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The Influence of Social Media Algorithms on Youth Behaviour and Decision-Making - A Study Among College Students

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ABSTRACT - Social media platforms have become an integral part of the daily lives of young people, particularly college students. The content presented to users is increasingly influenced by algorithmic systems that analyze user interactions, interests, viewing patterns, searches, and engagement behavior to recommend personalized content. While these algorithms can improve user experience by providing relevant information, they may also influence users' opinions, preferences, emotions, online behavior, and decision-making processes.

This study aims to examine the influence of social media algorithms on the behavior and decision-making of college students. The research focuses on how personalized recommendations and algorithm-driven content may affect students' perceptions, purchasing decisions, lifestyle choices, academic interests, social interactions, and opinions.

The study adopts a quantitative research approach and collects primary data from college students through a structured questionnaire. The collected data are analyzed using descriptive and statistical techniques to identify patterns in students' social media usage and their responses to algorithmically recommended content.

KEYWORDS - Social Media Algorithms; Youth Behaviour; Decision-Making; College Students; Personalized Content; Digital Awareness

1. INTRODUCTION

Social media platforms are not simply chronological collections of posts. Many organise content through recommendation systems that estimate what a user may find relevant and rank posts, videos, products, or suggested accounts accordingly. These systems can help people discover educational material, entertainment, places, and products. At the same time, repeated recommendations may shape what users notice, how long they remain online, and which options they consider.

For college students, social media is part of everyday communication, entertainment, learning, and discovery. Understanding how students experience personalised recommendations is therefore important. This study focuses on students' own perceptions rather than attempting to inspect platform code or measure algorithmic performance directly.

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It asks whether respondents notice repeated personalised content, whether they feel the platforms understand their interests, and how they describe the influence of recommendations on decisions.

2. OBJECTIVES OF THE STUDY

- To identify the social media platforms commonly used by college students.
- To analyse the daily social media usage patterns among college students.
- To examine how social media algorithms personalise content based on users' interests.
- To study the influence of social media algorithms on youth behaviour and decision-making.
- To identify the positive and negative effects of algorithm-based recommendations on college students.

3. REVIEW OF LITERATURE

Prior research describes recommendation systems as mechanisms for ranking and selecting content based on signals such as user behaviour and item characteristics. Covington, Adams, and Sargin (2016) explain how large-scale video recommendation can use candidate generation and ranking stages. Bakshy, Messing, and Adamic (2015), studying Facebook news exposure, found that both algorithmic ranking and individual choices can affect exposure to ideologically diverse material. Eslami et al. (2015) showed that users may not fully understand how a news feed is curated, highlighting the value of making algorithmic selection more visible. Pariser (2011) popularised concerns about personalised information environments and the possibility that users may repeatedly encounter content aligned with prior interests.

These works provide context for examining user perceptions, but the present survey is not a technical audit of any platform and does not establish causal effects. It contributes a small, local snapshot of how college students report noticing recommendations and connecting them with everyday choices.

4. RESEARCH METHODOLOGY

This study adopts a descriptive research design to examine the influence of social media algorithms on youth behaviour and decision-making among college students. It aims to understand how personalised recommendations on platforms such as Instagram, YouTube, WhatsApp, and Snapchat influence students' interests, preferences, opinions, and everyday choices.

Primary data is collected through a structured online questionnaire distributed among college students using the convenience sampling method. The questionnaire includes questions about social media usage patterns, daily time spent on social media, awareness of personalised recommendations, and the perceived influence of algorithms on decision-making.

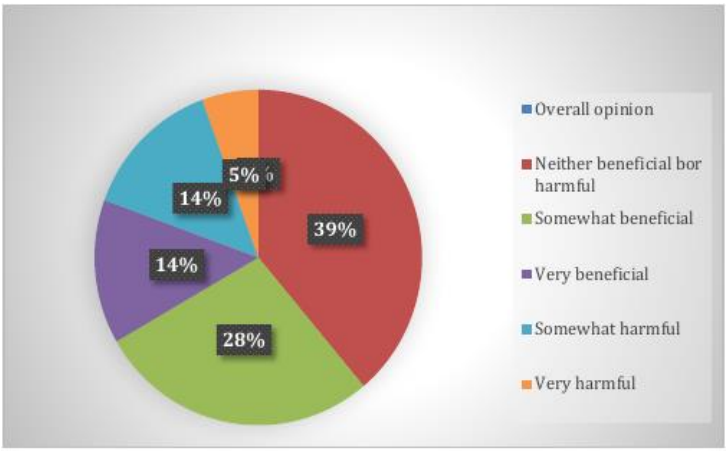
The collected data is analysed using frequency counts, percentages, tables, and graphs to identify patterns and trends in the responses. The study also examines students' opinions about the benefits and potential disadvantages of algorithm-based recommendations, including content discovery, learning opportunities, distraction, and excessive screen time. The findings are based on participants' self-reported experiences and perceptions, helping to understand the role of social media algorithms in students' everyday behaviour and decision-making.

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5. DATA ANALYSIS AND INTERPRETATION

5.1 RESPONDENT PROFILE



Pie chart shows age distribution; gender is shown in the table.

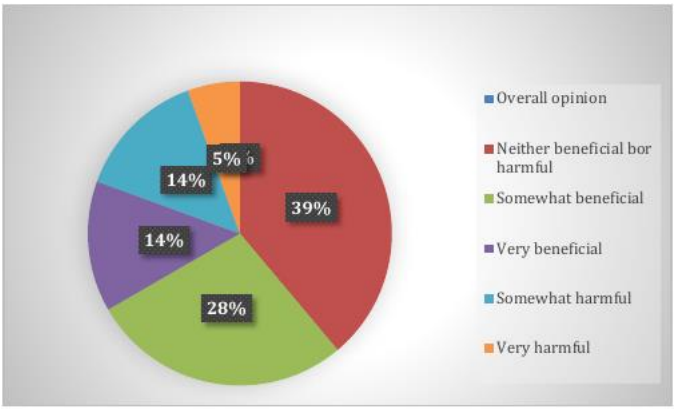
Characteristic	Responses	Percentage
Age 18–20	31	86.1%
Age 21–23	4	11.1%
Age 24–26	1	2.8%
Male	18	50.0%
Female	18	50.0%

The sample was predominantly 18–20 years old and evenly split by reported gender. The survey included respondents from different academic programmes, although programme labels were entered in several forms and were not combined into a detailed course-wise comparison.

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5.2 PLATFORMS USED REGULARLY



Pie chart shows share of platform mentions; multiple selections were allowed.

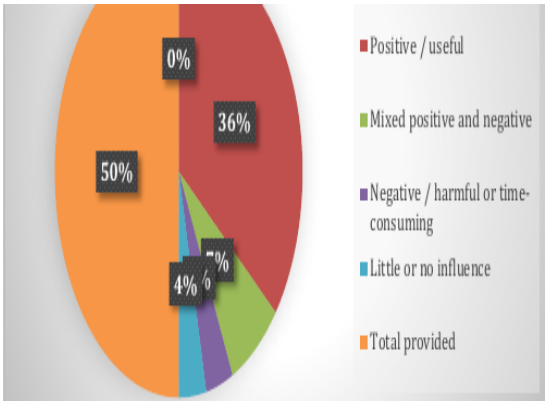
Platform	Respondents selecting platform	Percentage of sample
Instagram	34	94.4%
WhatsApp	21	58.3%
YouTube	18	50.0%
Snapchat	18	50.0%
LinkedIn (entered as “Linkdin”)	9	25.0%
Twitter/X	3	8.3%
Other	2	5.6%
Facebook	1	2.8%

Instagram was reported by 34 respondents (94.4%), making it the most commonly selected platform in this sample. WhatsApp was selected by 21 (58.3%); YouTube and Snapchat were each selected by 18 (50.0%). Since participants could select multiple platforms, these figures represent mentions rather than mutually exclusive groups.

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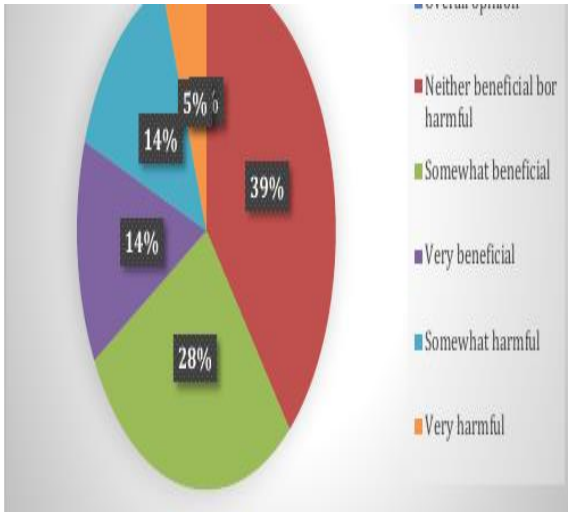
5.3 DAILY TIME SPENT ON SOCIAL MEDIA



Daily time	Respondents	Percentage
1–2 hour	12	33.3%
More than 4 hour	10	27.8%
2–3 hour	7	19.4%
3–4 hour	6	16.7%
Less than 1 hour	1	2.8%

The largest single group reported 1–2 hours per day (33.3%). Ten respondents (27.8%) reported more than four hours daily, while 16 respondents (44.4%) reported three hours or more when the 3–4-hour and more-than-four-hour categories are combined. Only one respondent (2.8%) selected less than one hour.

5.4 MAIN REASON FOR USE



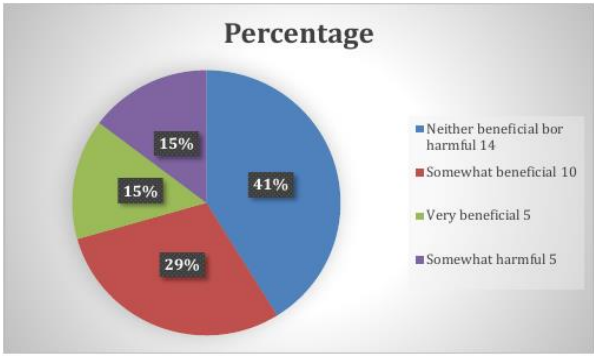
Main reason	Respondents	Percentage
Entertainment	17	47.2%
Education/learning	6	16.7%
Communication	4	11.1%
News/information	3	8.3%
Shopping/product discovery	2	5.6%
Others	2	5.6%
Career/professional purpose	1	2.8%
Following trends	1	2.8%

Entertainment was the leading primary reason (17; 47.2%). Education/learning was second (6; 16.7%), followed by communication (4; 11.1%) and news/information (3; 8.3%). Shopping/product discovery and other reasons each accounted for two respondents (5.6%)

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5.5 PERCEIVED PERSONALIZATION



Pie chart shows frequ

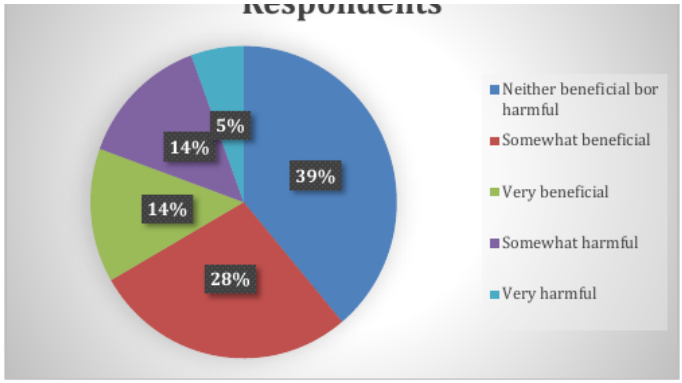
Survey measure	Response	Respondents	Percentage
Noticing similar content	Very often	24	66.7%
Noticing similar content	Never	12	33.3%
Algorithms understand interests	Strongly agree	28	77.8%
Algorithms understand interests	Strongly disagree	8	22.2%

Most respondents reported recognizing personalization: 24 (66.7%) said they very often noticed content similar to what they had previously watched, searched for, liked, or shared. A further 12 (33.3%) selected never. Similarly, 28 (77.8%) strongly agreed that algorithms understood their interests, while eight (22.2%) strongly disagreed. The strong split in answers suggests that perceptions of personalisation are clear but not universal.

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5.6 INFLUENCE ON DECISIONS



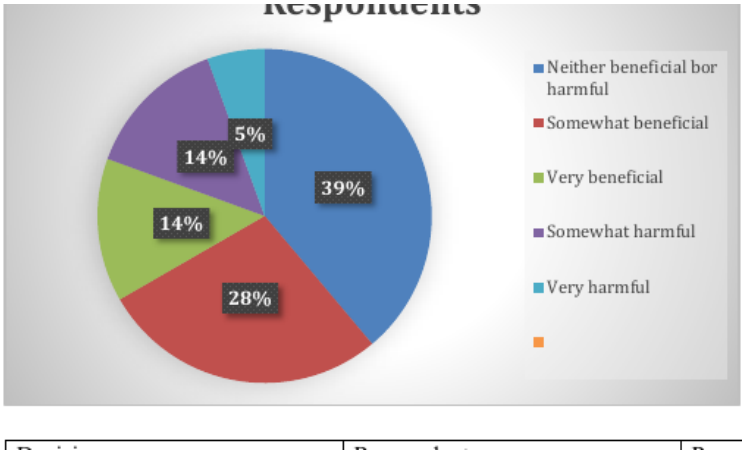
Frequency of influence	Respondents	Percentage
Sometimes	20	55.6%
Rarely	9	25.0%
Often	4	11.1%
Never	2	5.6%
Very often	1	2.8%

The most common answer was sometimes (20; 55.6%), followed by rarely (9; 25.0%). Four respondents (11.1%) selected often, two (5.6%) never, and one (2.8%) very often. Thus, recommendations were more commonly described as an occasional influence than as a constant one.

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5.7 DECISION AREAS MOST INFLUENCED



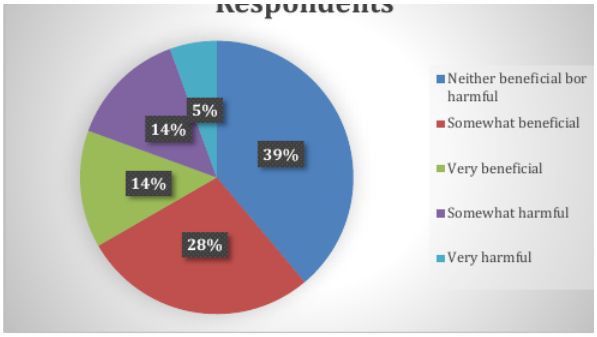
Decision area	Respondents	Percentage
Food /restaurant	11	30.6%
Travel/places to visit	8	22.2%
What to watch/listen to	7	19.4%
What to buy	3	8.3%
Fashion	2	5.6%
Education	2	5.6%
Others	2	5.6%
Opinion about social issues	1	2.8%

Food/restaurant choices were the most frequently selected decision area (11; 30.6%). Travel/places to visit followed (8; 22.2%), then what to watch or listen to (7; 19.4%). Buying decisions were selected by three respondents (8.3%). Fashion, education, and other categories each received two responses (5.6%); opinions about social issues received one (2.8%). This pattern points to a visible role in lifestyle and discovery decisions.

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5.8 OVERALL VIEW: BENEFICIAL OR HARMFUL



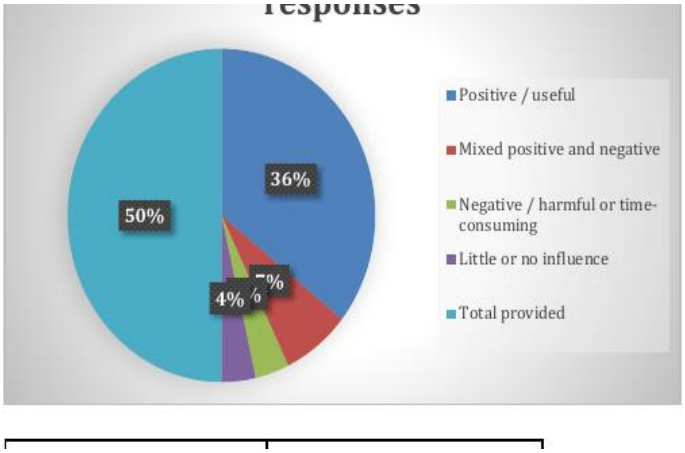
Overall opinion	Respondents	Percentage
Neither beneficial nor harmful	14	38.9%
Somewhat beneficial	10	27.8%
Very beneficial	5	13.9%
Somewhat harmful	5	13.9%
Very harmful	2	5.6%

The largest group selected neither beneficial nor harmful (14; 38.9%). Ten (27.8%) considered algorithms somewhat beneficial and five (13.9%) very beneficial. In contrast, five (13.9%) selected somewhat harmful and two (5.6%) very harmful. Combining the categories, 41.7% selected one of the beneficial options, 19.4% selected one of the harmful options, and 38.9% selected neither. The result indicates a mixed assessment rather than a uniformly positive or negative view.

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5.9 OPEN-ENDED COMMENTS



Category	Responses
Positive / useful	20
Mixed positive and negative	4
Negative / harmful or time-consuming	2
Little or no influence	2
Total provided	28

Open-ended comments were brief and varied. Positive comments referred to discovering useful content, learning resources, products, trends, career-related material, and opportunities to earn money. Some respondents described recommendations as relevant to interests or useful for discovering places and products.

6. SUMMARY OF KEY FINDINGS

- Personalized Content: Social media algorithms recommend content based on students' interests, searches, viewing patterns, and online interactions.
- Influence on Opinions: Repeated exposure to recommended content may influence students' opinions, perceptions, and attitudes.
- Purchasing Decisions: Product recommendations and advertisements may affect students' buying preferences and purchase decisions.
- Lifestyle Choices: Social media content can influence students' fashion, entertainment, lifestyle preferences, and daily habits.
- Academic Interests: Recommended educational content may influence students' learning interests and information-seeking behaviour.

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7. RECOMMENDATIONS

- For students: review recommendation and privacy settings, use “not interested” or equivalent controls when available, and deliberately seek varied sources instead of relying on one feed.
- For colleges: include short digital-literacy sessions on personalised feeds, sponsored content, misinformation, privacy, and healthy time management.
- For platforms: make recommendation controls and explanations easy to find, and give users meaningful ways to reset or diversify their feeds.
- For future researchers: recruit a larger and more diverse sample, report the sampling method, pilot-test questionnaire wording, and examine possible differences by age, course, and daily usage.
- For stronger evidence: combine self-report surveys with interviews or diary studies; avoid claiming causal effects unless the research design can support them.

8. CONCLUSION

In this survey of 36 college students, personalised recommendations were widely noticed and most respondents felt that social media algorithms understood their interests. Yet their reported influence on decisions was usually occasional, most often involving food and restaurants, travel, and entertainment choices. Respondents did not agree on whether algorithms were beneficial or harmful: the largest group was neutral, while more respondents selected beneficial than harmful options. Open-ended comments highlighted both discovery and learning opportunities and concerns about distraction, repetition, and time use. The practical implication is not that recommendation algorithms are wholly good or bad, but that their effects depend on platform design and user awareness. Digital literacy, transparent controls, and broader research can help students make more informed choices. Given the sample size and self-reported design, the results should be treated as exploratory evidence and a starting point for a larger study.

REFERENCES

- Bakshy, E., Messing, S., & Adamic, L. A. (2015). Exposure to ideologically diverse news and opinion on Facebook. Science, 348(6239), 1130–1132. https://doi.org/10.1126/science.aaa1160
- Covington, P., Adams, J., & Sargin, E. (2016). Deep neural networks for YouTube recommendations. In Proceedings of the 10th ACM Conference on Recommender Systems (RecSys ’16) (pp. 191–198). Association for Computing Machinery. https://doi.org/10.1145/2959100.2959190
- Eslami, M., Rickman, A., Vaccaro, K., Aleyasen, A., Vuong, A., Karahalios, K., Hamilton, K., & Sandvig, C. (2015). “I always assumed that I wasn’t really that close to [her]”: Reasoning about invisible algorithms in news feeds. In Proceedings of the 33rd Annual ACM Conference on Human.

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