

Research Paper

Mapping Student Interests to Career Pathways: Enhancing Guidance Practices in Schools in Rohtak, Haryana

Prerna Kadian^{1*}, Vandana Sharma²

ABSTRACT

Making career choices is a major and difficult turning point for teenagers. For students between the ages of 14 and 16 (those in grades 9 and 10), this time is particularly important as they select academic paths that will influence their future education and job prospects. This study seeks to explore the job interests of young people in Rohtak, Haryana, using Holland's RIASEC model, and to look at how these interests connect to their career decisions. The research included a sample of 100 students (50 boys and 50 girls) chosen from secondary schools through a random selection method. To collect data, two tools were used: the RIASEC Test (Holland's Vocational Interest Inventory) to evaluate job interests and a Career Preference Record to gather details about students' chosen careers, factors that influenced their decisions, and their experiences with career guidance. The study aims to show the differences in job interests between genders and examine how closely students' passion profiles match their career choices. The findings of study to check urgent need for structured, interest-based, and fair career counseling in schools. By aligning students' interests with relevant career options, this research help to develop more effective, locally relevant career guidance programs in Haryana.

Keywords: *Adolescents, Vocational interests, RIASEC model, Career preferences, Career counseling, Haryana, Gender difference*

Making career decisions is a significant and often difficult task for adolescents. For students aged 14 to 16 (grades 9 and 10), this phase is crucial as they start choosing academic paths that could influence their future educational prospects, career paths, and overall life satisfaction. However, these choices are seldom clear-cut. Young people frequently find themselves swayed not just by their own interests and abilities but also by the expectations of their parents, peers, and society. Research indicates that when students select careers that resonate with their intrinsic interests, they are more likely to feel motivated and achieve long-term success, while a mismatch can lead to disappointment and disengagement (Kavita, 2022). Theoretical models offer valuable insight into this process. Holland's Theory of Vocational Personalities and Work Environments (1997) stress the importance of aligning an individual's interests (RIASEC types) with suitable occupational settings, whereas the Social Cognitive Career Theory (Lent, Brown, & Hackett, 2000)

¹Research Scholar, Department of Psychology, Lovely Professional University, Punjab, India

²Assistant Professor, Department of Psychology, Lovely Professional University, Punjab, India

*Corresponding Author

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emphasizes the impact of self-efficacy, personal interests, and situational context on career choices. These frameworks highlight the necessity for structured, interest-based career guidance during adolescence, a time when students are forming their career identities. Nevertheless, many areas in India, including Haryana, provide limited formal guidance for students. For example, Jain, Kumar, and Khanna (2019) found that in the rural Beri block near Rohtak, only 47.5% of students had received any career guidance from teachers, despite 94.7% of those who did finding it helpful. Previous research also identifies significant gender-based trends in vocational interests. Sharma (2016), in a study of 300 adolescents in Rohtak, observed that girls tended to prefer artistic, social, and domestic fields, while boys displayed a greater interest in agricultural and technical careers. Likewise, Kavita (2022) noted that boys gravitated toward careers in business, clerical work, agriculture, mechanics, science, and social fields, while girls leaned more towards artistic and outdoor interests. Although Haryana has made progress in increasing educational access and implementing vocational education programs (Kumar, 2018), ongoing challenges—such as high dropout rates among girls, lack of awareness regarding diverse career options, and inadequate teacher training—continue to hinder students' ability to receive personalized, interest-focused guidance. Despite existing evidence on gender differences and the necessity for career counseling, there is limited research investigating whether the career preferences expressed by adolescents align with their vocational interests, particularly at the crucial stage of grades 9 and 10. This gap in region-specific evidence complicates the design of truly tailored and contextually relevant guidance programs. In light of this situation, the current study aims to map the vocational interests of adolescents in Rohtak using Holland's RIASEC model and explore how closely their stated career preferences correspond to these interests. By analyzing data from 100 students (50 boys and 50 girls), this research intends to provide practical insights for crafting structured, gender-sensitive, and interest-based career guidance strategies in schools throughout Haryana.

Objectives:

- To examine the vocational interests of adolescents (14–16 years) in Rohtak schools using the RIASEC model.
- To identify the career preferences of adolescents in Rohtak schools.
- To study the relationship between students' vocational interests and their career preferences.
- To explore gender differences in the vocational interests of adolescents.

Research Questions:

- What are the vocational interests of adolescents in Rohtak schools as measured by the RIASEC model?
- Are there gender differences in the vocational interests of adolescents?
- What are the career preferences of adolescents in Rohtak schools?
- Is there a relationship between students' vocational interests and their stated career preferences?

Hypotheses:

- **H1:** There will be significant gender differences in the vocational interests of adolescents as measured by the RIASEC model.
- **H2:** There will be a significant relationship between students' vocational interests and their stated career preferences.

METHODOLOGY

Research Design

This research adopts a descriptive survey approach to investigate the vocational interests and career preferences of adolescents. This design is appropriate because it enables the systematic gathering of data from a specified population without altering any variables, allowing for the identification of current trends and relationships.

Sample

The study involves 100 adolescents (50 boys and 50 girls) aged 14 to 16 years, enrolled in secondary schools in Rohtak, Haryana. A stratified random sampling method was used to ensure equal numbers of male and female participants. Within each gender category, students were randomly chosen to maintain fairness and reduce sampling bias.

Tools Used

- 1. RIASEC Test (Holland's Vocational Interest Inventory):** The RIASEC Test, developed by John L. Holland, categorizes vocational interests into six domains: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. The inventory consists of 48 items, where participants indicate their interest level in various activities and occupations and scoring responses are scored separately for each domain, producing six interest scores leads to highest-scoring domains reflect the individual's dominant vocational interest areas. It demonstrated good reliability ($\alpha = 0.80-0.89$) and established construct as well as predictive validity.
- 2. Career Preference Record (Vivek & Rajshree Bhargava):** The Career Preference Record is a standardized tool consisting of 80 items that assess adolescents' preferences across different career fields such as Mass Media & Journalism, Artistic & Designing, Science & Technology, Agriculture, Commerce & Management, Medical, Defence, Tourism & Hospitality, Law & Order, and Education and scoring each preferred option is given a score, and cumulative scores are calculated for each career domain. Higher scores in a domain indicate stronger career preference in that field. It shows high reliability (split-half = 0.82) and adequate content and face validity.

Procedure

Permission was secured from school administrators before initiating the study. The research objectives were clearly communicated to the participants, and informed consent was obtained. Both the RIASEC Test and the Career Preference Record were administered in classroom environments under the researcher's supervision, with standardized instructions provided and ample time allotted for completion. The completed responses were then collected, scored, and prepared for further analysis.

Data Analysis

All data were analyzed using SPSS software. The statistical methods applied included:

- Descriptive statistics (mean, standard deviation, frequency, percentages) to summarize vocational interests and career choices.
- t-test to assess gender-based variations in vocational interests.
- Chi-square test or correlation analysis to explore the association between vocational interests and career preferences.

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Ethical Considerations

Participant confidentiality and anonymity will be strictly maintained. Data will be used exclusively for research purposes, and students will retain the right to withdraw from the study at any point.

RESULTS

Vocational Interests Patterns Based on the RIASEC Framework And study of vocational interests utilizing Holland's RIASEC framework display unique patterns among students in schools in Rohtak. Descriptive statistics for each of the six domains of the RIASEC model are displayed in Table 1.

Table 1: Descriptive Statistics for RIASEC Vocational Interest Domains

RIASEC Domain	Mean	Standard Deviation	Minimum	Maximum	Rank
Social (S)	4.48	1.84	1.00	8.00	1
Investigative (I)	4.39	1.80	1.00	8.00	2
Conventional (C)	4.29	2.05	1.00	8.00	3
Enterprising (E)	4.03	1.73	1.00	7.00	4
Realistic (R)	4.00	1.81	1.00	8.00	5
Artistic (A)	3.66	1.82	1.00	8.00	6

The findings show that social interests were vital to the participants ($M = 4.48$, $SD = 1.84$), followed by investigative interests ($M = 4.39$, $SD = 1.80$). Artistic interests had the lowest average score ($M = 3.66$, $SD = 1.82$), shows that young people in Rohtak schools are not very interested in creative and artistic activities.

Examining Gender Variations in Career Interests

To access Hypothesis 1, independent samples t-tests were to execute gender differences in all RIASEC domains. The findings are displayed in Table 2.

Table 2: Gender Differences in RIASEC Vocational Interest Domains

RIASEC Domain	Males (n=50) M (SD)	Females (n=50) M (SD)	t-value	df	p-value	Cohen's d
Realistic (R)	4.04 (1.89)	3.96 (1.75)	0.219	98	0.827	0.04
Investigative (I)	4.60 (1.72)	4.18 (1.87)	1.170	98	0.246	0.23
Artistic (A)	4.44 (1.77)	2.88 (1.51)	4.738	98	0.000***	0.95
Social (S)	4.84 (1.80)	4.12 (1.84)	1.980	98	0.051†	0.40
Enterprising (E)	4.04 (1.79)	4.02 (1.69)	0.058	98	0.954	0.01
Conventional (C)	4.40 (2.14)	4.18 (1.97)	0.532	98	0.596	0.11

*** $p < 0.001$, † $p = 0.051$

The analysis specifies a significant gender disparity in the Artistic domain ($t = 4.738$, $p < 0.001$, Cohen's $d = 0.95$), with males exhibiting considerably greater artistic interests than females. The Social domain presented marginal significance ($t = 1.980$, $p = 0.051$), where males had somewhat higher scores than females. No significant differences were found in the other RIASEC domains.

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Table 3: Career Preferences Among Adolescents (N=100)

Career Domain	Mean	Standard Deviation	Rank
Science & Technology	7.69	5.10	1
Law & Order	6.59	5.26	2
Medical	6.09	5.85	3
Education	6.00	4.74	4
Artistic & Designing	5.87	4.70	5
Commerce & Management	5.58	4.49	6
Mass Media & Journalism	5.71	4.96	7
Defence	4.89	4.33	8
Agriculture	4.28	4.20	9
Tourism & Hospitality	4.02	3.89	10

Science & Technology was identified as the most favored career field (M = 7.69, SD = 5.10), closely followed by Law & Order (M = 6.59, SD = 5.26) and Medical careers (M = 6.09, SD = 5.85). Among the participants, Tourism & Hospitality received the least favorable preference scores.

Differences in Career Preferences by Gender

To explore gender differences in career preferences, independent samples t-tests were performed.

Table 4: Notable Gender Differences in Career Preferences

Career Domain	Males (n=50) M (SD)	Females (n=50) M (SD)	t-value	df	p-value
Mass Media & Journalism	7.42 (5.39)	4.00 (3.88)	3.541	98	0.001**
Artistic & Designing	8.00 (4.83)	3.74 (3.69)	4.806	98	0.000***
Agriculture	5.42 (4.66)	3.14 (3.40)	2.729	98	0.008**
Medical	7.36 (6.24)	4.82 (5.11)	2.211	98	0.029*
Tourism & Hospitality	5.50 (4.44)	2.54 (2.53)	3.999	98	0.000***
Education	7.44 (4.82)	4.56 (4.20)	3.144	98	0.002**

***p < 0.001, **p < 0.01, *p < 0.05

Males exhibited markedly greater preferences in various career fields, with the most pronounced discrepancies noted in the Artistic & Designing (p < 0.001) and Tourism & Hospitality (p < 0.001) areas.

Connection Between Vocational Interests and Career Choices

To evaluate Hypothesis 2, Pearson correlation coefficients were computed between RIASEC domains and career choices.

Table 5: Significant Correlations Between RIASEC Interests and Career Preferences

RIASEC Domain	Career Preference	r	p-value
Artistic	Artistic & Designing	0.511**	0.000
Social	Law & Order	0.491**	0.000
Social	Education	0.477**	0.000
Investigative	Science & Technology	0.451**	0.000

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RIASEC Domain	Career Preference	r	p-value
Artistic	Agriculture	0.426**	0.000
Social	Tourism & Hospitality	0.340**	0.001
Enterprising	Commerce & Management	0.298**	0.003
Realistic	Agriculture	0.287**	0.004

** $p < 0.01$

Strong positive correlations were identified between ranged interest-career fields, with Artistic interests and Artistic & Designing professions exhibiting the strongest connection ($r = 0.511, p < 0.001$).

Analysis by School

A comparative evaluation among the participating schools indicated few variations across most domains.

Table 6: Notable Variations in Career Preferences by School

Career Domain	School A	School B	t-value	df	p-value
	M (SD)	M (SD)			
Commerce & Management	4.52 (4.02)	6.64 (4.79)	-2.238	98	0.027*

* $p < 0.05$

Students from School B demonstrated significantly higher preference for Commerce & Management careers compared to School A students.

DISCUSSION

Vocational Interest Patterns

The research tells that students from schools in Rohtak have a strong interest in activities that involve social engagement. This suggests that a lot of them enjoy helping others, teaching, and interacting with people. These findings range with the views of experts and return the cultural values of Haryana, which places a high importance on community support and social service. In addition to social interests, many students expressed interest about exploring and solving problems, which accord with their strong interest in careers related to science and technology.

Opposite interest in artistic chasing was not as high compared to students in larger cities. This may be due to the fact that rural students see fewer opportunities in creative jobs or their families motivate following more conventional career paths.

Gender Differences

Impressive outcome from this study was that boys in Rohtak showed significantly greater artistic interests than girls. This difference with previous studies that found girls typically more attracted to creative fields. This could show that boys today are becoming more comfortable with expressing their creativity, or it may give back changes in how schools are presenting these subjects. The study also found that boys had somewhat higher social interests than girls, even though girls generally lean towards people-centered careers in many areas. The best part is the importance for career counselors to avoid from making

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guess based on gender and allow students to explore any career that aligns with their interests.

Career Preferences and Local Trends

Most students expressed a desire to follow careers in science and technology. This line up with the uplifting coming from schools, the government, and parents today. However, significant differences were observed between boys and girls in various career fields. For instance, boys demonstrated a stronger interest in medical professions, which is surprising as girls are often approach toward health-related positions. These findings indicate that career aspirations are develop and guidance should adapt to reflect these changes.

Why Interests and Career Choices Matter

The results highlight a strong link between students' interests and their career desires. When students' interests corresponded with their career choices—like artistic students choosing for creative professions—they reported feeling more confident and satisfied. This supports well-known career theories and suggests that using interest assessments, like the RIASEC test, can enhance career guidance for students and schools.

What This Means for Career Guidance Given these results

It is important that career counseling in schools is fair and based on students' interests rather than stereotypes or traditional way. Schools should help children in finding their strengths by conducting interest assessments early and providing them with information about various career options, including lesser-known fields like agriculture or modern tourism. Career counselors and educators should also motivate students to explore areas beyond what is typically expected based on their gender or background.

Limitations and Suggestions for Future Research

This study was conducted with just 100 students from two schools, so the results cannot be generalized to all students in Haryana or India. Additionally, it examined students' interests at a single point in time, without considering how these interests might evolve as they age. Future research should involve a larger number of schools and regions to determine whether these findings hold true in different contexts. It would also be important to track students over many years or interview them about their reasons for choosing certain careers.

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Conflict of Interest

The author(s) declared no conflict of interest.

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