASPIRATION OF STUDENTS AT FORMAL OPERATIONAL STAGE OF COGNITIVE DEVELOPMENT

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### Abstract

*'Formal operational stage of cognitive development' is of foremost importance in a students' life and career is a major part of one's life upon which the future life is determined. Aspiring for a particular type of career depends upon multiple factors like inclination, preferences, attitudes, opportunities, motivation and many more. The current study sought to investigate the various elements of career aspiration of students at formal operational stage on the basis of gender. The sample included 230 students of class IX selected from the city of Rohtak in the state of Haryana. Career Aspiration Scale (CAS) was administered to ascertain the difference on dimensions of Career aspiration viz. dedication, motivation, preparation, self-confidence and realization in terms of gender. Descriptive statistics were applied to examine the data. The analysis revealed that boys and girls have no significant difference regarding dedication, motivation and self-confidence, the three dimensions of CAS but for preparation and realization, they differ on the basis of gender.*

**Keywords:** Career Aspiration, Gender



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**Introduction:** Formal operational stage represents the final phase of cognitive development in Piaget's theory where an individual starts thinking abstractly and develop foresightedness and the arena of logical thinking gets extended. At this stage, thoughts are structured and draw conclusions from the information available in operational mannered and ability to use hypothetic-deductive reasoning also raises. "Early formal operational thoughts may only be imaginations, but as teenagers achieve late formal operational thought, the life experiences they have had transform those fantasy views into real opinions. (Boyes & Chandler, 1983)." At this point, when children are developing both physically and mentally at a rapid rate, a variety of

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factors—including the family situations, peer group, academic environment, mental health and choice of vocational stream—play an important influence in the overall development of a child. To lead a secured future, teenagers need to keep them updated with new stuff in the educational arena and awareness about the upcoming demand of new kind of careers.

The society has changed significantly in today's scenario as a result of numerous changes in our civilization, including the population growth, advances in science and technology, expansion of knowledge, urbanisation, mobilisation, IT revolution, and the influence of Western culture. (Dagar & Dhull, 1994). The society in which we are living presently is full of technological advancements, loaded with bulk of knowledge spread widely, causing competitive environment all around. To survive in such advanced and competitive world, it becomes necessary for everyone to keep oneself updated and as a student, an individual must be aware about his/her potentials, capabilities, aptitudes, shortcomings, limitations, expectations and aspirations too. The capacity to recognise, categorise, and determine targets and goals, as well as execute actions in line with them, is termed as aspiration. Aspiration manifests in actions and engages people in things that are appropriate for them. At formal operational stage of cognitive development, aspiration for career is foremost in shaping an individual's study behavior in higher education setting as it encourages the person to excel in their academic endeavors. Long-term personal objectives relating to employment are referred to as career aspirations. (Hafsyah, 2015). Career aspirations are also stated as persisted work connected to future aims or goals (Linderman, 2010). At this stage, students are enthusiastic enough to improve and progress in different fields of life as they want to be independent and self-sufficient by enhancing their strength and raised level of mature thinking. As defined by Vinothkumar & Perumal (2022), career aspiration is the professional path that a person aspires to take and maintain; it is a continuous process that necessitates appropriate judgements of aptitude, potential, and accomplishment. To understand it can be said that career aspirations revolve around the ambitions and inspirations of students. According to Lopez-Bonilla et al. (2016), career aspirations are the most frequent drivers of course or programme completion. Arhin (2018) emphasizes that individuals with positive career aspirations have high learning goal orientation because their characteristics of seeking to master new skills, complete tasks and overcome difficulties will be in line with their career pursuits.

Teenagers make significant decisions every day that will affect their future. The possibilities they will have throughout their lives are significantly influenced by the degree of time and effort they devote to learning and the areas of academia where they invest their greatest effort. Pursuing what they desire for both their professional and personal lives is a major motivator

for students to work hard in their studies. These hopes and aspirations, in turn, can be greatly influenced by a student's and their family's personal history as well as by the depth and breadth of their knowledge about the working world. They also depend on the students' talents. The internal elements—attitudes, interests, values, past experiences, sex, etc.—as well as the external ones—family, school, friends, and relatives—not only affect the academic and career paths that students take, but also have a tendency to steer them away from making the right career decision. These variables put students in a lot of difficult situations where they must choose a career and consider how it will affect their future.

**Review of Related Literature:** According to several research studies on career objectives that have been carried out so far, there are plenty of variables that determine and influence professional aspirations. These factors have a significant impact on students' career decisions both directly and indirectly. The familial environment, socioeconomic level, self-confidence, gender, and other factors may influence adolescent job goals. Students with goals for successful careers typically perform better academically. “Gender, socioeconomic situation, improved academic performance, parents' occupation and level of education, and parental expectations are some of the factors that affect career goals stated by Adragna (2009); Berzin (2010); Domenico & Jones (2006).” These elements have an impact on the expectations that teenagers have concerning themselves and their surroundings in which goals are attained. Contextual components may be accountable for the disparity, or lack thereof, between male and female teenage goals (Massey, Gebhardt, & Garnefski, 2008). Choosing a short-term school path and a long-term career path have both been considered as being significantly influenced by adolescent career aspirations. (Schoon & Parsons, 2002; Patton & Creed 2007). In the findings of many studies, girls in urban adolescents reported having stronger career goals than boys (Gutman & Schoon 2012). Obura and Ajowi (2012) found that secondary school pupils in Kisumu Municipality have different career objectives depending on their gender. Male students have stronger occupational goals than female students (Gupta & Kumari, 2017). However, Khan (2018) did a study to evaluate the career goals of boys and girls enrolled in several 10+2 schools of Delhi and found no appreciable differences between the career aspirations of boys and females across all institutions.

Ambitious career aspirations, are a good indicator of higher academic accomplishment because they assist students show more enthusiasm for their schoolwork, Willcoxson and Wynder (2010); Opoko, Daramola & Eke (2018) further confirm that students who are more certain about their course preferences and whether their course of choice leads directly to their ideal vocation and perform better regarding their scholastic achievements. Al-Bahrani et.al (2020)

reported that students with pure maths as their intended job manner outperformed those with applied maths in terms of career aspirations. The results also demonstrated that parents' educational attainment and grade point average had a substantial impact on their children's professional aspirations. Whereas, Sapra, Chaudhary and Jeswal (2021) reported that there was a nominally favourable association between academic performance and professional goals.

**Rationale of the Study:** “Formal operational stage is a crucial time for forming aspirations for the upcoming life, particularly for career aspirations (Schulenberg, Goldstein & Vondracek, 1991; Vondracek, Lerner & Schulenberg (2019).” At this stage, career aspirations take a firm shape on ground level due to enhanced level of logical thinking, reasoning and realization, varying from individual to individual. A lot of different factors such as interests, preferences, inclination, engrossments, social economic status, bent and likings etc. influence an individual's job aspirations. “Some researchers feel that genetics accounts for 80% of an individual's potential, while others feel that the environment affects their potential (O'Brien, (2001).” Since very little work has been done considering the formal operational stage, the present study was undertaken.

This paper elucidates children's awareness about career and investigates different dimensions of career aspiration viz, dedication, realization, self-confidence, preparation and motivation. However, there is dearth of studies which try to study about different dimensions of career aspiration at formal operational stage. So, the present investigation visualized a need to study Career Aspiration of students at Formal Operational Stage of Cognitive Development considering gender as a base.

### **Objectives:**

1. To investigate the various elements of students' career aspirations at the ‘formal operational stage of cognitive development’.
2. To investigate the differences in different elements of career aspiration, such as dedication, motivation, realization, self-confidence, and preparation, on the basis of gender at ‘formal operational stage of cognitive development’.

### **Hypotheses:**

1. There is no difference in different dimensions of career aspiration viz, dedication, motivation, realization, self-confidence and preparation of students on the basis of gender at ‘formal operational stage of cognitive development’.

**Method:** The descriptive survey approach was adopted in the study, and the details are outlined below:

**Sample:** Generally speaking, the term "sample" refers to a group of people who have been specifically chosen from the defined community in order to optimise the overall population that is the subject of the study. A sample was chosen from the total population using a simple random procedure after the population had been listed. The Rand Corporation's table of random numbers was employed in the simple random procedure to verify that the sample was representative of the entire population and to remove bias and error. The sample encompassed 230 students (113 boys and 117 girls), from each school 46 students of IX standard were considered on the basis of random sampling who were at 'formal operational stage of cognitive development'.

**Tool used:**

**Career Aspiration scale (CAS) by Anand S. (2014):** The CAS is an instrument designed to assess the career aspirations of students studying at XI class. The scale is in accordance with Indian school having 30 items catering to five dimensions of career aspiration:

- **Dedication:** - The attribute of being committed to an activity or goal is dedication.
- **Motivation:** It's a multidimensional construct within the human that is influenced by the situation and reflected in the individual's actions and behaviours.
- **Realization:** A conscious decision to accept something as true.
- **Self-confidence:** Freedom from doubts and belief in oneself or one's own abilities.
- **Preparation:** the activity of setting in order in advance of some act or purpose.

**Dimension Wise Items of the Scale**

Sr. no.	Dimensions	Item Serial Number in the Scale	Total Items
1.	Dedication	2, 4, 5, 24, 27, 28	6
2.	Motivation	7, 11, 17, 18, 30	5
3.	Realization	6, 8, 10, 13, 16, 23, 26	7
4.	Self-Confidence	9, 19, 20, 21, 25, 29	6
5.	Preparation	1, 3, 12, 14, 15, 22	6
<b>Total Items</b>			<b>30</b>

All the five dimensions ensure that this scale represents the career aspirations of students. There are 30 statements in the test having both positive and negative statement. Every statement has five alternatives' choices of answers from strongly agree to strongly disagree. For CAS, a 5-point Likert scale was used, with 5 responses for each item, where 5 for "Strongly Agree" to 1 for "Strongly Disagree" will be considered. The following represent the point values for positive and negative items:

“Responses”	“Strongly Agree”	“Agree”	“Neutral”	“Disagree”	“Strongly Disagree”
Positive	5	4	3	2	1
Negative	1	2	3	4	5

The career aspiration scale has a highest and lowest score of 150 and 30, respectively. The split half method's coefficient of internal consistency, which is 0.86, and the test-retest method's coefficient of stability, which is 0.90, both of which are significant at the 0.01 level of significance, are used to determine the reliability of the scale. Based on the test-retest approach, the intrinsic validity was calculated to be 0.90 and the index of reliability to be 0.93 to 0.95.

**Data Analysis:** SPSS was used to compute the mean, t-test, and critical ratio for the purpose to investigate the significance of differences between boys and girls.

**Results:** To explore the differences in different dimensions of students' career aspirations based on gender, mean, SD, and t-values were determined for each dimension. The data was examined in light of the study's hypotheses, and the findings were contained in the following headings for easier reader comprehension:

For understanding the difference in different dimensions of career Aspiration of learners taking gender as base, mean, SD and t-value were calculated for every dimension. The data was analysed in the light of hypotheses designed for the study and findings has been encapsulated below:

**Table-1: Difference in Dedication dimension of Career aspiration of Students at ‘Formal Operational Stage of cognitive development’ on the basis of Gender**

Sr. No.	Variables	Gender	N	Mean	SD	df	C.R.	t-value	Remarks
1	Dedication	Girls	117	19.17	2.72	223	0.363	0.49	P>.01
2	(Career Aspiration)	Boys	113	18.99	2.78				

Table 1 demonstrates that critical ratio for dedication dimension career aspiration scale was found 0.363 on the basis of gender which is neither significant at 0.01 level nor at 0.05 level of significance. This means that no significant difference exists between male and female students at ‘formal operational stage of cognitive development’ in the dedication dimension of career aspiration. The difference amid the male and female pupils was negligible and may have occurred due to some probability. Therefore, the null hypothesis stating that ‘There exists no

difference in dedication dimensions of career aspiration on the basis of gender at formal operational stage of cognitive development of Rohtak city” is accepted.

**Table-2: Difference in the Motivation dimension of Career aspiration of Students at ‘Formal Operational Stage of cognitive development’ on the basis of Gender**

Sr. No	Variables	Gender	N	Mean	SD	df	C.R.	t-value	Remarks
1	Motivation	Girls	117	18.44	1.74	228	0.245	0.98	P>.01
2	(Career Aspiration)	Boys	113	18.20	1.97				

Table 2 reveals that critical ratio for Motivation dimension of career aspiration scale of students at ‘formal operational stage of cognitive development’ came out to be 0.245 on the basis of gender which does not meet the criteria for significance at either level. So, it shows that there is no substantial difference in career aspiration motivation between students at the ‘formal operational stage of cognitive development’. The difference between male and female pupils was insignificant and could have happened due to chance. Therefore, the null hypothesis stating that “There is be no significant difference in the motivation dimension of career aspiration of students at ‘formal operational stage of cognitive development of Rohtak city on the basis of gender” stands accepted.

**Table-3: Difference in the Realization dimension of Career aspiration of Students at ‘Formal Operational Stage of cognitive development’ on the basis of Gender**

Sr. No.	Variables	Gender	N	Mean	SD	df	C.R.	t-value	Remarks
1	Realization	Girls	117	21.47	3.36	228	0.398	9.70	P<.01
2	(Career Aspiration)	Boys	113	25.33	2.61				

Table 3 shows that critical ratio for Realization dimension of career aspiration scale of students at ‘formal operational stage of cognitive development’ of Rohtak city on the basis of gender came out to be 0.398 which has value at both levels of significance. This means that there is significant difference in the realization dimension of career aspiration between the students at formal operational stage of cognitive development of Rohtak city on the basis of gender. Therefore, the null hypothesis stating that “There is be no significant difference in the Realization dimension of career aspiration of students at formal operational stage of cognitive development of Rohtak city on the basis of gender” is rejected.

**Table-4: Difference in the Self-confidence dimension of Career aspiration of Students at Formal Operational Stage of cognitive development on the basis of Gender**

Sr. No.	Variables	Gender	N	Mean	SD	df	C.R.	t-value	Remarks
1	Self-Confidence (Career Aspiration)	Girls	117	23.47	2.40	228	0.548	1.76	P>.01
2		Boys	113	24.36	5.40				

Table 4 depicts that critical ratio for Self-confidence dimension of career aspiration scale of students at 'formal operational stage of cognitive development' of Rohtak city on the basis of gender turned out to be 0.548 which does not meet the criteria of significance at any level. This means that no significant difference stands in the self-confidence dimension of career aspiration between the students at formal operational stage of cognitive development of Rohtak city considering gender as base. The variance amid the male and female students was negligible and may have occurred due to some probability. Therefore, the null hypothesis stating that "There is no significant difference in the self-confidence dimension of career aspiration of students at formal operational stage of cognitive development of Rohtak city on the basis of gender" remains accepted.

**Table-5: Difference in the Preparation dimension of Career aspiration of Students at Formal Operational Stage of cognitive development on the basis of Gender**

Sr. No.	Variables	Gender	N	Mean	SD	df	C.R.	t-value	Remarks
1	Preparation (Career Aspiration)	Girls	117	23.21	2.67	228	0.344	5.34	P<.01
2		Boys	113	21.36	2.55				

Table 5 shows that critical ratio for Preparation dimension of career aspiration scale of students at 'formal operational stage of cognitive development' of Rohtak city on the basis of gender turned out to be 0.344 which is substantial at both levels of significance. This means that there is significant difference in the Preparation dimension of career aspiration between the students at formal operational stage of cognitive development of Rohtak city on the basis of gender. Therefore, the null hypothesis stating that "There is be no significant difference in the



Preparation dimension of career aspiration of students at formal operational stage of cognitive development of Rohtak city on the basis of gender” is rejected.

**Discussion of the results:** Findings of the study reveals that there is no significant difference in some of the dimensions of career aspiration viz. dedication, motivation and self-confidence of students at ‘formal operational stage of cognitive development’ but significant difference was found in the preparation and realization dimension of the career aspiration scale. Studies conducted previously showed no significant difference regarding dedication on the basis of gender (Al- Bahrani et.al, 2020) whereas contrary results were found in the study conducted by Mendez & Crawford (2002). For motivation dimension of career aspiration, Gbollie and Keamu (2017) reported that both boys and girls improve their performance due to good motivational beliefs whereas Chaffee & Plante (2022) found no difference in the motivational belief in terms of gender. For realization factor of Career aspiration scale, Watson, Quatman & Edler (2002); Nadeem and Khalid (2018); and Dangol (2019) also found significant difference between boys and girls in terms of self and academic realization. For Self-confidence dimension, Kumari (2018) found significant difference in boys and girls but Nupur and Mahapatro (2016) reported contrary findings. The finding revealed by this study that there lies significant difference for preparation dimension of career aspiration is in consonance with the findings given by Leung, Conoley, & Scheel (1994); Mistry (2015) and Andleeb and Ansari (2016) who also found that the difference in boys and girls for preparation for career.

**Final Words:** In today’s world, everyone is cognizant about one’s future prospects either a girl or boy. At formal operational stage, gender may be affected by the way of upbringing in a family. But even then, out of five dimensions of career aspiration three dimensions have no significant difference in the terms of gender. It may be concluded as patriarchy system is being followed in Indian families so boys were found more concerned for future preparations and realization factor.

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