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RESEARCH ARTICLE

THE PREVALENCE OF MOTION SICKNESS IN YOUNG ADULTS OF MYSORE, KARNATAKA

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Abstract

Background: Motion sickness is a common condition characterized by symptoms such as nausea, dizziness, and vomiting, triggered by movements during travel or other activities. Despite its impact across all ages, there is lack of studies in the prevalence among 18– 28 years individuals.Understanding its effects on the quality of life and productivity is crucial for developing effective interventions.
Objectives: To investigate the prevalence of motion sickness among age 18 –28 years.
Methods:A convenient sampling approach was employed, involving 562 participants (463 females, 99 males), aged 18 - 28 years from various departments of JSSAHER. Participants completed the Motion Sickness Susceptibility Questionnaire (MSSQ) short form to assess their susceptibility. Additionally, the Motion Sickness Assessment Questionnaire (MSAQ) was administered at the end of travel to evaluate the severity of symptoms experienced by them.
Results: In this study of 562 participants (463 females, 99 males), 71.4% mild, 27.8% moderate, and 0.9% severe. The mean age was 19.89 years. There was no significant association between gender and motion sickness severity ($p = 0.264$), but age showed a significant correlation with motion sickness severity ($p = 0.014$). Linear regression indicated a weak positive relationship between age and motion sickness score (Beta = 0.196, $p < 0.05$), explaining 3.9% of the score variability.
Conclusion: The study highlights the importance of motion sickness that impacts young adults' quality of life and occupational performance. Currently, there is no permanent solution, highlighting further research and intervention strategies.

Introduction:-

The term "motion sickness" describes a set of autonomic symptoms caused by incongruent sensory impressions under conditions of motion [1]. [2]

The currently suggested mechanism of action is based on a sensory mismatch or conflict [3].Vestibular, proprioceptive, and visual afferents provide information about body posture and movements. Normally the three sensory channels complement each other. Sensory conflicts are the most current explanation of motion sickness [1].

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The principles of vestibular system include tonic firing ate, Vestibular Ocular Reflex (VOR), Push-pull mechanism, Inhibitory cutoff [4] [5].

An appropriate differential diagnosis can usually identify motion sickness and rule out other diseases like Meniere's disease, migraine, hypotension ,hypoglycaemia , or psychological factors [6] [7] [8][9]. Many scientists have developed a questionnaire approach to screen susceptibility to motion sickness, such as the MSSQ, the Reason and Brand's MSQ etc [10].

The constellation of symptoms include nausea, vomiting, cold sweating, pallor, headache, drowsiness, yawning, loss of appetite and increased salivation known as "sopite syndrome", that persist for hours to days following exposure [2].

Historically, professional seafarers, comprising 25% of the passengers developed motion sickness within 2 - 3 days of voyage. In extreme cases, almost 60% may be affected [1]. An ISO standard (IDO 2631) now exist for calculation of "motion sickness incidence" (MSI) [11].

Space motion sickness affects 60%-80% of astronauts in microgravity and upon return to Earth [12].

Globally, 66.7% of travelers experienced car sickness. Generally, women, the ill, and children aged 2 – 12 years are more susceptible than individuals above 50 years of age. [13]

Simulator sickness is a new phenomenon causing motion sickness symptoms while using virtual reality headsets or playing video games on huge displays [1].

A cross-sectional study in Brazil (2014), revealed that 11.7% of school children experienced motion sickness on park swings, highlighting its impact on children's well-being, particularly in recreational settings. [14]

Research on the prevalence of motion sickness has typically focused on various age groups. However, specific studies targeting young adults (aged 18-28) are limited. Addressing its impact on them is crucial, as they are pivotal to the future development and success of any nation.

The WHO defines Quality of life (QOL) as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Standard indicators of the QOL include wealth, employment, environment, physical and mental health, education, leisure time, social belonging, religious beliefs, safety, security and freedom [15] [16].Motion sickness significantly impact QOL causing physical discomfort, anxiety , social isolation, limited career option, and economic burdens. Effective management is crucial to mitigate these effects and improve daily functioning and overall wellbeing.

Motion sickness treatment includes indication therapy and behavioral therapy [17].Common medications are antimuscarinics, Hl-antihistamines, and sympathomimetics [18]. Remedies like mint, vitamin B6 and ginger are also used, though all these do not provide a permanent relief. Thus, addressing the sensory stimuli that cause motion sickness is essential to alleviate the distress experienced by an individual.

Methodology:-

The cross-sectional study was conducted at a tertiary hospital in Mysore, Karnataka. The study includes individuals aged 18 to 28, with a total sample size of 562 participants, including 99 males and 463 females, selected through convenient sampling. The required sample size of the study were 384 individuals obtained from the formula $n=(Z)2P(1-P)\ d2$, [19] where n is the required sample size, Z is the score corresponding to the desired confidence level, p is the estimated prevalence of motion sickness in the southern part of Karnataka, prevalence of which is not already established (given as 50% probability, or 0.5), E is the desired margin of error. For a 5% margin of error, E is 0.05.

n = (1.96)2 x 0.5 x (1-0.5) / (0.05)2

= 3.8416 × 0.5 x 0.5/0.0025

= 0.96 / 0.0025

= 384

The research aimed to determine the prevalence of motion sickness in this age group.

Individuals who were between the age group of 18-28 years, regardless of their gender were included in the study. All the individuals fitting under this inclusion criteria and willing to participate will be taken into consideration in the study. All the individuals will be then explained about the study objectives and their role in the study and an informed consent will be taken prior to their recruitment in the study. Paper based MSSQ-short will be used to collect the data. All the participants will then be administered with preset study outcome measure – MSSQ-short.

Individuals who were suffering from other underlying conditions such as psychiatric disorders, cerebellar disorders, Meniere's disease, chronic gastroenterological and viral diseases, vertigo, migraine and women who were pregnant were not considered in the study

MSSQ-SHORT FORM: It is noted that the MSSQ- short form by Golding is applicable to all the stimuli, including motion sickness in a car, in the air, in space, or at sea. The questionnaire initially contained two questions about susceptibility to motion sickness, with five scales: not applicable or never travelled, denoted by t, never felt sick by zero (0), rarely felt sick by one; occasionally felt sick by two; and frequently felt sick by three; and what motions were likely to cause motion sickness in childhood (Child part A); and from adult experiences over the last 10 years (Adult part B). Nine different modes of transportation were included in the categories of motion: vehicles, buses or coaches, trains, aircraft, small boats, ships, swings in playgrounds, playground roundabouts and fun fare rides (like big dippers). The total illness score for children and adults for each mode of transport is multiplied by 9 and divided by 9 (less the number of modes of transport not experienced) to determine the scores for questions 3 or part A (MSA) and MSB scores constitutes the MSSQ- raw score (MSSQ raw score). According to the original questionnaire, a percentile score is computed from the MSSQ – Short raw score.

MOTION SICKNESS ASSESSMENT QUESTIONNAIRE : The questionnaire includes various statements describing potential symptoms of describing potential symptoms of motion sickness as I felt sick to my stomach , I felt faint like, I felt annoyed/ irritated, I felt sweaty , I felt queasy, I felt lightheaded, I felt drowsy, I felt disoriented, I felt tired/ fatigued, I felt nauseated, I felt hot/ warm, I felt dizzy, I felt like I was spinning, I felt as if I may vomit. Each statement could be rated on a scale of 0 to 9. As 1 determines not at all, 2 determines very slight, 3 determines slight, 4 determines mild, 5 determines moderate, 6 determines fair, 7 determines severe, 8 determines very severe, 9 determines extremely severe. This scale allows for a detailed assessment of the severity and impact of each symptom at the end of the travel.

Result:-

Table 1:- Frequency and percentage of Gender and Score category of motion sickness.

		Frequency(n=562)	Percent
Gender	Female	463	82.38
	Male	99	17.62
Score category	Mild	401	71.4
	Moderate	156	27.8
	Severe	5	0.9

Table 1 reports, out of 562 participants 463 that is 82.38% were female and 17.62% is male. In score category of motion sickness 401 reports mild sickness and only 5 members, that is 0.9% reported severe sickness. This table

explains majority of the participants in this study is female. Also suggests majority of the participants have mild motion sickness.

Table 2:- Descriptive statistics for age and gender.

	Minimum	Maximum	Mean	Std. Deviation
AGE	18	28	19.89	1.378
SCORE	0.00	52.00	10.0131	9.64285

The mean age group involved in this study is 19.89 with the standard deviation of 1.378. The minimum age of the participant is 18years and maximum age is 28 years.

Similarly, the mean score of motion sickness is 10.0131 with the standard deviation 9.6428. The minimum score is 0 and maximum score is 52.

Table 3:- Association for Gender and Age with Score category.

SCORE CATEGORY						
		Mild	Moderate	Severe	Total	P value
Gender	Female	323	135	5	463	0.264
	Male	78	21	0	99	
Age group	18	69	22	1	92	0.014
	19	112	22	0	134	
	20	120	49	3	172	
	21	74	34	0	108	
	22	15	13	1	29	
	23	10	13	0	23	
	25	1	2	0	3	
	28	0	1	0	1	

This table suggests the association between gender, age group with score category. Out of 463 females 323 have mild motion sickness, 135 are moderate and 5 have severe. In male, none of the participants have motion sickness, 78 have mild sickness and only 21 have moderate motion sickness. The chi square test is used to check the association. The p value from the chi square test is 0.264 which is greater than 0.05 explains there is no statistically significant association between gender and motion sickness.

Regarding the age groups, the total number of individuals in each age group varies. The age of 18 has 92 participants with 69 mild, 22 moderate and only one severe motion sickness. In the age of 19, 134 individuals with 112 mild and 22 moderate and none of them express motion sickness. The age group of 20years comprises 172 individuals with 120 mild,49 moderate and 3 severe sickness. The age group of 21 years has 108 participants with 74 mild, 34 moderates, and none of them reported sever score category. In the age group of 22 years 15 show mild, 13 and 1 are moderate and severe respectively. In the age group of 25 and 28 years, 3 and only one participated involved. 1 and 2 individuals represent mild and moderate motion sickness. In the age group 28 years has only I individual, who fall in moderate category.

The p value from the chi square test is 0.014 is less than 0.05 indicates statistically significant between age group and motion sickness score. This suggests that age may be a contributing factor for motion sickness whereas gender does not have any significant result.

Table 4:- Linear regression analysis of Score as dependent variable.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
AGE	1.374	.290	.196	4.740	.000	.805	1.944

The regression analysis indicates the significant relation between age and motion sickness score. The unstandardized coefficient of B for age is 1.374 suggesting for each additional year of age. The standard error for this coefficient is 0.290 indicating the relatively precise estimate.

The standardized coefficient of [4]beta is 0.196 means one standard deviation increase in age corresponding to 0.196 increase in dependent variable. The p value of t is 0.000 which is less than 0.05 indicating highly statistically significant between age and score at 5% level of significance. At 95% confidence interval the lower limit is 0.805 and the upper limit is 1.944 and does not include zero provides evidence that the relationship between age and score is significant and positive.

The correlation value is 0.196 indicates a weak positive correlation between age and motion sickness score. If the age increases, there is a less chance of an increase in motion sickness. From the graph the R square value is 0.039, that is 3.9% of the variability in the score value can be explained by the independent variable age. This indicates that the model has low explanatory power and age is not the strong predictor of motion sickness. The adjusted R square value is 0.037 and this value is slightly higher than R square value suggests the possibility of the over fitting and confirms that the model's predictive power is weak even after adjusting for number of predictors.

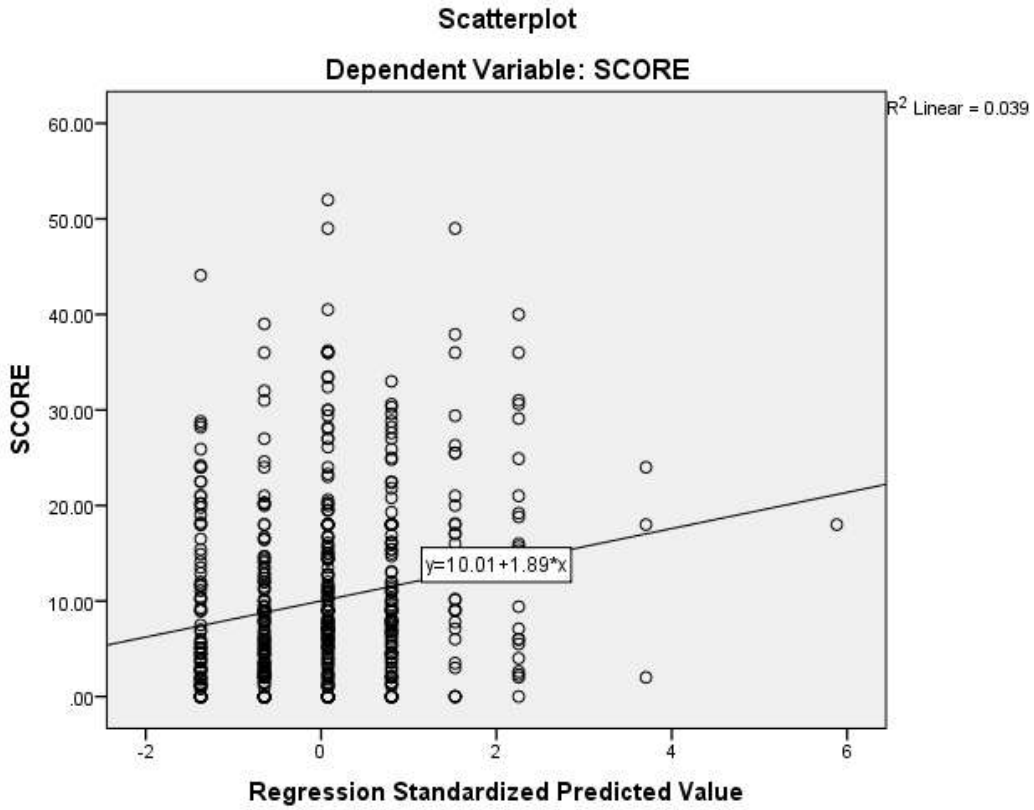

Fig 1:- Scatter plot of linear regression between age and motion sickness score,

Discussion:-

Motion sickness eventually triggers distress feelings in an individual such as nausea, dizziness, and vomiting which could arise while travelling or during mobile based activities. There is no age for one to develop or realize that they have motion sickness. Studying motion sickness is crucial for its significant impact on one's quality of life, occupational performance and career growth. The quality of life of an individual could be hampered by any disruption in physical health by resulting in dehydration and drowsiness, mental health by anxiety and stress related to motion sickness, reduced participation in social activities that include travel and social isolation and embarrassment. Occupational performance could be reduced by hindrance in the work and productivity, avoidance of various modes of transportation, involvement in leisure activities that could trigger the symptoms. In addition to

these challenges, individuals with motion sickness often find difficulty in career growth as they are unable to access the educational institution and work that require long commute. Our study is based on the prevalence of motion sickness as per a survey conducted among individuals aged 18 to 28. As per information that we got from electronic medias and journals, it revealed that the insufficient research was available till date that determine the prevalence of motion sickness in young adults, whom are pillars on which the future of the nation rests, and they bear the responsibility of its development.

Young adults of this age are often at the peak of their physical and mental energy. This age group is more likely to contribute to innovation and creative solutions in the workforce. This is the point of life where individuals choose their higher education to establish their career pathway. This age group is typically more mobile, engage in frequent travel for education, work and leisure. Thus, addressing motion sickness in this demographic ensures that their full potential can be hindered in various productive ways. The frequent episodes of motion sickness could also address the increased absenteeism and reduce work force, affecting both individual performance and overall economic output. Thus, it is more relevant that it could affect a nation's GDP by reducing workforce productivity, increasing healthcare costs, limiting educational career opportunities, and reducing participation in economic and social activities. This knowledge in this particular age group could contribute to targeted intervention, improve public health strategies, and enhance the overall quality of life for young adults, which in turn promotes personal and national growth.

When any individual faces difficulty in performing functional skills in daily life or maintaining their quality of life due to any physical, mental or psychosocial issues, occupational therapists step in to help.

Occupational therapists propose a holistic approach where individuals are considered as whole, ensuring comprehensive care. They focus on addressing all disrupted occupational performance areas and aim to improve overall well-being and functional performance in daily activities by engaging them in meaningful activities and using therapeutic modalities.

Occupational therapy focuses on satisfying the needs of an individual with motion sickness. They incorporate sensory integration that improves the brain's ability to process and respond to motion. Occupational therapists could work on visual and sensory strategies to improve gaze stabilization and spatial orientation and reduce the symptoms of dizziness and vertigo. Occupational therapists also focus on all the other negative impacts in performing functional tasks in their daily life that are caused due to motion sickness. They play a crucial role in maintaining one's quality of life even though the individuals themself ignore it. They could develop and teach coping strategies and recommend environmental adaptations to enable the individuals to function better.

And develop individualized plans to treat their specific needs, goals and address the challenges of each person. These could be done by developing specific exercises for each disrupted domain, therapeutic modalities and recommending and counselling the individual about the environmental modifications adaptations that they must adapt. Occupational therapists monitor the progress of the individual and increase the grade of the activities and exercises according to the improvement and need of the individual. Also, the Occupational therapist ensures to empower the individual in self-care and other ADL aspects by teaching them self-management techniques and providing them with required resources. In overall occupational therapists support the individual in throughout process and tend to maintain the improvement and not let to decline.

When the study was held, out of 562 participants 401 i.e. 71.4% individuals reported to have mild motion sickness, according to the severity scale. Most of the individuals who suffered from mild motion sickness tend to say that they do feel arising distress in them during travel but tend to ignore most of the time as they believe that it is not much of a health concern. So, most of them felt that ignoring it would be the best option and believed that these distress feelings would reduce with time. But whenever they felt immense distress arising in them, they could only choose temporary relief such as carrying lemon, distracting mind with music or looking outside of the window, avoid

thinking about it whenever they feel difficulty while traveling as there is no permanent solution till date. These individuals may not take this condition seriously, but they do have inbuilding fear in them whenever there is the matter of travel. Even though motion sickness may not increase within them but may contribute to other health issues due to stress and mental distress that could arise if no proper treatment was taken.

This may eventually cause major distress in them and become more conscious about the situation. They would start to avoid participating in various extra curriculum activities like sports, dance etc. and start to avoid social gatherings which may include travelling to one place. Thus, they start to isolate themselves from society as well as ignoring their own choice of interests. Some may strongly feel that stating one having motion sickness would show their vulnerability and others would consider them as weak. During this study it is noted that males who have mild motion sickness comprise of 78.79% and out numbers the female who acquired 69.76% but in case of moderate and severe cases females outnumbers the males. It could be because one may feel vulnerable or embarrassed stating the fact of motion sickness. The embarrassment or vulnerability could also be due to one's previous negative experience with their surroundings due to motion sickness and the distress could even increase in anticipation of recurrent situations in future. This could lead to significant ignorance of the symptoms that arise and individuals would not realize how these symptoms are affecting their quality of life, social life and other factors. However, the study shows that they do have symptoms within them which are categorized as mild but causing significant disruption in their life.

This shows how mild motion sickness could also severely affect their quality of life by impacting on their comfort, impairment on daily functioning and not being able to enjoy activities of their choice. Even though the symptoms are mild the effect that causes their life is crucial and leading them to be vulnerable, socially withdrawing themselves, increased mental stress, imbalanced emotions and other physical disruptions could also be included. This could also lead to cause unwanted distress and one could also develop increased irritability or anger and fail to manage their emotions due to these restrictions.

Thus, proper techniques or strategies are crucial to minimize the risk of developing associated health issues or worsen the impact of motion sickness for mild categorized individuals and ensure them with better quality of life. Occupational therapists could evaluate the dysfunction that is behold by the individual and develop individualized therapy which enables the individual to deal with the distress caused due to motion sickness.

The moderate cases in the study were the second highest acquiring 27.8% of total individuals participated. As they have more severe symptoms than mild cases that could get them mentally and physically exhausted. During the study many have reported that, some would avoid travelling to places which led through circular paths or roads, some would carry plastic covers, some would try to mentally prepare themselves by initiating breathing exercises one week prior to the trip, some would tend to take medicine, ginger, or lemon to cope with the distress or other symptoms. They tend to try all these methods even though they know that these temporary remedies would not last longer and they might consider themselves lucky if they reached their destination without any disruption. Some also have reported taking medicine for the second time after the effect of the first one subsides due to increased hours of journey. These medications usually help them to sleep throughout the journey which is more convenient in journeys during night time rather than in journeys during day time. Even though some individuals are very reluctant to take any sort of medicines could have no option rather taking these medicines during travel which cause a high level of inconvenience in them. The individuals who are relying on medicines during travel would consume it even after realizing that they are not permanent relief as there is no other way to avoid motion sickness. The individuals those who are frequent travelers along with which they take medicines, may face significant side effects in future. In future they might not realize the health problems they are facing might be due to the continuous intake of these medications.

Constant medication or other irrelevant remedies could make the individuals to be less productive or decrease their function in various ADLs due to increased drowsiness or other side effects that are associated with these remedies.

These could also limit the individuals in participating in leisure activities, social gatherings, important meetings or enjoying long journeys, having a greater impact on their quality of life than seen in mild cases. These individuals tend to completely cut down all the activities or their interests that could arise distress in them. The fear of arising distress could be more in moderate cases than in mild cases which could cause more unwanted stress in them. These could be more emotionally vulnerable and would face decline in their self-esteem. They could also find difficulty in carrying out daily activities and altogether these individuals could develop a feeling of unfulfillment in their life eventually leading them to lead a poor quality of life.

Occupational therapists could evaluate each domain that the individual finds difficult and develop a personalized plan to satisfy all the needs and to treat other dysfunctional areas caused due to moderate motion sickness.

The severe case turned out to be 5 out of 562 participants and all are female. The distress that is experienced by these individuals while travelling from their hometown to Karnataka or going back home is enormous. During the study they have reported that they tend to take medicines before travel and some even avoid having food to avoid vomiting, nausea, dizziness and distress. Some of them even carry home remedies and plastic bags even after taking medication. They do realize the medications they take have limitations and could only give relief temporarily like other home remedies, but they do not have any option and sometimes have to take the medication twice when there are prolonged hours of journey. One of them even reported that once while travelling back to home she had to ask the bus driver to stop the bus after numerous vomiting, and the bus authorities had to take her to nearby hospital and from there she had to take IV fluids after being completely drained out and immense dehydration. This was the case when she forgot to take the usual medicine. This shows that individuals especially at this age group between 18-28 years are becoming completely dependent on medications and other remedies even though they do not serve as a permanent cure or isolating themselves from society or interests of their choice. They do realize there would be side effects due to continuous medication, but they could not even imagine travelling without it. Individuals with severe motion suffer from severe persisting nausea all throughout the journey often leading to frequent vomiting, dizziness and a sense of loss of balance, extreme tiredness, sweating, throbbing headaches, and dehydration. This eventually affects their quality of life by decrease in focus and concentration, intense anxiety and fear. This could gradually lead to a decrease in the quality of occupation or roles they perform on a daily basis like in areas of education, work, self-care activities, and social life. They would tend to be isolating oneself from the society in order to not to become a burden or embarrassed due to the motion sickness. They would start feeling depressed about themselves and a feeling of unfulfillment encompasses them. All the symptoms and situations faced by mild and moderate cases are experienced by these individuals with severe motion sickness but in more intensity. They require proper guidance and help in order to lead a life of optimal wellbeing.

Occupational therapists could evaluate each domain that the individual finds difficult and develop a personalized plan in order to satisfy all the requirements and to treat other dysfunctional areas caused due to motion sickness. Occupational therapists tend to ensure functional restoration to enhance the quality of life of each individual.

Thus, occupational therapists could understand the significant dysfunction in these individuals and could develop intervention to provide them with a permanent cure and assuring them with better quality of life is necessary.

The study comprised 562 participants, with a significant gender imbalance—82.38% female and 17.62% male. This disproportionate representation could influence the generalizability of the results. The majority of participants (71.4%) reported mild motion sickness, 27.8% moderate, and a minimal 0.9% severe, indicating that while motion sickness is prevalent, severe cases are rare in this age group.

While our study shows no statistical significance association between gender and the severity of motion sickness, some of the previous studies mention that females are more prone to motion sickness as compared to men.

GENDER	% OF PARTICIPANTS	MILD	MODERATE	SEVERE
FEMALE	82.38%	69.76%	29’16%	1.08%
MALE	17.62%	78.79%	21.21%	0%

As per our survey, females reported increased moderate and severe cases as compared to males, who reported no severe cases. Mild cases seemed to be slightly prevalent among males as compared to females. The findings suggest that gender specific factors such as hormonal fluctuation may be a contributing factor, may contribute to the increased susceptibility in females.

According to the information conducted during the survey, it reveals that in many parts of the country, the societal norms restrict women to travel, but on the other hand male gets opportunity to travel even from younger age. And, male doesn’t face any kind restriction in travelling at any point of the life. Moreover, males often travel frequently even for work and studies. And it is quite common that males are exposed to physical activities that facilitate the vestibular system, such as climbing trees, riding bicycles, and playing rough outdoor activities as compared to females. This exposure helps them to develop a more resilient vestibular system. And also, males get habituated to the vestibular system more than females do. Females usually gets fewer opportunity to such exposure which may leads to weaker vestibular system development. Men are usually the drivers in the household, wherein females are more often passengers, which might reduce the symptoms in males and trigger symptoms in female. The most prevalent cultural perception is that men should be more tough and resilient, this may lead men to deny the experiences of motion sickness. This could be a contributing factor for which males reported maximum number of mild cases and females reported maximum number of moderate and severe cases.

In this specific study of individuals between the age group of 18 -28 years, the total number of individuals in each age group varies.

AGE GROUP	MILD	MODERATE	SEVERE
18	69	22	1
19	112	22	0
20	120	49	3
21	74	34	0
22	15	13	1
23	10	13	0
25	1	2	0
28	0	1	0

Individuals of this age group play many roles and are most productive in whatever roles they play in their life. As they are most young and are more active in nature behold to form the major manpower of the nation.
When these individuals suffer from motion sickness (mild /moderate / severe), could cause disruption in their quality of life and the responsibilities they behold due to their roles in society. Individuals suffering from mild to severe motion sickness can face situations like decreased efficiency in work by taking frequent breaks or labor shortages, inability to focus on work or taking frequent sick leaves or miss out on important meetings / training due to demand of travel for attending it.

The fear of motion sickness in these individuals could also arise various associated health issues such as anxiety and unwanted stress which will eventually affect the individual 's mental wellbeing. They tend to avoid all means of travelling that could trigger their vulnerability and discomfort due to motion sickness and even avoid better opportunities in their career paths.

ADL could also be significantly affected by their inability to self-care, commute to different places, perform household chores and involve in social and play activities. Focusing on self could be disrupted in ways like one may

face difficulty in attending gym daily or exercise regularly which may arise symptoms of motion sickness in them. Motion sickness could also arouse difficulty in daily commuting to workplaces, educational institutions, for errands or shopping by any means of transport such as car, bus train or plane. Difficulty with transportation leads to relied on others this reduces functional independence. This can degrade one's self esteem and also develop other health issues due to unwanted stress.

At this age of 18-28 years, young adults are always fond of exploring new places, adventure trips, going for vacation with family or friends, participating in activities such as water sport, trekking, hiking, skiing and many other leisure activities. Motion sickness can prevent these individuals from enjoying various activities and long journeys associated with it.

Socially, motion sickness is not considered as a serious health issue. Many people have a perception that it is a temporary inconvenience rather serious condition that could have major impact on daily living. Due to lack of awareness, the individual might feel embarrassed to discuss the issue, which leads to reluctance in seeking help. They also feel isolated as others may underestimate the issues or sympathize with their condition. They could also have a perception that they might be a burden for others, thus they tend to avoid activities or situations that might trigger the symptoms.

From the point of view of individuals in our society, motion sickness is not considered as a major issue, thus it does not have a significant intervention. Thus, this impression leads to underestimation of the impact of motion sickness in individuals daily living and quality of lives. Physicians frequently recommend medication to alleviate the symptoms, which could give a temporary relief not the absolute remission of the condition. It is also notable that there is scarcity of clinics and professionals specialized in motion sickness. This on the other hand reduces the awareness among the common individuals. It is quite prevalent that there is limited research limited to understanding the condition especially among the age group of 18 to 28. This contributes to the lack of effective intervention.

In Indian context it has distinct cultural and social dimension how the motion sickness is perceived and managed. Society considers it as a slight discomfort and that could be easily treated by taking a pill of through several traditional remedies. Many individuals rely on public transportation which could trigger the symptoms due to the crowded transportation service and the lengthy commute. In addition to this, the roadway transportation in rural areas is underdeveloped which could trigger the symptoms. It could also induce indirect economic cost due to productivity, alternate transportation arrangement and mode of transportation. The individuals who are not able to afford it remain isolated and have limited access to essential services and opportunities. Due to lack of awareness and knowledge regarding the severity and its impact on an individual, it is apparently clear that this condition requires effective treatment.

Conclusion:-

This study underscores the prevalence of motion sickness in Mysore, Karnataka among individuals aged 18 to 28. Despite being the crucial contributors to societal and economic development, this age group remains under recognized for receiving the intervention for motion sickness. The prevalence of motion sickness in young adults is insufficient, but it could affect a nation's GDP by reducing workforce productivity, increasing healthcare costs, limiting educational career opportunities, and reducing participation in economic and social activities.

Our research pioneering in focusing the prevalence, increased awareness, supportive environment, and comprehensive research to develop effective intervention. By addressing this, the wellbeing, the quality of life, the productivity, and the occupational performance of the individual being enhanced.

The study was done on 562 participants with convenient sampling. From the result it was found that 71.4% of participants have mild motion sickness, 27.8 % have moderate and 0.9% suffer from severe motion sickness. During the study, the intensity of severity in individuals from motion sickness was also noted. Despite the majority experiencing only mild symptoms, significant treatment is necessary for all affected individuals to achieve optimal

quality of life. Even the individuals with mild symptoms suffer from decline in quality of life, facing various hinderance in performing daily living skills and career path, as well as increase in unwanted stress. And in the case of moderate and severe cases there is sever decline in their quality of life and it is also noted that individuals becoming completely dependent on medication and other home remedies to overcome the distress caused due to motion sickness.

Till date there is no permanent cure developed for motion sickness and individuals tend to rely much on traditional remedies or medications. Even though these remedies won't permanently cure motion sickness and individuals would not be comfortable using them, sometimes they are left with no option. Sometimes continuous consumption of medication and other remedies could cause more distress in these individuals and affect their daily life, social life and quality of life. The motion sickness itself restrain individuals from performing daily life activities, isolate themselves from society in fear of causing embarrassment to oneself and others, avoiding career growth and personal growth, and altogether have greater impact on individuals' quality of life. Thus, developing a cure for motion sickness is much needed especially for the individuals between the age group of 18- 28 years as they are the main representation of any nation, they are the future of our nation. When hinderance is caused in any individual's quality of life, disruption in daily living skills, or in any occupational performance areas, occupational therapy steps in to help.

Thus, occupational therapy could evaluate all the functional dysfunction in an individual caused due to motion sickness and could develop personalized treatment plan after studying the intensity of the problems faced by the individual. This study was the first step to find out the prevalence of motion sickness in individuals between the age group of 18-28 years and also find the intensity and various issues faced by all the participants due to motion sickness.

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