

GAMES AND SENIOR CITIZENS (USER STUDY WITH A FOCUS)

DESIGN RESEARCH SEMINAR

SUBMITTED BY
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IDC SCHOOL OF DESIGN
INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY
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DECLARATION

I declare that this project report submission represents my thoughts in my own way, and where other's ideas or words have been included, I have adequately cited and referenced the original source. This project is all my own work and has not been copied in part or in whole from any other source except where duly acknowledged. As such all use of previously published work (from books ,journals, internet sites etc.) has been cited within the main report and fully referenced as an item in the list of References.

I understand that any violation of the above will be cause for disciplinary action by the institute.

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Roll No - 176130011

Sign - 

Approval Sheet

Design Research Seminar

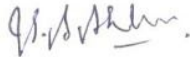
"GAMES AND SENIOR CITIZENS (USER STUDY WITH A FOCUS)" is approved for the partial fulfilment of the requirements for the post graduation degree in Industrial design.

Minu

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M.Des Industrial Design

Project Guide: Prof. Uday Athavankar



ACKNOWLEDGEMENT

I would like to express my gratitude to my guide, Prof. Uday Athavankar for his meticulous guidance and the efforts he put in to make this project happen. His suggestions and instructions were what helped me to steer this project in the right direction and push myself to try and come up with new ideas.

I would also like to thank all the jury members for their valuable inputs and suggestions on this project.

We gratefully acknowledge the members of the "Dada Dadi Par", members of "Nisarg Swasthya Sansthan" and other elderly members who gracefully participated for the interview sessions.

A handwritten signature in black ink, appearing to be 'Shiv' or similar, written in a cursive style.

1. ABSTRACT

The aim of this paper is to bring out the games that urban elderly of India play now and wishes to play during their older age. In a later category it also looks into the possibilities of demand of digital games for the elderly.

Keywords: *elderly users, childhood games, stiff body, time pass, adopted games, digital games*

2. INTRODUCTION

Older adults need to keep exercising to stay active and healthy. Games are proven to be an important and fun way to stay healthy. They not only helps us to upgrade cognitive or physical functions, but also helps us to stay socially active, irrespective of what age group one belongs to, games tend to lure everyone.

India being home to numerous games. With the advancement of newer technologies and more options to play games lot of these games are on the verge of getting forgotten.

This paper tries to collect the facts on what kind of games elderly -

- used to play during their childhood,
- prefer to play now (during age groups of 50-60, 60-70, 70+),
- what could be the reasons that they have left those games, and became comfortable with newer or other games.
- why they prefer to play what they are playing today?
- and, what they wish to play at this age.

3. RESEARCH METHODOLOGY

(I) Data Collection:

Understanding the games that urban elderly still prefer to play:

People of age above 50 were considered for interviewing and observation.

Some were questioned based on prepared questionnaire, while some were shown images of certain games to categorize them into "Childhood games", "Fav Games at childhood/ youngster/even today (but don't play now)", "Favorite games(play now)", "Boring games" and "Dream games".

Elder members at Dada Dadi Park (Borivali), Nisarg Swasthya Sansthan (Powai) and some visiting Hiranandani Heritage Garden (Powai) were considered for interview for collecting data.

Around 36 people were interviewed, 12 for each age group (50-60, 60-70, 70+). Elders were interviewed with an aim to collect the facts around games that they used to play at childhood, what was their favourite games? what are the various games that they play today

and why? What games they still want to play but are unable to play? What could be the factors that is stopping them from playing their favourite games?

(II) Data Analysis:

Grounded Theory and Content analysis method was adopted to analyse the Qualitative data collected.

After collecting the relevant data, a detailed table was developed of their favourite games at childhood and of their favourite games today with an objective to compare and analyse, other columns included boring games and their dream games. The collected data also had the facts for why they stopped playing most of their favourite games, why had they adopted new games (if they had) or to what extent have they restricted playing some of the games.

A list of 40 games was prepared to look at the frequency of the occurrence of game in all three age groups. Based on this list further counting was done for individual age group to analyse and draw insights based on qualitative understanding and survey.

A variety of interviews were analysed to explain why change in interest of game might have had happen.

(III) Comparative study

1) Comparative study amongst 'All' age groups for individual game categories:

Categories of games:

- i.) "Fav Games at childhood/youngster/even today (don't play now)" - 116,
- ii.) "Fav games (play now)" - 69,
- iii.) "Boring games" - 14,
- iv.) "Dream games" it was - 24.

Table 1: The table shows the count for choice of game.

Fav Game (don't play now)	Fav game (still play)	Boring game	Dream game
Cricket (14)	Carrom (14)	Cricket (4)	Cricket (6)
Chess (9)	Ludo (7)	Puzzles (3)	Badminton (6)
Badminton (9)	Sudoku (6)	Taash (2)	Chess (2)
3patti (8)	Snake-n-ladder (5)		
Taash (7)	*Cricket (1)		
Pithu (7)			
Carrom (6)			

As per above table, while cricket was chosen by most of the elders as their favorite game during childhood/young age, only one chose it to be favourite game even today. Similarly, carrom was least (only 6) chosen in first category but gained highest count for favorite game today.

Under the category "*Fav Games at childhood/youngster/even today (don't play now)*", while cricket had been popular amongst all age(approx same count), taash was most popular choice for 70+ age group. Under "*Fav games (play now)*" carrom gained most counts for all the three age groups and 'cricket' got ruled out.

Number of people from age group 70+ voted for "*Fav games(play now)*" was least(only 17) while it was approximately same for rest two age groups (25-57). More number of people from age group of 70+ showed data for "*Dream games*" (around 9) and least people from age group of 50-60 had any dream games (only 5).

One could conclude (keeping above table for reference), that after the age of 50, people tend to adopt games like carrom, that require least amount of physical efforts to play and could be played with anyone, irrespective of having a defined team or not. Such games started to have gain popularity after certain age.

The other observation shows that the number of games have decreased drastically. Here for the first category had 116 total vote for games, the 2nd category had only 69 votes, suggesting that the number of games and choice of games reduces also after age of 50.

The games that gain popularity after age of 50 are easily accessible, easy to play, and require least body movement to be put in, despite having seen there are many people who still prefer to play physical games even after crossing age of 50. Most of these people have shifted from popular (as per above table) outdoor games to indoor games.

Though we can see the count for boring games is only 14, which could suggest that people have positive outlook towards games in general - i.e, it provides mode of enjoyment, fun, and keep them healthy, etc.

2) Comparative Chart amongst Individual Age groups:

Compared "*Fav Games at childhood/youngster/even today (don't play now)*" and "*Fav games (play now)*" for each age category:

i.) Age between 50 - 60

Games like cricket got maximum count under 1st category ("*fav games at childhood/ youngster (don't play now)*" (4 counts)) while it got completely ruled out in 2nd category ("*Fav games (play now)*" (0 counts)). While new games like Sudoku has become more popular for them today; suggesting that they are losing interest in their childhood games and adapting new games that are getting popular with newer generations.

They are more inclined to playing games which they can play to refresh themselves or take their mind off the work. While indoor are also viewed as ways to interact with their team members for other than work.

Games like chess, snake and ladder, and carrom are more popular amongst them. Some of them voted cricket, kho-kho, volleyball, swimming, as their "Dream games" (4th category). Probably because these games require them to go to a specific place or allow them to take time out of their working schedule/daily routine.

Ludo being most popular game for this age group as favourite childhood game is still played by most of them.

We can suggest that they tend to play games that they have played previously in their childhood.

ii.) Age between 60 - 70

Games like carrom, cricket, badminton (outdoor games) had more counts under 1st category have now become their dream games (3rd category). The interviewees reported they prefer games that they can enjoy and have fun, anywhere and any time.

Indoor games like chess, carrom, and ludo gained more popularity, as reported by some participants, these are familiar games, and they have been in touch with them for a longer period of time, hence it's easier to play and spend time with others.

Such games are easily available to the players like at home or clubs and are portable. They do not require any special ground or members or skill to play these games.

Some interviewees mentioned that at this age they have nothing else to do hence they keep looking for activities to keep themselves engaged. After retirement, sitting idle causes depression, and their body gets lethargic, which they want to avoid and hence can pick up any game that could help them to stay active.

While some interviewees commented that it's a way to spend time with their grandchildren.

We can see varieties in "Dream games" for this age group compared to the previous age group. Here they have listed outdoor (cricket, badminton), indoor (TT, chess, sudoku) and even mobile games in this category. The one reason could be as there is a lack of choices of games for this group of people; as they have more idle time due to lack of work and activities after retirement, this makes them demand for games that could be played for longer hours.

Compared to other categories there is very less count for "Boring games" (only 2), simply because they keep looking for activities to do and try "not to sit idle", and hence any activity/game requiring lesser efforts to be put in is easily adopted by this group.

This group of people wants to feel young and energetic and so prefer to play games, as stated by few interviewees.

iii.) Age above 70

This particular category has shown a major shift from outdoor games (cricket (5 to 0 votes)) to indoor game (carrom (1 to 6 votes)).

More games in “*Dream games*” category compared to rest two groups. Most of the games voted in this category are physical games. Major number of adults reported common ageing impairment as reasons for stop playing.

While those who still play/want to play said they become more comfortable and confident in their games/activities, they play only to have fun rather than for competitions.

They spend more time in playing what they wanted to as they have enough time to enjoy now. They demand easier but engaging games to spend more time. They look for activities to stay away from boredom.

Instead of playing in bigger teams they prefer to enjoy and meet new people, and socially interact with people irrespective of their age groups, as reported by some old adults.

4. ELDERLY AND DIGITAL GAMES

People of “digital generation” are growing up constantly connected to the world around them through smartphones, tablets, and computers. Smartphones are now available at cheaper rates and are easily affordable. Digital game is a big market now.

In-order to understand how these emerging technologies are being adopted by the urban elders in India, and to what activities are they able to perform with these technologies, a small survey was conducted with 18 people between the age group of 50-60(7 people) and 60-70(11 people).

The results showed that some of the frequently used mobile applications by these adults are Whatsapp (15), youtube (13), money transferring apps (21), games (12), booking (ticket/cabs) (9), radio/music (7), and social media (fb, Instagram)(8) and other applications(15).

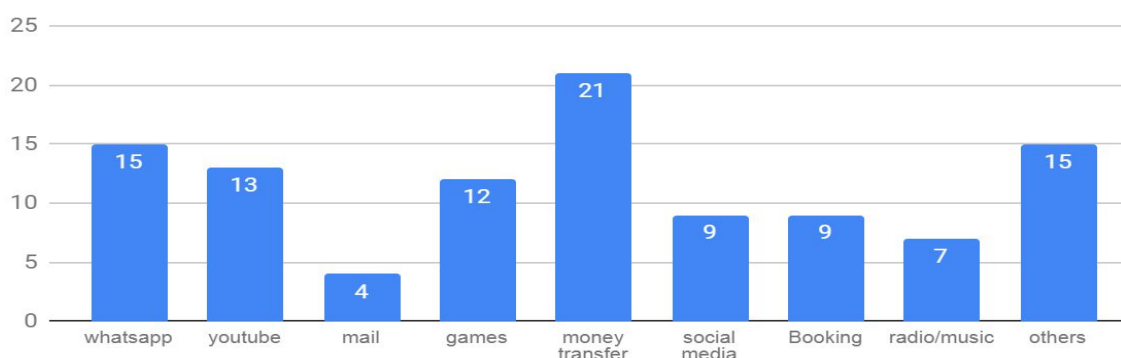


Chart 1: Bar graph showing the use of mobile apps by elders

One can conclude that there are multiple tasks that can be easily performed by the older people. More number of them are able to use whatsapp and youtube, which are straightforward and easy to understand and use applications.

While some adults reported that they had used gmail/email during their working period hence they are well aware of those, yet don't have to use them now as most of the conversions are done on whatsapp.

Other interesting application came into light was 'Ramnaam Book' app. The App is free to download from Playstore. Further, users can purchase Ramnaam Book from the App and start writing it. The app will give flexibility to the users and also let them write the book anywhere and even while traveling.

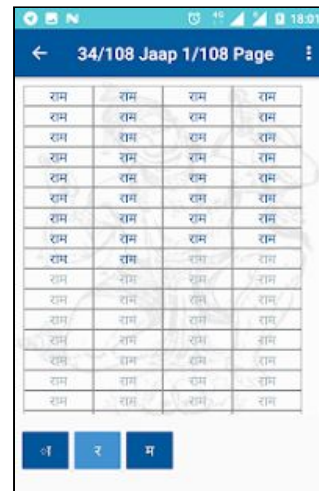
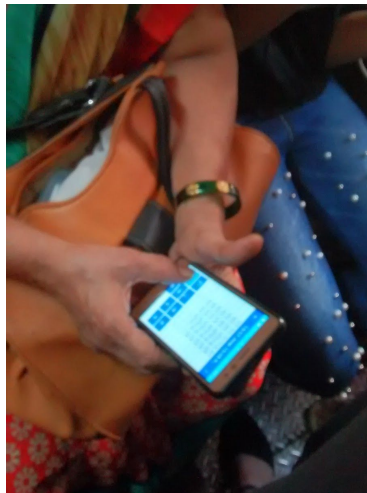


Image:(Left) A women using "Ramnaam book" in mumbai local to do 'Jaap' digitally

Image(Right): official app of 'Aniruddha's Universal Bank of Ramnaam' (downloaded from apkgk.com)

The availability of such apps shows that older adults are open to accept digital medium especially when it is associated with their daily or regular activities.

Such applications that makes it easier for them to 'Jaap' anywhere and anytime they want, helps them to concentrate on their work and also to perform simple tasks on smartphones.

Some elderly users reported the following applications they use most often: google drive, skype, google maps, medical apps (med-scape app, growth chart, BMI chart app - being a doctor), JioTv, Universal remote, and m-indicator.

Games that they reported to play and enjoy on their mobile: Solitaire, sudoku, puzzles, Candy crush, car racing, snake & ladder (on mobile), ludo, and crossword.

As reported by an interviewee, he prefer to play ludo and chess on his mobile phone as he doesn't get anyone to play - such comment demonstrate that digital games are platforms that could be used to provide player partners online for loner adults, it may be the automated program or another player online.

Games like solitaire are give them the opportunity to re-play their childhood or familier games. These games attracts them more as they can play them from anywhere irrespective of having an availability of the game equipments.

5. CONCLUSION

Older adults tend to adopt games in-order to spend their time more fruitfully. They have worked hard throughout their life mostly due to family responsibilities and unavailability of enough time and sources, now they want to rest and enjoy their second innings at life.

After crossing the age of 50, they try to stay active and youthful mostly to stay away from ageing impairments and to stay healthy. As reported by most of the senior citizens, it becomes very difficult to spend time after getting retired and hence they start to prepare and look for more activities to keep themselves busy.

Playing games helps them to interact with their office colleagues, friends, grandkids and children.

While most of the people interviewed above the age of 60 said that they have worked enough and now it is their time to do whatever they want or wanted to do. Their choice of games require least physical movement to some physical movement while playing, and hence they tend to play simple games or games that they had played in their childhood/youth.

Playing games are suggested for the elders in-order to maintain cognitive and physical functions. With the advancement of technology a lot of the game that people have been involved with can be digitized in-order to solve problems of lack of player partner, inability to perform physical task and provide a greater way to keep themselves engaged.

These technologies also help them to keep in touch with their families, and stay positive.

Some of the hypothesis that can be derived from this study are:

- social interaction (with younger and peer generation) is one of the strong motivator to play games
- younger elderly (50-60) are trying to adopt upcoming games rather than to re-adopt their childhood games
- with the advancement in technology, there are number of physical games that are liked by elderly that could be converted into digital games
- senior citizens tend to play games that they have played as children
- elders play for fun and enjoyment rather than as a competition
- playing with younger people can help elders to adopt new generation games

6. DESIGN OPPORTUNITIES

Some of the speculative ideas that one may consider while designing games for the elderly:

- Simpler but familiar 'gesture movement' based games can help in reviving the childhood games for elders,
For example:
 - VR games that require multiple players to be present in the game environment, Gesture controls (hand or head movement) could be used to play badminton or cricket in the virtual world.
 - Portable chairs can be designed (like wheelchair - less complex) to play these

games.

- Fixed chairs with hologram balls and cricket bats could be used by players to play.

- Making levels within a games can help them to stay motivated to play that game
- A series of similar games could be launched to give more options to the users
- The mobile games could be derived from their regular activity like 'jaap', listening to bhajans, talking while playing (from observations),

For example:

- Mobile app similar to messaging apps where 2 people can participate to play, like "Guess the word": where one person gets a word and he can try to explain the other player using images or stickers, etc

- Online gaming can help to improve on their social skills,
- The advancement of technologies like VR/AR can help them to play their dream games.

For example

AR/VR gesture based games to provide 2nd partner to play:

- There could be playing against the computer itself, or
- There could be an online player acting as 2nd person

7. ACKNOWLEDGEMENT

We gratefully acknowledge the members of the "Dada Dadi Par", members of "Nisarg Swasthya Sansthan" and other elderly members who gracefully participated for the interview sessions.

8. REFERENCE

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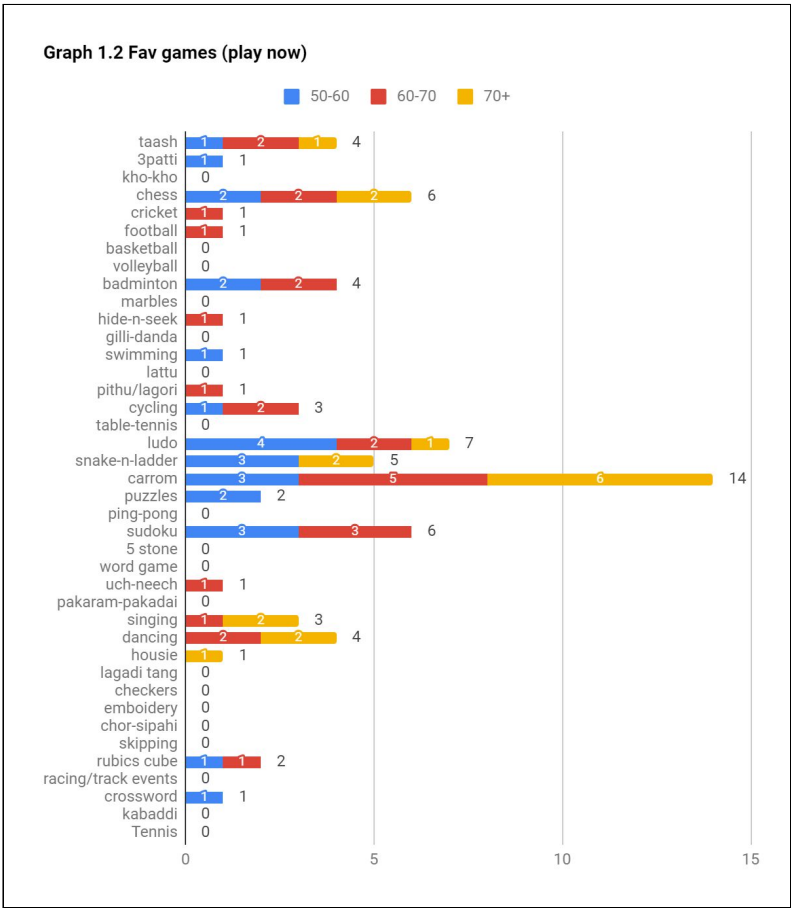
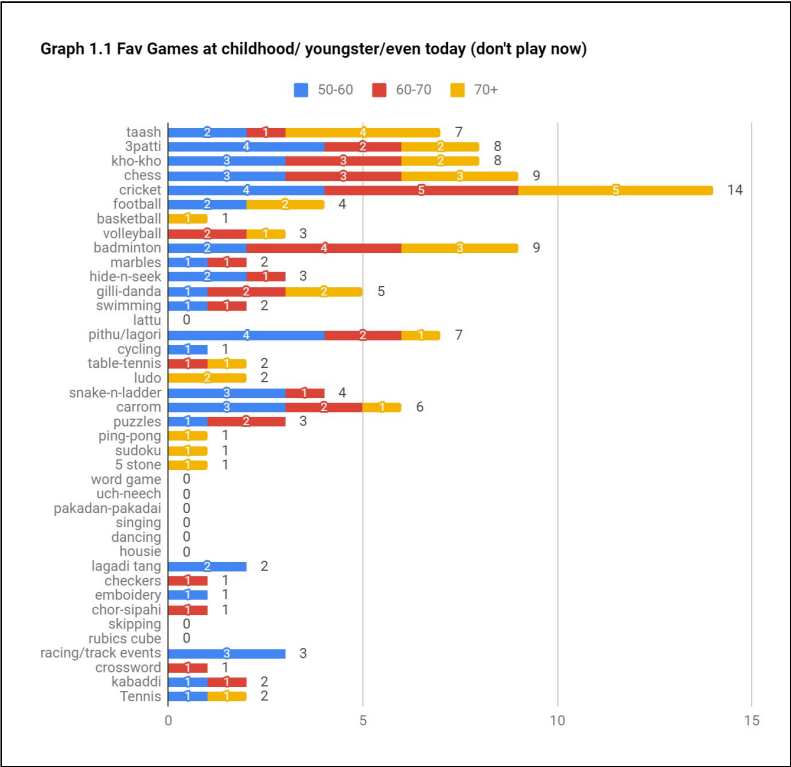
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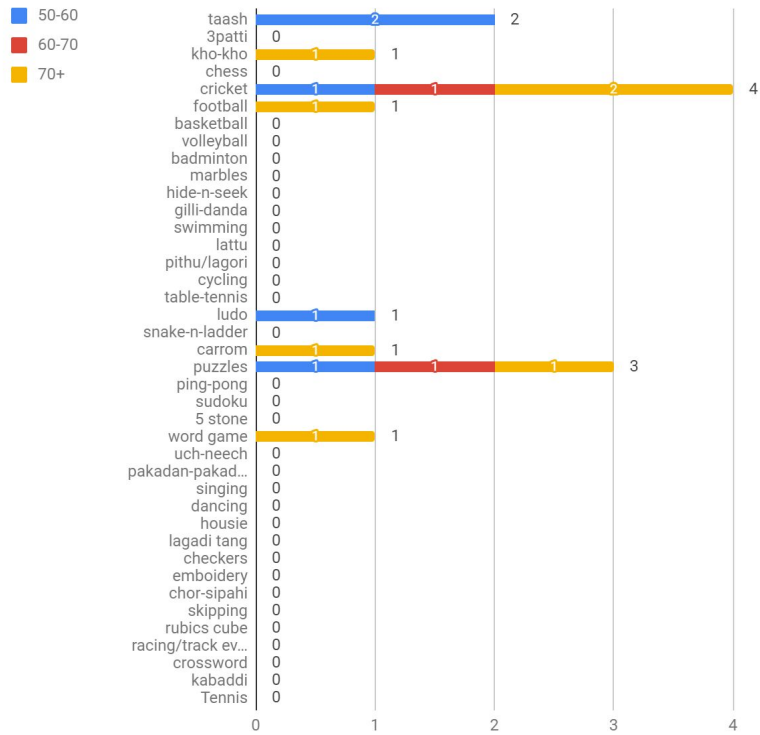
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<https://www.nacada.ksu.edu/Resources/Journal/Current-Past-Book-Reviews/Understanding-the-digital-generation-Teaching-and-learning-in-the-new-digital-landscape.aspx>

APPENDIX

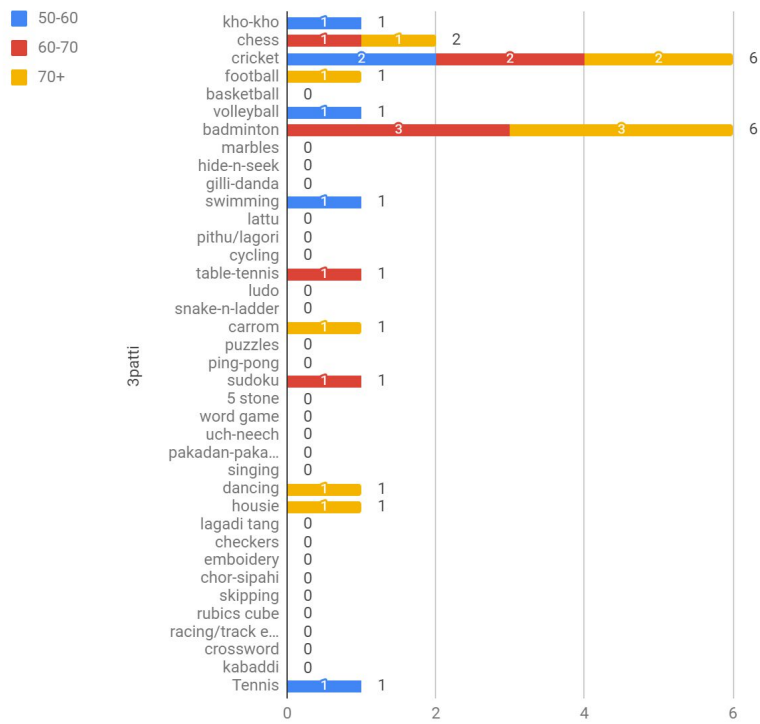
Graph 1: Graph showing Comparative study amongst 'All' age groups for individual game categories



1.3 Boring Games

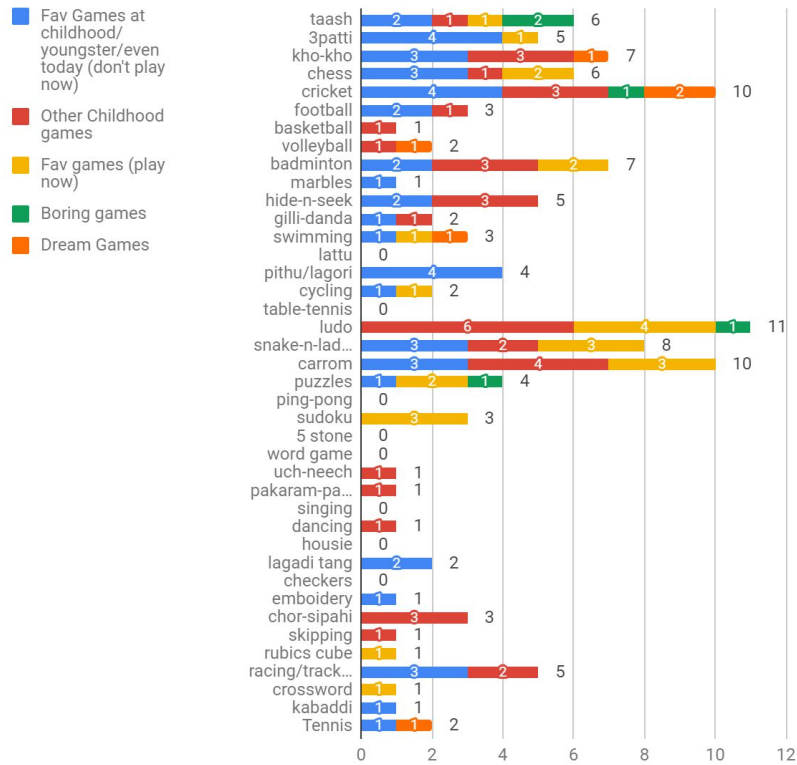


1.4 Dream Games

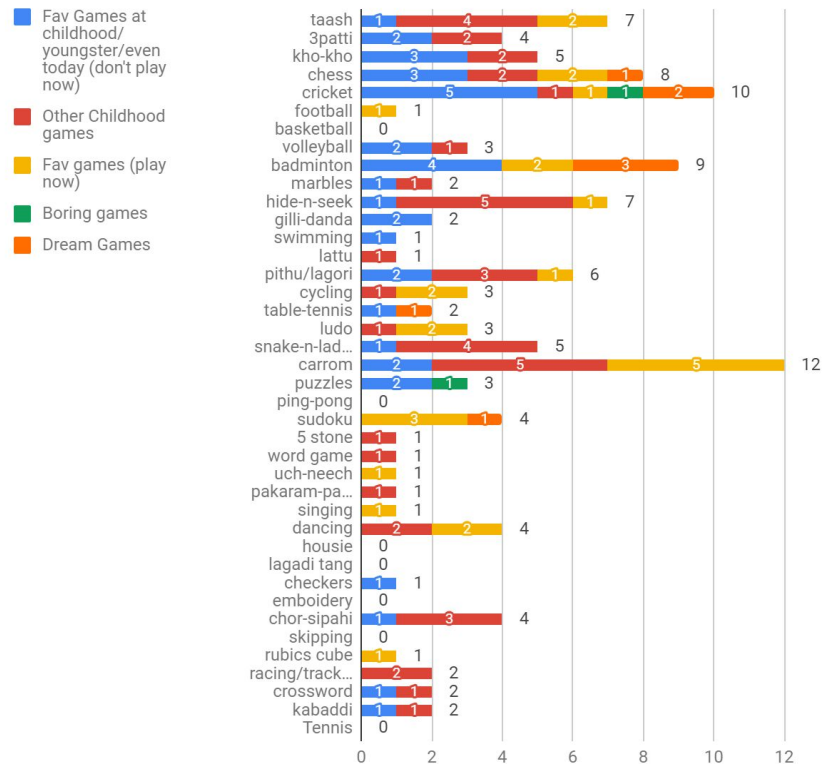


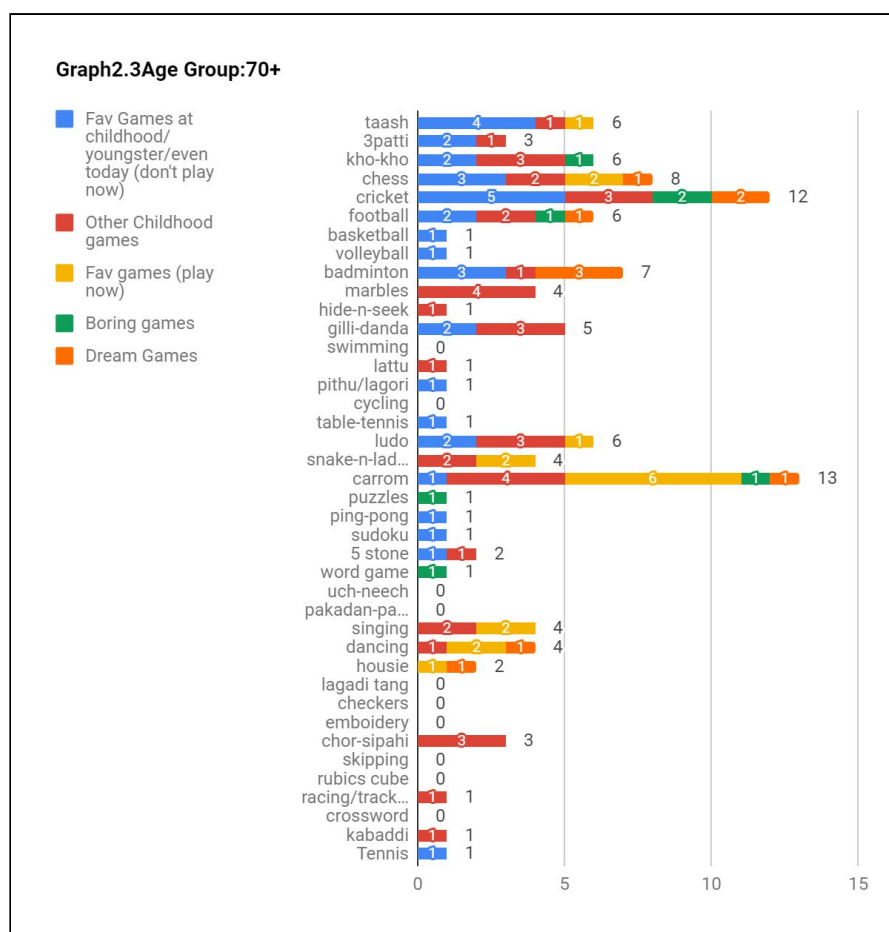
Graph 2: Graph showing Comparative Chart amongst Individual Age groups:

Graph 2.1: Age Group: 50-60



Graph 2.2: Age group: 60-70





Images:

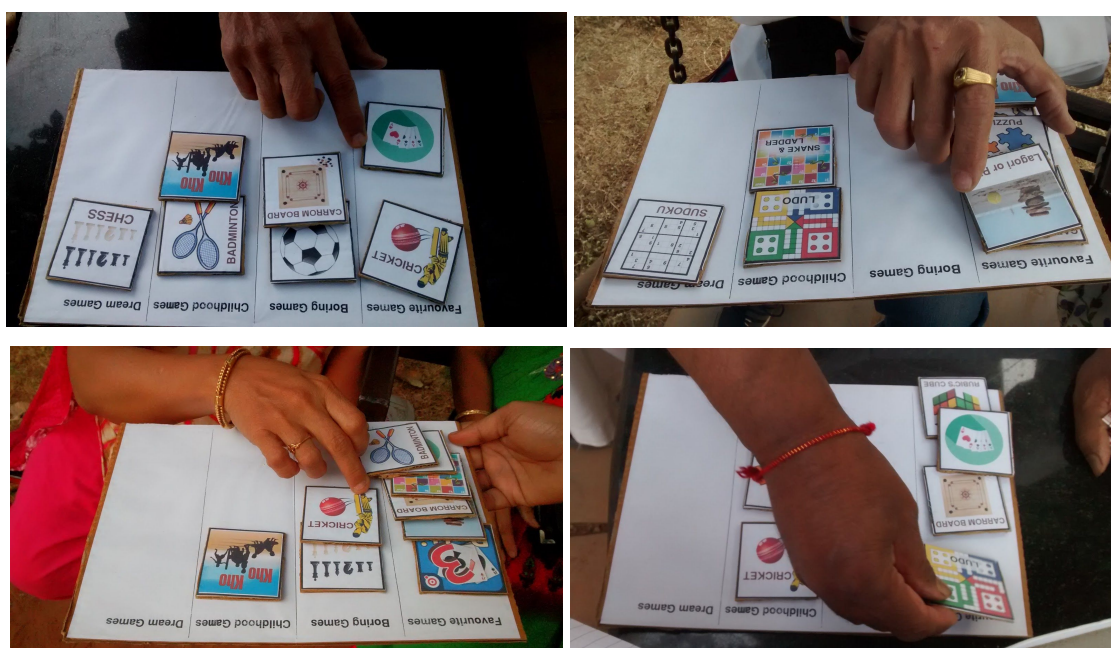


Image1: Elder voting for their favorite games at 'Dada Dadi Park - Borivali'



Image 2: A group of elderly from "Nisarg Swasthya Sansthan" at powai lake preparing march past to perform on 26th January.



Image 3: An elder man looking at group photo of elder's cricket team at 'Dada Dadi park- Borivali'



Image 4 and 5: A group of elders playing carrom at "Dada Dadi Park" (left image); A group of elders singing with karaoke at "Dada Dadi Park" (right image).