

User Survey of Music Streaming Apps

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Abstract - Music streaming apps have become increasingly popular in recent years, providing customers with an affordable and convenient way to access a vast library of music. To gain a better understanding of the current state of Music streaming apps, we conducted a user survey to evaluate the popularity, usage and features of different Music streaming apps which include Spotify, YouTube Music, Apple Music, Gaana, Jio Saavn, Amazon Music and Resso. The survey was conducted online with 210 participants and was presented with 22 questions. It covers a wide range of age groups which are 16-24, 25-44, 45-60 and 60+ years. About 68 % of male and 32 % of female respondents have been included in the survey. The findings of the survey show that Spotify and YouTube Music dominate the Indian market. The reasons for their dominance are mainly, a vast library of music, the discovery of new music, cheaper premium plans, etc. The survey also identified that the main reason to purchase the premium version of the apps is the constant advertisements played in the free version.

Keywords - User Survey, Music Streaming Apps, Spotify, India

1. Introduction

Music occupies a significant and cherished position in the lives of individuals worldwide, and the same sentiment holds true for the people of India. The diverse and vibrant culture of India has given rise to a rich tapestry of musical traditions, each resonating with its own unique charm. From classical ragas to Bollywood hits, and folk melodies to devotional songs, the Indian populace showcases a remarkable affinity for various types of music.

Bollywood music, known for its catchy tunes, lively rhythms, and cinematic appeal, has an immense fanbase in the country. The Digital Music Study report of 2022 [1] included a user survey involving 4,000 respondents. According to their results, Bollywood music was heard by the most of respondents in the user survey. To get a clear view, they divided Bollywood music into five subsections. Bollywood (Modern) with the latest songs released in the past two years, Bollywood (Classic) with a list of classic songs sung by legendary singers like Kishore Kumar and Lata Mangeshkar, Bollywood (New Age 2000-2020) with songs from the past twenty years, Bollywood (80-90s) with songs from the 90s era and Bollywood (Retro) with songs between the late 50s and 60s. Around 49 % preferred Bollywood (Modern), 40 % chose Bollywood (Classic), followed by 33 % Bollywood (New Age

2000-2020), 28 % Bollywood (80-90s) and 20 % Bollywood (Retro). This survey highlights the classification of popular Bollywood music in India.

India is a place of multiple states where all regional cultures live in harmony. Folk music is a symbol of this harmony. Folk music represents the cultural fabric of different regions / states and adds a distinct flavor to India's musical landscape. The folk traditions from various states like Punjab, Rajasthan, Maharashtra and others, find immense popularity among people. According to [1], around 27 % of their users listen to Punjabi music. Apart from these dominant genres, there is also a growing interest in Western music, including pop, rock, hip-hop, and electronic music. These genres collectively make up around 35 % of the music preference in India, representing the influence of international music on the younger generation.

The major growth in the music market was seen after the effective use of Music streaming services like Spotify, YouTube Music, and Apple Music on their smartphones. Users were able to access music anytime and anywhere on these apps. Some apps offer free services with advertising, but all offer 'premium' services for a month or year. Spotify, YouTube Music, and Gaana are among the companies that provide free services with ads, as well as paid services without ads. It is also called Hybrid Service when the company uses free and paid models [2]. However, there are also a few music companies that offer only paid services, such as Apple Music and Tidal.

The trend of music apps came into the limelight because of the free model, also known as the freemium model [3]. According to [4], Music streaming apps are offering a 'free' version to attract many users. Another reason may be that companies continue to push the free version to control or conquer the Music streaming market.

To gain a better understanding of the landscape of Music streaming services, we conducted a user survey to evaluate the popularity, features, and user rating of different Music streaming apps. In Fig 1 logos of Spotify, Gaana, Jio Saavn, YouTube Music, Amazon Music, Resso and Apple Music are presented. These apps have common features like 'Creating Playlist', 'Finding Favorites', 'Song Recommendation' and 'Artist Album'. This research paper provides valuable factors that users take into consideration before choosing the Music streaming app and their premium versions.

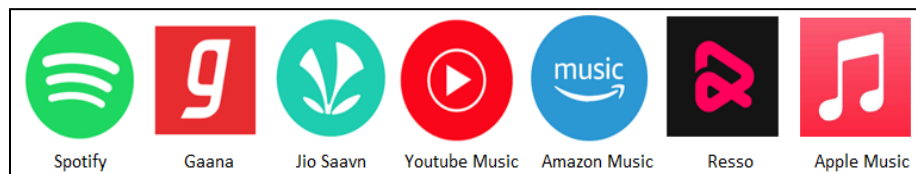


Fig 1 Popular Music Streaming Apps in India

2. Literature Review

This research work identifies 2 research papers, 3 marketing reports and 2 online questionnaires. All of them belong to a time span of 2012 to 2022. The keywords used for the literature review are 'Music streaming apps', 'digital music', 'music survey' and 'music survey questionnaire' with Google and Google Scholar.

The Jackdaw Research team [5] conducted two surveys on Music streaming apps to understand the patterns and habits of users. The surveys were in the groups of 200 and 500 users. The patterns found in both groups were consistent. The survey stated the popular features of music apps. According to their findings, users loved to explore the feature - 'favorites' in the apps. The survey was focused on how people were using Apple Music and its features. It also discussed the number of premium and free users and their retention rates.

Christian van Dijk [6] conducted a user survey of 216 users using different Music streaming apps. The aim of the survey was to study a type (free/ paid) of service preferred by the users. It also answers the factors that influence the user for the premium version. It compared the usage time of paid users versus free users. It was found that users who chose paid service tended to listen for hours compared to free users. User Income was one of the factors which influenced users for premium services.

The Indian Music Industry (IMI) [7] conducted a user survey of 4,000 respondents in India. The survey was focused majorly on users aged between 16 to 44 years. The survey stated that around 54% of the respondents enjoyed music in live streams. The survey also highlighted that on other platforms such as video streaming, short-form video services and social media, around 70 % of the respondents listen to Indian artists. The survey also discusses the relation of music to mental health.

Mohesen et al. [8] conducted a user survey of 222 participants to understand the listening and management behaviors of users. The key findings from the survey indicate that factors like song familiarity, level of distraction and alignment with the listener's mood, are influenced by the specific activity during which music is being enjoyed. The survey also concluded that users preferred passive listening and compared different recommendation systems.

Ruma et al. [9] compare different Music streaming services in India. The comparison is based on the premium fee, features and plans provided by different Music streaming apps. The [10] and [11] are different questionnaires for Spotify and Apple Music, in which the users are asked about how many hours they spend on these apps. The questionnaire also interrogates the most attractive app features to the users.

3. App Review

Before creating the questionnaire, 7 popular Music streaming apps were compared to find the common trends among the apps. Spotify, Gaana, Jio Saavn, Amazon Music, YouTube Music, Resso and Apple Music were compared on the basis of their features, cost of premium versions, device limit, and many more. The comparison is shown below in Table 1. In Table 1, ‘M’ stands for Millions, ‘K’ stands for Thousands and ‘NA’ stands for Not Available.

Table 1. Comparison of popular Music Streaming Apps

Items	Spotify	Gaana	Jio Saavn	Amazon Music	YouTube Music	Resso	Apple Music
Vendor	Spotify	Times Internet	Reliance Industries	Amazon	Google	Byte Dance	Apple Inc
Start Year	2008	2010	2007	2007	2015	2020	2015
Globally available	184 Countries	Global	Global	Global	101 Countries	India, Brazil, Indonesia	175 countries
Free Access	Yes	Yes	Yes	Partial	Yes	Yes	Yes (Radio)
Premium Charges in INR / Year	1189	0339	0749	0999	1290	1150	0999
Currencies	INR, USD & AUD	INR & USD	INR	INR, USD & EURO	USD & INR	INR	USD, CAD & INR
App Size	25 MB	32 MB	27 MB	74 MB	20 MB	7.7 MB	45 MB
No. of Tracks	100 M +	45 M	55 M +	75 M	100 M +	NA	100 M +
No. of Users	500 M	201 M	100 M	82.2 M	2500 M	50 M	88 M
Premium Users	205 M	NA	NA	NA	80 M	NA	88 M
Offline Mode	Yes	Yes	Yes	Yes	No	Yes	Yes
Track Downloads	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Podcast	Yes	Yes	Yes	Yes	Yes	No	Yes
Login Required	Yes	Limited	Limited	Yes	No	Yes	Yes
App Rating	4.3	4.3	4.3	3.7	4.2	4.3	3.7
Total Reviews	20 M	5 M	5 M	2.7 M	4.4 M	3.4 M	0.5 M

From this app review, it is seen that all the apps provide some basic features like creating playlists, recommendations, and discovery of new music. Except for Resso, all the other apps are available in more than 100 countries. Indian Currency is mainly accepted for payment options. All the apps have more than 50 million users. Spotify has the highest, 205 million premium users, out of its 500 million users. Spotify has around 20 million reviews on the Google Play Store. These apps have an average rating of more than 4.1 stars on the Google Play Store. All the apps have different login systems. For example, apps like Gaana and Jio Saavn have a Guest login option, where users do not have to mention their personal details like email or mobile number. While other apps like Spotify or Amazon Music need some kind of personal verification from the user. It is observed that most of the apps followed the Freemium version except Apple Music. In Apple Music, the only free tool available is the Radio.

4. Research Methodology

This section discusses the research methodology followed, including the design of the questionnaire, data collection process and demographic representation of participants.

4.1 Design of Questionnaire

After the App review, a structured questionnaire of 26 questions was created and divided into three sections. The respondents were directed to the second or third section depending on their responses in the first section. All the questions are objective multi-optional questions with 2 to 4 options. The first section included questions about their demographic information such as gender, age, occupation and others. The second section consisted of questions related to Music streaming apps. This section was focused on obtaining what features of music apps are essential to the users. Fig. 2 provides a couple of sample questions in this second section. The third section consisted of questions for users not using Music streaming apps. This section is focused on knowing the reasons for not using the Music streaming apps and also, the possibility of using them in the future.

What kind of user you are? *	How often do you use music streaming apps? *
<input type="radio"/> Premium Subscription User	<input type="radio"/> Multiple Times a Day
<input type="radio"/> Trial Subscription User	<input type="radio"/> Once a Day
<input type="radio"/> Free Subscription User	<input type="radio"/> Sometimes in a Week

Fig 2 Sample questions in the user survey

4.2 Collection of Data

The user survey is mainly targeted at Indian users, but it also has respondents from foreign countries. The survey has been targeted at different age groups, which are (16-24), (25-44), (45-60) and 60+ years. The survey has a total 210 respondents, out of which 180 respondents are considered for the analysis, as seen in Table 2. The other 30 respondents are not considered in the rest of the results and in further analysis. Out of these 30 users, 10 users don't listen to music on these apps and the other 20 are invalid users. In order to validate our responses, some questions are repeated in the questionnaire. If the user gives the same answer for those questions, then only it's a valid response. There were 20 such users in our survey and those invalid users are not considered in the analysis.

The online tool used to design this survey is Google Forms. It is used since it is easy to understand, easy to design questionnaires and also, supports data analysis effectively. The questionnaire has been circulated on different social media platforms such as Instagram, Twitter, Whatsapp and Reddit.

Tables 2 to 6 depict the demographic information of users such as the number of app users, age groups, gender distribution and occupations-wise distribution.

Table 2. Respondents to User Survey

Respondents using Music Streaming Apps	Respondents not using Music Streaming Apps	Invalid Users	Total Users
180	10	20	210
85.5%	5%	9.5%	100%

Table 3. Age group of respondents of User Survey (in years)

16-24	25-44	45-60	Above 60	Total
105	60	08	07	180
58%	34%	4%	4%	100%

In Table 3, the age wise distribution of participants is given. The maximum respondents to the user survey belonged to the age group of 16-24 years. The users in this category are students from schools and colleges. The second major category is of 25-44 years have 60 users, which are mostly working professionals.

Table 4. Gender of Respondents to User Survey

Male Respondents	Female Respondents	Total Users
123	57	180
68%	32%	100%

In Table 4, it is observed that there are 68 % male users and 32 % female users participated in this user survey.

Table 5. Occupation of the Respondents of the User Survey

Occupation	No.of Respondents	Percentage
Business	28	16%
Working Professional	64	36%
Student	82	45%
Retired Employee	06	03%
Total	180	100%

Table 5 displays the occupations of the users who participated in the survey. Around 45 % of users are students and 36 % are working professionals. Only 3% of users were retired and belonged to the 60+ years age group.

Table 6. Role of Respondents to the User Survey

User Type	No.of Respondents	Percentage
Music Enthusiast	106	59%
Part-time Singer / Instrumentalist	24	13%
Professional Artist / Performer	15	08%
Nothing Specific	35	20%
Total	180	100%

In order to get better results, the users are asked to describe themselves. In Table 6. this distribution is stated. Around 59 % of the respondents classify themselves as Music Enthusiasts. In this survey, 15 professional artists participated and shared their experiences.

5. Results & Discussion

In this section, data analysis is performed according to the responses given by the respondents, during the user survey. The section discusses parameters like popularity, usage and charges of Music streaming apps. Popularity is discussed according to age groups, location and gender. The weekly usage of premium and free users is presented. This section also highlights important features of Music streaming apps. Finally, the app ratings by users, are discussed.

5.1 Popularity of Streaming Apps with Different Factors

In this section popularity of Music streaming apps is discussed with factors like age, location and device. The key reasons for the results obtained from the user survey are also presented.

5.1.1 Popular Music Streaming App

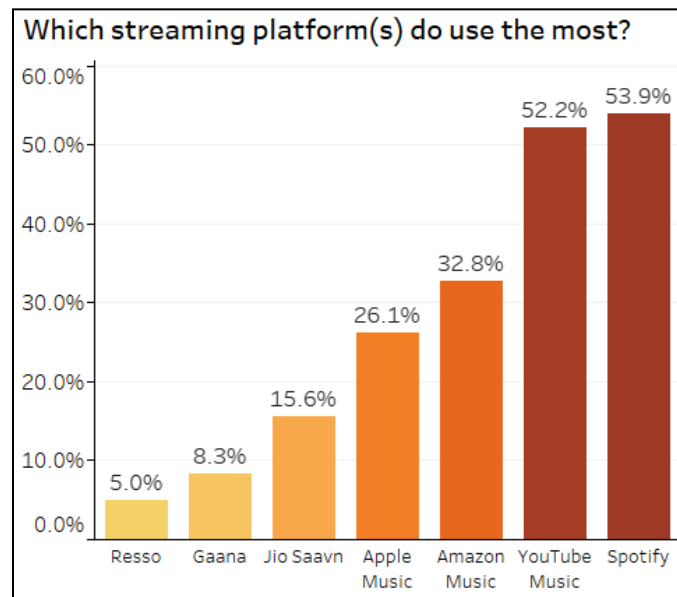


Fig. 2 Bar Graph of Music Streaming Apps Popularity

As seen in Fig. 2, a user can use multiple Music streaming apps. Spotify is the most popular app in the user survey closely followed by YouTube Music. Spotify is used by 97 out of 180 users and 94 users use YouTube Music.

The main reason for their popularity is that Spotify and YouTube Music each provides more than a hundred million tracks free to their users [12]. Also, this survey has a maximum number of respondents from the age group of 16 - 24 years. The users from this age group are generally students who can't afford paid apps like Apple Music.

5.1.2 Location-wise popular Music Streaming App

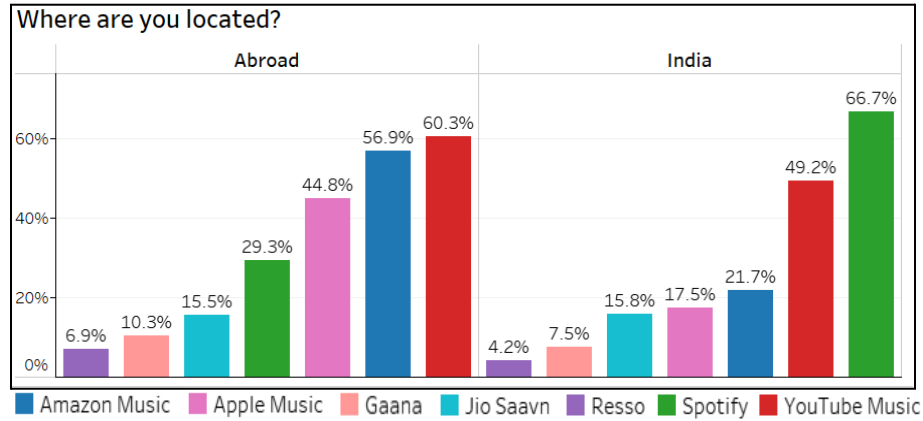


Fig. 3 Graph of Location-wise Popularity of Music Apps

In Fig. 3, the location-wise distribution of respondents in the user survey is provided. In the survey, the respondents are asked a question - Are they in India or Abroad? As the survey is mainly focused on Indian users, the option for the location of users outside of India is given the title as 'Abroad'. There are 130 Indian users and 60 Abroad users. According to Indian respondents, Spotify and YouTube Music are in the top 2 positions. Spotify is preferred by 66 % of Indian respondents which is depicted in green, whereas YouTube Music is preferred by 49 %, which is depicted in red. The respondents from Abroad preferred Amazon Music and YouTube Music over Spotify. YouTube Music is preferred by 60 % of respondents from Abroad, whereas Apple Music is also used by 44 %. However, Apple Music is not preferred by many Indian respondents. The main reason for that is - Apple Music doesn't provide any free membership to its users [12]. While apps like Spotify and YouTube Music provide millions of songs free to their users.

5.1.3 Age-wise Popular Music Streaming App

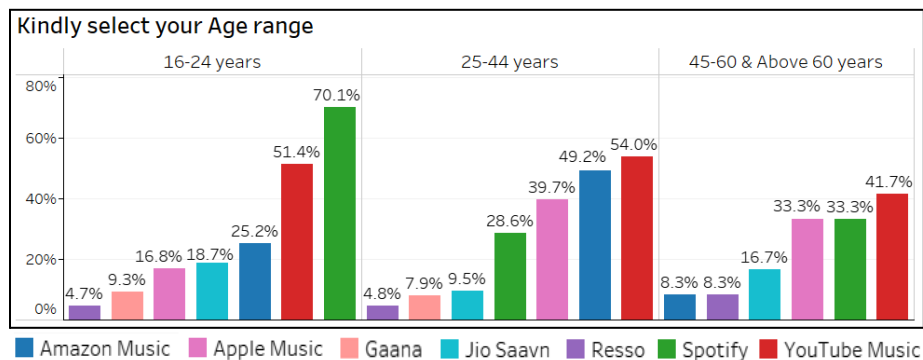


Fig. 4 Graph of Age-wise Popularity in Music Streaming Apps

In Fig. 4, the age-wise distribution of the respondents is presented. According to the above graph, in the age range of 16 to 24 years, Spotify has 70 % of users which is depicted in green, whereas in the age range of 25 to 44 years, YouTube Music has 54 % of users which is depicted in red. It is observed that YouTube Music was preferred over Spotify by the older age group. The main reason for that is - YouTube is also a video streaming platform which relatively older than Spotify. Many people from the older generation are already familiar with YouTube so that's why they have preferred YouTube Music as their music platform [13]. Additionally, YouTube has a large database of old Bollywood classic songs which are favorites of older generations. From the above two graphs, it is very clear that YouTube Music and Spotify have dominated the arena of Music streaming apps.

5.1.4 Cell Phone wise popular Music Streaming App

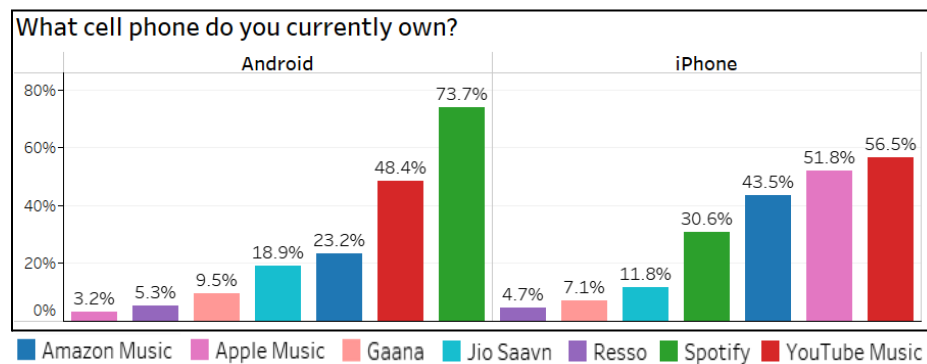


Fig. 5 Graph of Android vs iPhone in Music Streaming Apps

In Fig.5, the graph of Android vs iPhone users is provided. It is observed that about 73 % of Android users prefer Spotify which is depicted in green and around 48 % prefer YouTube Music which is depicted in red. Whereas about 56 % of iPhone users prefer YouTube Music and around 52 % use Apple Music which is depicted in pink. The main reason for Spotify having a large number of Android users is that Spotify comes pre-installed on many Android devices which makes it more accessible to its users [14, 15]. Also, Android devices often provide users with more customization options compared to iOS devices.

5.1.4 Subscriptions of Music Streaming Apps

In Fig. 6, Gaana and Jio Saavn displayed the maximum percentage i.e. over about 66 % of free subscription users, depicted in blue. Apple Music displayed the lowest percentage i.e. about 32 % of free subscription users. The main reason for this is that Gaana and Jio Saavn have Guest Login systems that enable users to stream music without logging in or giving their personal information [16]. Also, is observed that Apple Music has the maximum percentage i.e. about 59 % of premium subscription users, depicted in orange. From the chart of India vs Abroad, it is known that the majority of these premium users are from Abroad.

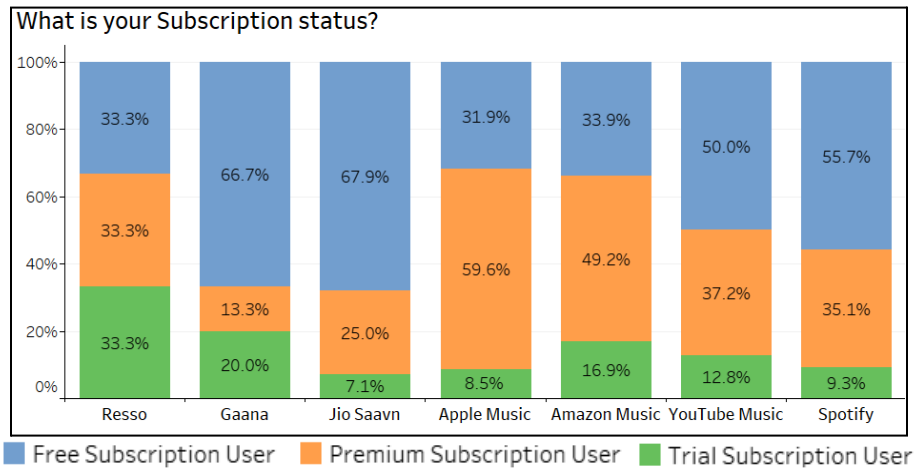


Fig. 6 Graph of Subscription-wise Distribution in Music Streaming Apps

5.2 Usage of Music Streaming Apps

In this section usage of Music streaming apps is discussed. The graphs discuss the Duration of usage of Music streaming apps. The possible reasons for the obtained results are also mentioned.

5.2.1 Duration of Usage of Music Streaming Apps

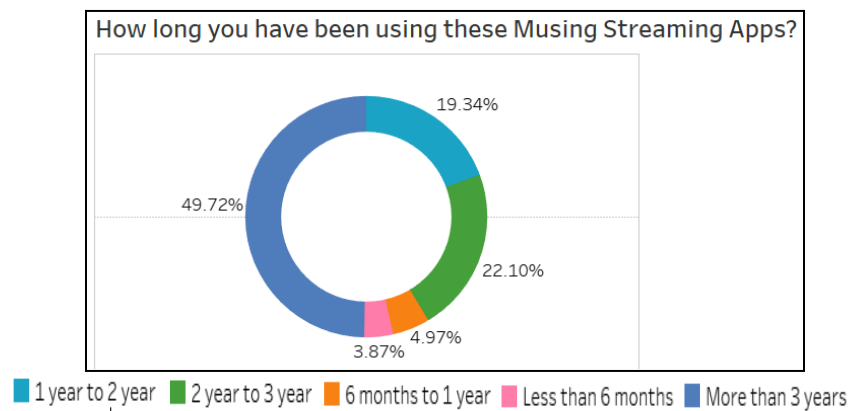


Fig. 7 Chart of Duration of Usage of Music Streaming Apps

Music streaming apps have totally changed the trend of listening to music. Almost 50% of users in this survey have been using these apps for more than 3 years, depicted in dark blue. Some reasons for this could be the easy availability of the internet over the last 7-8 years and the other reason is the lockdown of the COVID-19 pandemic.

During the lockdown of 2020, people had enough time to listen to music, watch movies and other recreational activities [17].

5.2.2 Comparison of Free vs Premium Subscription in Music Streaming Apps

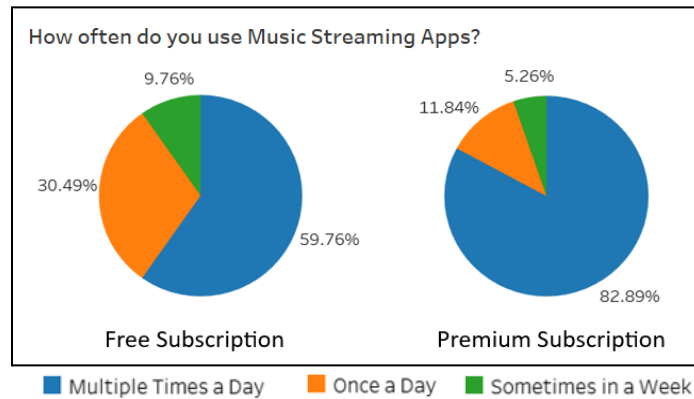


Fig. 8 Comparing Usage of Free and Premium Users

In Fig. 8, the usage of premium and free subscription users of the Music streaming apps is presented. It is observed that users use the Music streaming app multiple times a day. Around 60 % of the free subscription users use these apps multiple times a day whereas around 83 % of the premium subscription users use these apps various times a day. The major reason for this is the ads played in the free subscription. Most of the users get annoyed by the ads and close the app. However, most people buy the premium version to avoid annoying ads [18]. Also, the premium version has different features like recordings of live shows and downloading track files locally on the device [18, 19].

5.3 Features of the Music Streaming Apps

Music apps offer various features to enhance the user's music-listening experience. They have a vast music library with songs from various genres and artists. Users can search for songs, albums, artists, and playlists using the search function. Personalized playlists and curated radio stations can help users discover new music [19]. In this section, the popular features preferred by users are discussed.

5.3.1 Features Enjoyed by Premium Subscribers

In Fig. 10, features preferred by premium users are presented. Around 78 % of premium users like ad-free music. This can also be the reason for purchasing the premium version of these Music streaming apps. Also, about 43 % of users enjoy access to exclusive content like live sessions, concerts, or podcasts. This graph also complements the graph of the comparison of free vs premium subscriptions, depicted in Fig. 9.

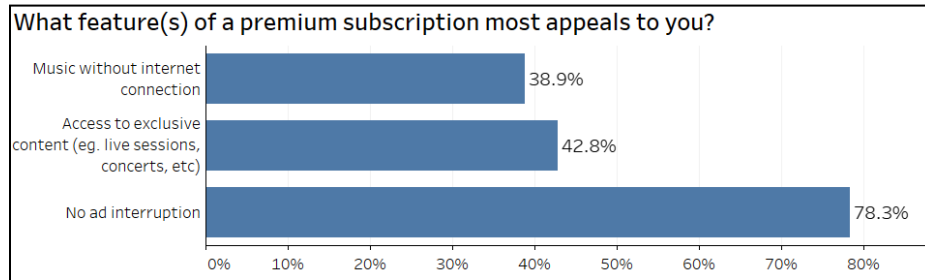


Fig. 10 Graph of Features of Premium Subscriptions

5.3.1 Popular Features in Music Streaming Apps

In Fig. 9, the popular features used by users are discussed. Around 68 % of users use the ‘Discovery of New Music’ in the Music streaming app, whereas about 64 % of users use the ‘Playlist’ feature. These two features are the most common features in all Music streaming apps. Users use these Music streaming apps to find their favorite songs easily on these platforms. These features can be considered trends for launching a new music app in the market [19]. People love to create and share their playlists.

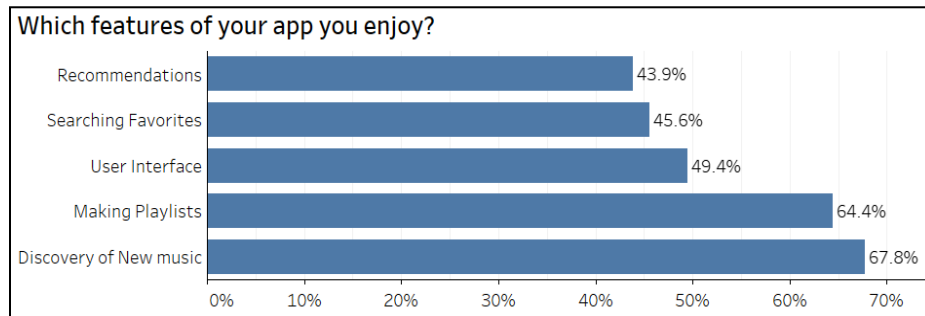


Fig. 9 Graph of Features Enjoyed by User

5.3 Charges for Premium Subscriptions in Music Streaming Apps

Premium charges for Music streaming apps vary depending on the platform and the features offered. The monthly subscription fee ranges from 100 to 250 Rs depending on the app and selected package. Many Music streaming apps offer free trials to new users to test out the premium features before committing to a subscription. Premium charges are a way for Music streaming apps to generate revenue and provide users with a better listening experience.

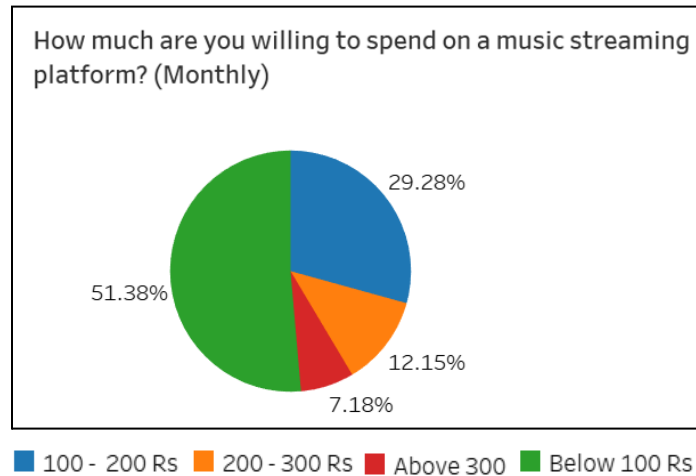


Fig. 12 Chart of users willing to spend on the apps

Spotify has a monthly subscription of INR 119 / month and YouTube Music has a premium subscription of INR 129 / month [9]. Amazon Music has a premium of INR 299 / month, which is quite high for students. In this user survey, around 51 % of users have preferred the charges to be below INR 100 / month, whereas about 29 % of users prefer between INR 100 - 200 / month. The reason for Youtube Music and Spotify have a larger number of premium subscribers is that both these music streaming apps have their subscription rates close to INR 100 / month.

6. Conclusion

In conclusion, the survey results suggest that music streaming apps are becoming an increasingly popular way for people to listen to music and discover new music. The majority of respondents reported using Music streaming apps regularly, with Spotify and YouTube Music being the most popular platforms. The key factors that influence users' choice of Music streaming apps are the availability of a vast music library, personalized playlists, and a user-friendly interface. Respondents who do choose a paid streaming service tend to listen to more hours of music per week. The main reason to choose the premium service was to escape from the annoying ads. Respondents from India favored Spotify and respondents from Abroad favored Apple Music along with YouTube Music. In this survey, the people who said no to Music streaming apps were from the age of 25-44 and 45 -60. There were around 10 respondents and most of them liked their music on the local device. Overall, Music streaming apps have become an integral part of people's music listening habits and are likely to continue growing in popularity in the coming years.

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