CHAPTER-9

Major Findings & Triangulation

This chapter presents the objective wise summary of the major outcomes and findings of the study. At the some of the findings of the three approaches are presented in the form of triangulation.

The previous chapters dealt with the objective wise as well as design wise analyses of the data gathered. This chapter provides a brief summary of the vital findings of the study. The chapter is divided into three main sections. Section 9.1 highlights the finding specifying the diners' perception of the soundscape in influencing dining experience. Section 9.2 reveals the findings from the first broad objective, shedding light on role of music in diner' experience. Sub-section 9.2.1 presents the findings related to live music, sub-section 9.2.2 covers the key findings related to ethnic music and ethnic cuisine. Section 9.3 consists of the findings related to the second objective of the study, describing the effect of noise on diners' experience. Section 9.4 specifies the key findings highlighted during FGD. Section 9.5 tries to triangulate the findings pooled from different approaches.

In order to achieve the laid down objectives, three different research approaches have been taken as pillars. The role of music and noise is determined with the help of the survey. The congruency between ethnic music with ethnic food is examined by way of an experiment in real life setting i.e., ethnic restaurants. To correlate the research findings from the survey and experiment, focus group discussions are considered as foundation and triangulation is attempted in that way.

9.1. Diners' Perception on Soundscape of the Restaurants

The findings showcasing the perception of diners towards the sound environment of the restaurant are as follows:

1. *Section 5.4* shows the perception on the sonic quality of restaurants. It is found that participants' perception of the sound environment is influenced not only by the conviviality of the ambience or attention to music alone but by the combined effect of both. The most pleasant assessments of the sound environment are linked to the welcoming ambience, which greatly outperform the neutral and unwelcoming settings. Even mild or passive awareness of the music enhances perceptions of the sound environment making the experience a pleasant one compared to complete disengagement with music (*Section 5.4.1*)
2. In case of the perception of sonic environment on uneventfulness, it is found in *Section 5.4.2* that the effect of the conviviality of the ambience on the perception of sound eventfulness is relatively independent of whether diners are paying attention to the music played. If the restaurant has a more convivial ambiance,

customers will find the auditory environment more interesting and eventful. To improve perceptions of the eventfulness of the sound environment, a moderate level of musical awareness is sufficient.

3. *Section 5.4.3* analyses the perception of diners on chaotic sonic environment. The study found that the effect of conviviality on the chaotic perception of the sound environment changes depending on the level of attentiveness. A welcoming ambience with music may change the sonic environment. A welcoming environment is perceived as less chaotic by the diners. But attentiveness towards music may not significantly influence the perception of chaotic sonic environment alone.
4. With regard to the combined effect, conviviality and attentiveness to music significantly affect perceptions of diners on the sound environment being exciting. It is found that the relationship between attention to music and excitement depends on the level of conviviality. Therefore, being attentive to music enhances excitement only in environments perceived as more convivial. However, diners who perceive the ambience convivial feel the sound environment to be highly exciting compared to those who do not find the ambiance convivial. Results confirm that attentiveness to music enhances engagement with and appreciation of the sound environment making it more exciting (*Section 5.4.4*).
5. The results indicate an insignificant difference on interaction effect and confirmed that the influence of attention to music on calmness is relatively consistent across different levels of conviviality, and vice versa. However, it is found that diners who perceived the ambience convivial feel the sound environment to be calmer compared to those who did not find the ambiance convivial and those who are neutral. While paying attention to music in the restaurant, diners perceived the acoustic environment as being much calmer than when they are not. Overall, the attention to music appears to play a role in shaping the perceived calmness of the auditory environment, but the effect diminishes when participants are neutral in their attention to music (*Section 5.4.5*).
6. Results under *Section 5.4.5* indicate that the combined influence of conviviality and attention to music on the perception of annoyance is notable, meaning that the effect of attention to music on annoyance depends on the level of

conviviality. At times, welcoming ambience might mitigate or enhance the annoyance level of diners by letting them pay attention to music, depending on the context. Findings suggest that convivial ambience lead to the highest annoyance levels. A welcoming ambience could be associated with higher noise levels which some diners perceived annoying despite the positive atmosphere. Surprisingly, diners who were neutral toward music perceived the sound environment as the least annoying. Being actively engaged or distracted (paying attention and not paying attention to music) by the music contributed to a more tolerable auditory experience.

7. In case of perception of monotony in the sound environment, the combined influence of conviviality and attentiveness towards music significantly affects perceptions of diners on the environment being monotonous. However, the effect is small. It is observed that conviviality significantly influences perceptions of monotony, the role of attention to music is less impactful. The interaction between conviviality and attention to music suggest that in some conditions, paying attention to music may influence monotony ratings, but the overall effect is modest. It is also found that perception towards monotonous environment may not lead to finding the ambience welcoming and vice- versa. This may be due to the fact that if the diner is a regular guest there may be a chance of finding the things repetitive and monotonous. Moreover, the degree of attention paid to music during the meal does not significantly affect the perception of monotony in the sound environment (*Section 5.4.6*).
8. Other than music, the restaurant soundscape is primarily influenced by kitchen sounds, followed by interactions among co-diners and background noises from fans or electronic devices. Natural and traffic sounds from the external environment also play a role, though to a lesser extent. Sounds from employees are the least noticeable sound by the diners (*Section 5.2.2*).
9. The findings of *Section 5.2* indicated that music, particularly live and soft genres, is the most significant contributor to a pleasant auditory experience in restaurants. Culinary sounds, especially those related to food preparation, also enhance the overall ambiance by being pleasant. With regards to the unpleasant sound in the restaurants the findings reveal that both operational sounds (mixer grinder, kitchen accessories) and social sounds (co-diner laughing, co-diner talking and children running) significantly impact diners' experiences. Chair dragging is

mentioned to be the most unpleasant sound by the diners, which heightens the need for adjustment of furniture to mitigate the noise. Among the different sounds within the restaurant soundscape diners predominantly specify are orders placed by the diners, music and fountains/ aquarium sound, co-diner talking are neutral sound**.** It is found that although they don't really improve the dining experience, these noises are also not disruptive.

10. *Section 5.3* indicates that both male and female diners prefer music during special occasions, and they show a least preference for music during breakfast. Surprisingly female diners like music during lunch more than during dinner. Also, incorporating music during special occasions like birthday, anniversary party, new year party etc., and dinner could be particularly appealing to a broad audience. Indian music is the most preferred genre among both the genders, followed by western and instrumental music. Gender differences are seen in the preference for popular movie songs (higher among females) and classical/ghazal music (slightly higher among males).

9.2. Role of Music in Diners' Experience

The current section deals with the first objective- *To determine the role of music in diner experience.* In order to investigate how music affects diners' experiences, the study first of all employs exploratory factor analysis (EFA) that identifies two major factors that are related to music and diners' overall dining experiences. The "Dining Euphoria" is the first factor which has eleven items on dimensions such as musicscape and how music works on diners in totality. It includes the items related to diners' perception on enjoyment while dining with pleasant music, music helps in transforming negative mood into positive one, music in restaurant reduces stress etc. "Sonic Flavour" is the second factor, and it includes five items, including- music induces impulse buying and buying more, recommendation and revisit etc. These dimensions are important in evaluating the role of music in restaurants. As there are 17 items related to music, dimension reduction method is applied and the factors so derived are further analyzed with other variables to fulfill the laid down objectives.

1. Two-way ANOVA tests were performed among diners' perception of restaurant experience and attention to music on diners' perceptions of dining euphoria and sonic flavour. In particular, it evaluated the variations between diners who

indicated that their experience was "satisfying," "moderately satisfying," or "dissatisfying," as well as their different levels of attentive, inattentive, or neutral music listening during the meal. *Section 5.5.1* shows the interaction effect of satisfaction levels of experience and attention levels of music during meal on dining euphoria, reveal analysis that the effect of satisfying experience levels on dining euphoria depends on diners' attention levels to music, and vice versa. Paying attention to music enhanced dining euphoria further, especially for diners who already report higher satisfaction with their experience. It is also reported that diners are more likely to feel intense dining euphoria during meals if they are more on satisfying experience. The notion that satisfying restaurant experience is linked to a significantly larger sense of euphoria during the dining experience is confirmed by the fact that diners having higher satisfying experience exhibit significantly higher dining euphoria than diners with dissatisfying experience. Also, paying attention to music leads diners to experience significantly higher dining euphoria than those do not pay attention to music during meal.

2. The interaction between attention to music and satisfaction levels indicates that diners' perception of sonic flavors is influenced by both the variables together. This suggests that attention to music may enhance the dining experience, especially for diners who are already more satisfied with their experience. Additionally, level of attention to music is an important variable in enhancing the perception of sonic flavors. However, experience levels alone do not have a significant effect on sonic flavors (*Section 5.5.2*).
3. The study findings show that the dining euphoria during a meal is not significantly influenced by their choices for music volume (loud, moderate, or soft). Regardless of volume level, welcoming ambiance has a consistent impact on dining euphoria. It is also found that a welcoming atmosphere heightens dining euphoria during their meal, demonstrating that a welcoming atmosphere plays a substantial role in diners' experiences (*Section 5.5.3*).
4. *Section 5.5.4* shows the interaction effect among preferred volume level (loud, moderate and soft), perception of diners on welcoming restaurant ambiance. And sonic flavours. The results of the interaction effect indicates that a combination of ambience and preferred volume level can influence diners' sonic flavours. Welcoming ambience found to have a small but meaningful impact on the perception of sonic flavour. However even in the presence of interaction effect

diners' preference for volume (soft, moderate and loud) singularly does not significantly affect the sonic flavour score.

5. With regard to the different demographic variables, the diners who are married report higher levels of dining euphoria compared to those who are currently single. Self-earning individuals experienced higher dining euphoria than those who are not earning. We could not, however, conclude any influence of gender on the overall dining euphoria. Findings suggest dining euphoria between the groups of diners who spend Rs. 2501/- –Rs. 5000/- and Rs. 5001/- –Rs. 10,000/- for dining experience varies significantly. Dining euphoria varies significantly among diners with monthly income Upto Rs.35000/- & Rs.65000/- -Rs.100000/- and Upto Rs.35000/- and Above Rs.100000/- (*Section 5.5.5).*
6. Married people report higher sonic flavour compared to those who are currently single (*Section 5.5.6*). The perception of sonic flavour is higher for self-earning than for those who do not earn. According to the findings, gender has no bearing on sonic flavour also as seen for dining euphoria. Income is a determining factor in terms of auditory perception, as evidenced by the differences in sonic flavour between diners with incomes Upto Rs. 35,000/- and those from Rs. 35,000/- –Rs. 65,000/- and Upto Rs. 35,000/- and above Rs. 65,000/- categories. Additionally, customers who spend between Rs. 2,501 and Rs. 5,000 and those who spend more than Rs. 5,001 on dining out per occasion have different sound flavour.
7. The perception of music level experienced in the restaurant is significantly influenced by diners' volume preferences (soft, medium and loud) but not by their preferences of music tempo (fast or slow) (*Section 5.5.6).* There is no interaction effect of volume and tempo preferences on how diners perceive the music level that they experience in the restaurant. The results indicate that whether diners prefer slow or fast music tempo does not have a noticeable impact on their perception of the music level experienced in the restaurants. The result shows significant difference in the music level experienced in the restaurant neither with the preference for slow volume nor with medium level of volume categories. However, diners who prefer a loud music volume experience a noticeably higher music level in the restaurant compared to those who prefer soft music. It is also found that the diners preferring fast tempo are likely to have a higher personal listening level of music in general compared to those preferring slow tempo.

Again, diners preferring fast tempo are also likely to prefer a higher music listening level in restaurants compared to those preferring slow tempo. Results show a significant impact indicating that diners' preferred music tempo affects how loud they want the music to be in a dining establishment.

8. The results in *Section 5.7* indicate perception of diners on conviviality of the restaurant ambience is influenced by gender and occupation. It was observed that female diners find the restaurant ambiance more convivial than male diners. Financially independent diners also feel the ambience to be livelier and more welcoming than those who are not earning. There exist significant pair-wise differences among the age brackets of 26-35 years & 36-45 years and 36-45 years & Above 46 years on conviviality.
9. Similarly, there are remarkable differences on gender, occupation and age on attentiveness towards music in restaurants. Male pay more attention to music during meals in restaurants than female diners. It is also observed that those who are financially independent also pay more attention to music than those who are not earning. In case of age the difference is between the age brackets of 26-35 years and 36-45 years, who pay more attention to music during meal.

9.2.1. Role of Live Music in Diners' Experience

This section deals with the findings of the sub objective of the first objective- *To explore the role of live music in creating a positive customer experience.* A comparison is made here between live and pre-recorded music on restaurant customers' experience. The major findings of this sub objective are:

1. It is found that majority (82.6%) of diners prefer live music, and only 17.4% shows their non-preference for live music. The purpose of visiting a restaurant (outings with family or friends, casual lunch/ dinner, business purpose, special occasion) does influence whether diners prefer live music, however, with a not very strong effect. Live music is comparatively more preferred for special occasions (*Section 5.8.1*).
2. *Section 5.8.2* highlights the comparison where diners' show a significantly higher preference for pre-recorded music over live music while dining. In order to have a detailed understanding of the preference for live music and

pre-recorded music among diners the results of series of Independent Samples t tests are placed below.

(a) Extent of the diners' preference for live music during dining across those who prefer live music and those who do not prefer live music. Results show that respondents who prefer live music have a higher average (2.62) preference score for live music while dining compared to those who does not prefer live music ($\bar{x}$=1.57).

(b) Extent of the diners' preference for pre-recorded music during dining across those who prefer live music and those who do not prefer live music are also checked. It is observed that diners who like live music in general, the mean preference score for pre-recorded music while dining is 2.78. While the same for diners who do not generally enjoy live music is 3.25. This means that those diners who do not like live music, the preference for pre-recorded music is more. Again, diners who do not generally enjoy live music, the mean score for the extent of preference for live music while dining is 1.57.

(c) Additionally, the preference for no music with pre-recorded music and live music was also measured. Diners apparently prefer pre-recorded music and live music over no music with marginally higher mean for both.

3. *Section 5.8.3* highlights the perception of diners who prefer live music and who do not prefer live music on three variables- attention to music during meal, overall satisfaction with the restaurant experience, and welcoming restaurant ambiance. Diners who prefer live music observed to be paying less attention to music than diners who do not prefer live music. Diners who prefer live music express less satisfaction with the overall restaurant experience than diners who donot like live music. Again, diners who like live music found to rate the restaurant ambiance less welcoming than those who do not like live music.

9.2.2. Ethnic Music and Ethnic Cuisines

In this section the second sub-objective of the first objective is showcased- *To assess the role of ethnic music in diners' experience.* The findings highlight the role of ethnic music

in ethnic restaurants. An experiment has been carried out to determine how diners' experiences are related to ethnic music in ethnic restaurants. The restaurants serving Assamese cuisine, Bodo cuisine, Naga cuisine and Bengali cuisine (all 4 are ethnic community residing in Assam) are considered and the data is collected from two sets- Ethnomusicological Group (EG) and Control Group (CG). The diners of intervention groups are exposed to instrumental music excerpts representing "Assamese," "Bodo," "Naga," and "Bengali" music, and the same in control groups are exposed to Bollywood instrumental music. Following findings are gathered from the experiment:

1. In *Section 7.2,* the perception of the diners that the music played in the restaurant is associated with the food served is determined. It is found that almost 80% of the subjects under EG could associate between the music played in the restaurant with the food served in the ethnic restaurant. In case of control group 70% report that they were unable to associate (perceive at "0") the music playing in the ethnic restaurant with the cuisine they were eating.
2. Diners perceive that the choice of ethnic music (Assamese, Bodo, Naga and Bengali) being played for the Ethnomusicological Group strongly fits with Assamese cuisine, Bodo cuisine, Naga cuisine and Bengali cuisine respectively. It can be said that people prefer ethnic music with ethnic food. There is high congruency effect of ethnic music with ethnic food (*Section 7.3*).
3. *Section 7.4* captures the findings for both the intervention and control groups on a significant variable about the importance of ethnic music in elevating the dining experience. It is found that in both the groups, diners' perception towards the value of ethnic music while consuming ethnic food in a restaurant on enhancement of the dining experience is very strong. Diners from both the groups felt the importance of this variable irrespective of the music being played in the restaurant.
4. *Section 7.5* shows the result of the average perception on the authenticity of experience for both the groups. The comparison with the Ethnomusicological Group shows a significant difference, reinforcing that the intervention (the presence of ethnic music of Assamese, Bodo, Naga and Bengali) significantly impacts the perception of authenticity. When compared to the Control Group, the intervention group's perception of their experience to be far more genuine.

Hence, a significant factor in determining the authenticity of the experience is the use of ethnic music in the ethnic restaurant.

5. The results of the Paired samples t tests show that there is a noteworthy distinction in how the Ethnomusicological Group and the Control Group perceive their eating experience with respective music. The findings demonstrate that, the dining experience is influenced by the restaurant's musical selection. In case of Ethnomusicological Group, when in Assamese ethnic restaurant, people liked Assamese ethnic music as they were exposed to music of Dr. Bhupen Hazarika, while having Bodo cuisine diners liked *bagurumba (*Bodo ethnic music), Naga Cuisine diners listened to Naga music and Bengali cuisine diners exposed to Bengali music by Rabindra Nath Tagore. This may be one of the reasons for diners, liking the ethnic food and having a pleasant dining experience when exposed to ethnic music. As said, authenticity by means of ethnic music is important to create a pleasant experience (*Section 7.6*).

6. The findings of *Section7.7* demonstrate that, when compared to the control group, the intervention group's perception of appealing sound at ethnic restaurants is much improved by pleasing sound of ethnic music. In case of EG, as ethnic music was only factor which was altered and all the other sound factors remained the same in case of both EG and CG. This may be due to the fact that ethnicity of the Assamese, Bodo, Naga and Bengali music worked as a catalytic agent and making the overall sound much more appealing in case of Ethnomusicological Group.

7. In *Section 7.8* the high mean score of 5.84 of the Ethnomusicological Group's subjects shows that they are quite satisfied with their dining experience. Additionally, the respondents in the control group report a much lower degree of satisfaction with their overall dining experience, as indicated by the lower mean score (2.46).
8. The Ethnomusicological Group's respondents found the restaurant's ambiance to be highly welcoming, as compared to the control group who felt the atmosphere to be less welcoming (*Section 7.9*).
9. The EG is found to be more willing to pay higher price due to the ambience than the Control Group (*Section 7.10*)

10. For empirically analyzing diners experience further, the average score across the three experience items (*To what extent the music in the restaurant defines the authenticity of the experience in the restaurant, The choice of music played in the restaurant enhances my liking towards the food which leads to a pleasant dining experience* and *Overall, I am satisfied with my restaurant experience*) are computed for each respondent for both the Ethnomusicological Group and the Control Group. It is found that the intervention group perceives a high level of experience when ethnic music was played in the restaurant compared to the control group.

9.3. Effect of Noise on Diners' Experience

The findings of chapter 6 on noise sensitivity and diners' experience is presented in this section. These outcomes of the second objective of the study - *To measure the impact of noise in overall satisfaction of diners and to find out if music can play some role in noise avoidance* are discussed as under:

1. *Section 6.2* covers the findings related to noise sensitivity.

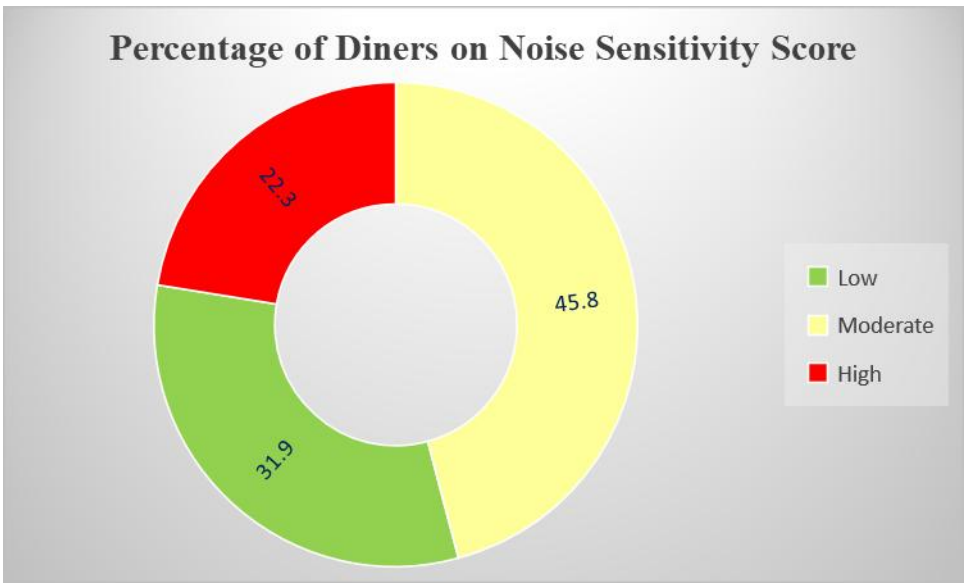

Figure 9.1.: Percentage of Diners on Noise Sensitivity Score

The above figure depicts the percentage of diners on their noise sensitivity score derived from the survey data. The scores are based on the 20 statements

of the Weinstein's Noise Sensitivity Scale modified for restaurant settings by the author. 22.3% diners are calculated to be high on noise sensitivity, 45.8% are moderately noise sensitive and 31.9% are low sensitive to noise in restaurants.

2. It is found that diners generally have a "Neutral" sonic impression irrespective of sensitivity levels. Diners with low to moderate noise sensitivity perceive the restaurant comparatively *more* "Good" than those with high noise sensitivity. However, diners with high sensitivity perceive the sonic impression to be less "Bad" than moderate and low noise sensitive diners (*Section 6.2.1*).
3. Compared to moderate and low sensitive diners, smaller group of high-sensitive diners consider the background sound to be "high". Regardless of sensitivity, the majority of diners favour "Appropriate" sound levels. It is observed that while highly sensitive diners tend to perceive the restaurant as calmer, individuals with low sensitivity are more tolerant of "High" sound levels (*Section 6.2.2*).
4. It is found in *Section 6.2.3* that majority of the low sensitivity diners perceive the music as "Too Soft," indicating that they prefer music that is a little louder in volume. According to moderately noise sensitive diners, more than half of the diners perceived the volume to be "Good". The diners who are moderately sensitive can be considered as the most satisfied ones, with the majority rating the volume as "Good". Highly sensitive diners find the volume "Good" but were less likely than other groups to report "Too Soft" indicating their preference for softer music.
5. In *Section 6.2.4* it is found that perception of noise and the sensitivity levels of the diners are influenced by their respective personal level of listening music. There are statistically significant differences in the usual personal levels of listening music among the "low," "moderate," and "high" sensitivity groups, with a clear trend of increasing levels as the frequency category rises. It is observed that diners prefer to listen to loud music otherwise, but sensitive to restaurant noise. Even if the diners are highly sensitive they prefer listening to music in general at a louder volume, but does not prefer any kind of noise in restaurants.

6. *Section 6.3* deals with the qualitative aspects of soundscape with its established sonic quality. The perception of the sonic environment being pleasant, chaotic, exciting, uneventful, calm, annoying and monotonous in restaurant ambience to noise sensitivity are explored with one way ANOVA for each. Interestingly, diners with *high noise sensitivity* perceive their sound environment as significantly *more pleasant* compared to those with low and moderate noise sensitivity. The reason for this result could be that high sensitivity diners may have focused on the positive aspects of the ambience, such as the music and other pleasant sound, while being less disturbed by the noise. For *Calmness* also, the trend is similar with different noise sensitivity level as like pleasantness.

   The only notable distinction in the case of *Exciting* is between the "low" and "moderate" sensitivity groups; the moderately sensitive diners find the acoustic environment to be significantly more exciting than the low group. For the variable *Uneventful,* diners with high sensitivity perceive their sound environment as more uneventful compared to those with low sensitivity and moderate sensitivity. On the other hand, people with low sensitivity might want to experience greater stimulation in the same sound environment as they are finding the ambience to be somewhat eventful and need more volume and music to find it uneventful.

   The auditory environment is seen as less *chaotic* by diners with low noise sensitivity than by those with moderate and high sensitivity.

   In the case of *Monotonous,* diners with high sensitivity perceive the sound environment as significantly more monotonous compared to those with low sensitivity.

   For *Annoying,* patrons with low sensitivity perceive the sound environment as significantly less annoying compared to those with moderate sensitivity scores and high sensitivity groups.

7. *Section 6.4* look into diners' perception on different restaurant experience (paying attention to music during meal; overall, satisfied with the restaurant experience; conviviality; sound of cooking food affects mood positively; and

sound of food ordered by co-diners enhances appetite and temptation to order the same) on different noise sensitivity levels.

The more sensitive a person is to noise, the more likely he/she to pay attention to or notice music while eating. The findings reveal that those who are more sensitive to noise are more sensitive to auditory inputs, which means that music plays a prominent role in their eating/ dining experience. This finding complements the finding of section 6.3 (for pleasantness and calmness). Since the diners who are low sensitive did not pay sufficient amount of attention to music during meal, therefore, they find the restaurant ambiance comparatively less pleasant than moderate and high sensitive diners. In terms of the perception related to satisfying restaurant ambiance, diners who are highly sensitive are the most satisfied with their dining experiences, followed by diners who are moderately sensitive and, finally, those who are low noise sensitive. On the other hand, people who are low sensitive do not find the restaurant setting to be as interesting, which resulted in lower levels of satisfying restaurant experience.

Patrons with high sensitivity find the restaurant atmosphere to be welcoming and friendly, followed by people with moderate sensitivity and people with low sensitivity. People with high sensitivity are probably better able to enjoy the subtle aspects of ambience, which increases their conviviality scores. On the other hand, low sensitive diners may not find the setting as convivial and may require more volume and excitement.

It is also found that the sound of cooking has an equally favourable effect on people with high and moderate sensitivity. Low sensitivity diners, however, experience significantly less positive effects from the sound of cooking compared to both moderate and high sensitivity groups. A threshold effect is shown by the lack of substantial differences between the moderate and high sensitivity groups: people with at least moderate sensitivity find cooking sounds uplifting and affecting their mood positively, whereas people with extremely low sensitivity do not.

However, ‘sound of food ordered by co-diners enhances appetite and temptation to order the same’ has an equally marginal favourable effect on diners’ noise sensitivity irrespective of its levels.

8. Results of *Section 6.4* on the extent of preference for different categories of music such as no music at all, pre-recorded music and live music on the basis of noise sensitivity levels shows the following:

   (a) For no music- Diners with high noise sensitivity prefer 'no music' during restaurant visit as significantly less than those with low sensitivity. However, diners with low noise sensitivity prefer 'no music' comparatively more than those with moderate sensitivity. High noise sensitive diners find the ambience unpleasant due to the absence of music therein. They want the music as because to suppress the negative impact of noise in their dining experience. Here, music acts as the noise avoider. On the other hand, low sensitive diners are somewhat accustomed with noise and does not need a cover (mask) to a particular extent.

   (b) For pre-recorded music- it is observed that the preference for pre-recorded music while dining significantly varies across individuals with different levels of noise sensitivity- diners with high noise sensitivity show a stronger preference for pre-recorded music compared to those with low sensitivity and moderate sensitivity. It can be concluded that high sensitivity diners like restaurants with a set volume, which may be caused by the pre-recorded music.

   (c) For Live music- Diners with low noise sensitivity prefer live music slightly more than those with moderate noise sensitivity. Conversely, diners with high noise sensitivity show significantly less preference for live music compared to those with low noise sensitivity. Additionally, there is no significant difference in live music preference between individuals with moderate and high noise sensitivity. Therefore, diners who are moderately and highly sensitive towards noise avoid a live music condition in restaurant. It may be due to the fact that they may perceive live music to be noisy.

9. Section 6.6 deals with diners demographics- age, gender, occupation, marital status, visit types (instant or pre-booked)) and treat type (self paid or sponsored) with their noise sensitivity. It is observed that younger diners (18-25 years and 26-35 years) are more likely to have moderate or low sensitivity to

noise. Majority of diners with high sensitivity is seen in the 36-45 years age bracket. Across all age groups, the moderate sensitivity covers the largest number of diners, indicating a general trend of moderate noise sensitivity among the population.

It is found that majority of diners who are self-earning are moderate noise sensitive and majority of those who are not earning are low noise sensitive. It can be said that restaurants should consider creating sound levels that cater to moderate and high sensitivity diners, particularly for the self-earning group, as they form the majority of customer base.

It is found that among married diners, majority are high sensitive and in case of currently single diners majority are low on sensitivity. Since currently single diners make up the largest portion of their clientele, restaurants with moderate noise levels are likely to appeal to them. Married customers may benefit more from customized noise environments

It is reported that noise sensitivity tends to rise with income as it was observed that income group ₹65,000–₹1,00,000 are high sensitive and diners with low income (Upto ₹35,000) noise sensitivity tends to be low. Therefore, it can be concluded that income is a determining factor as far as noise sensitivity is concerned.

Among diners spending while dining "Above Rs. 10,000" the majority (57.9%) has moderate sensitivity and among diners spending ‘Upto Rs. 2500’ majority is high sensitive. This indicates that with rising sensitivity average spending comes down and with decreasing sensitivity average spending while dining noise sensitivity rises.

It is reported that depending upon treat type sensitivity of diners varies. The sensitivity level goes down from low to moderate in case of self paid treats.

10. *Section 6.7* emphasized on ***role of music as a noise avoider***. Association between diners' perception of pleasant music as a noise avoider and levels of noise sensitivity was measured with a chi-square test. It is found that high noise sensitivity and the perception of pleasant music as a noise avoider are positively related. Diners with high sensitivity are more likely to agree or strongly agree

with this statement, whereas those with low sensitivity exhibit more variation in their responses. It is observed that diners who are high sensitive to noise prefer music as a thin linen to mask the undesirable sounds that are referred as noise in restaurants. They are fairly certain that listening to music will enhance their experience. This conclusion is also complemented by the earlier research on music and noise sensitivity that was reported in *Sections 6.3* and 6.4 (a) above.

9.4. Key Findings of FGDs

In this part the key findings of the FGDs are presented. The purpose of the FGDs is to gain insights on sound environment in restaurants from persons who are related to restaurants. The participants' shared experiences serve as the study's major source of data in this qualitative approach.

1. The data analysis resulted in a thematic table with 70 sub-themes (thematic analysis) and twelve main themes, as shown in Table8.2.
2. In *Section 8.2.1* covers the participants shared their experiences of different sound that they encounter during their visit and period of stay in the restaurant. When people visit different eateries, they encounter different types of sound that's present in the environment. The type of sound depends upon the nature of the eatery. Sources of sound figured out by the participants are sizzler ordered by other guests, music, conversations of others, fan, AC and other mechanical gadgets, natural sound like breeze etc. these sound influences them and their behavior.
3. *Section 8.2.2* reflects that participants are aware that restaurants play music and pointed out the importance of music in the restaurant. It is found in the discussions that restaurateurs/ managers/operators play music of their choice and that presentation may or may not be favorable. Participants provided their opinions that definitely music plays a crucial role as it can both positively and negatively affect the customer.
4. *Section 8.2.3* highlights on liking towards different genres with respect to gender and age. It is revealed by most of the participants that the liking of genre and music does not necessarily depends upon gender and age. It is found that the choice of music does not depend upon someone being male or female or of what age. It depends upon the liking, interest and the vibes.

5. When participants were asked to throw some light on live music and pre-recorded music in customer satisfaction. It was found that diners choose between live music and pre-recorded music according to their own choice, companion, conversation intention etc. of the diners in determining customer satisfaction. An interesting except from one of the participants highlights-

   "There should be sync between the food and music. But to a large extent, I would relate mood to mean experience that I want to consider. I mean if I have to go to a restaurant, I know my mood and I have my choice of restaurants that I will decide according to that. If I am really stressed out, maybe I would like to chill out a bit. I would choose a pub rather, I would prefer a more interactive music like live music, where on I can talk about the music, forgetting about what was going on at my background at back of my head. But if I want to spend some time with you, with my loved ones or my baby, my peer and I want to talk. Then I would prefer foreground music. This live music is something I would not appreciate because that would take away a lot of conversational time."- Food Blogger, Male, FGD 2 (*Section 8.2.4*).
6. Results of FGDs (*Section 8.2.5*) also show that participants were very conscious about the noise prevailed in the restaurant. The sources of noise are different for everyone. Some may feel the surrounding very annoying early and some may have more resistance towards noise sensitivity. An excerpt relevant to this is-

   "Soothing sounds are always positive, but annoying sounds should also be taken care of in the restaurants. Sometimes what happened that we forget the soothing sound, but we cannot forget and always remember the unpleasant or the annoying sound."- Food Blogger, Male, FGD 1.
7. It is opined by experts that sometimes music becomes a noise if the volume is raised up. However, sometimes music can be enjoyable and eventful that other noises are ignored (*Section 8.2.6*)
8. There are mixed opinions and expressions of participants found regarding how music transform a bad experience of food to a positive one. It is found that good music simply does not lead to positive experience if the food served in the restaurant is not good. However, only food alone cannot create a positive experience (*Section 8.2.7*)

9. When participants were prompted to reflect on the role of music in ethnic restaurants, their responses were overwhelmingly positive, conveying optimistic view on use of ethnic or traditional music with ethnic food (*Section 8.2.8*).
10. The result of the sentiment analysis shows 24.15% positive sentiment, 6.73% negative sentiment, 24.20% neutral and 44.90% mixed sentiment of the participants in their narrations and connotations (*Section 8.3*).

9.5. Triangulation of Qualitative, Quantitative and Experiment Outcomes

Triangulation is a method used to strengthen the findings by confirming insights from different lens. It is a way of using multiple approaches to a single problem to come to a more insightful conclusion. This study uses three different approaches i.e., focus group discussion, survey and an experiment. To bring the results obtained from these three research approaches together into one platform, integration is thought to be essential. One of the main challenges of adopting multi-method or mixed method is integration, or synthesizing (Åkerblad et al., 2020). Integration is a distinctive feature of mixed method research since researchers purposefully combine the components as a single study rather than conceptualizing, carrying out, and reporting them individually (Skamagki et al., 2022). Depending upon the design and scope of the integration can be done at different levels (Johnson et al., 2019; Guetterman et al., 2020). This study exclusively focuses on integration at the reporting and interpretation levels. According to Fitters, Curry, and Creswell (2013), it can be done through joint displays, narratives and data transformation. The transformative technique transforms one dataset into the other type of data before integrating it, while the narrative approach reports the qualitative and quantitative conclusions independently. Finally, the joint display technique tries to bring new insights through visual means. However, this study is limited to the extent of narrative and joint display.

Joint display helps in identification of the links between the qualitative and quantitative phases and allows establishing associations or comparisons. Sequential studies like this can use either qualitative or quantitative data to start comparisons. The narrative joint display is presented in Table 9.1 and Table 9.2. In the joint display, the qualitative themes are displayed in the first column of the table and termed as ‘Broad Themes’ for both phases. Second column is for survey findings. The third column comprises of the quotes or narratives of the FGD participants and the last column

includes integrated sub categories of the qualitative phase. Conclusion in terms of convergence is shown with green colour, complementarity is shown with blue colour, divergence is shown with pink and expansion is shown with yellow colour in both the tables.

Table 9.1.: Narrative Joint Display of FGD & Survey Results

Broad Themes (Variables)	Survey Findings	FGD Findings (Descriptions)	Integrated Sub-Categories/Conclusion
Sound	*14.3% declared of hearing natural sound*	*River, birds, breeze*	*Natural sound*
	22.3% of diners declared sound heard from co-diners; Chair dragging is mentioned to be the most unpleasant sound by the diners (Section 5.2)	*Talk, baby crying, sound of table*	*sound form Co-diners*
	30% kitchen sound	*Crunch of a crispy dish, the sizzle of a steak on a grill.*	*Food sound*
	14.5% fan/ electronic gadget sound	*Air conditioner, fan*	*Mechanical and gadget sound*
	6.2% sound heard from employees	*Staff conversation, handling cutlery*	*Staff sound*
Choice and preference of diners	*Age difference is among 26-35 years and 36-45 years on being attentive to music during meal (Section5.7)*	*Age is not a bar, young, old*	*Preference for music and age*
	Various co-diners' activities determined as unpleasant sound by the diners , presented as number of mentions-for talking (124), laughing (184) , children running (125),baby crying(218) (Section 5.2.2)	*Family, idle crowd, loud crowd*	*Sound emanated from the actions of Co-diners*
	The results of Two way ANOVA in section 5.6 found that diners who prefer loud music perceive the music level in the restaurant as being closer to their preferences, while those preferring soft or medium levels experienced it as loud.	*Comfortable with loud, uncomfortable with loud music*	*Expectation from music*

Broad Themes	Survey Findings	FGD Findings (Descriptions)	Integrated Sub-Categories/Conclusion
Eatery Type	*Those who do not prefer live music report a slightly higher satisfaction with their restaurant experience (mean = 3.76) compared to those who prefer live music (mean = 3.42). Those who do not prefer live music rate the restaurant ambiance more positively (mean = 3.80) than those who prefer live music (mean = 3.44). (section 5.8.3)*	*Live music, loud music, interactive live music, forgets about what is going on in my mind and focuses on live music (Section 8.2.4)*	*Restaurant /Bars/cafe*
Experience	*Diners (47.5%) finds the music volume was "Good" followed by 32.2% diners opined the music as "Too Soft". Less frequently given responses include "Irritating" (3.3%), "Too Loud" (5.3%), "Can't Hear Any Music" (4.3%), and "Does Not Matter At All" (7.4%). (Section 6.2.3)*	*Too loud music turned experience bad*	*Bad experience*
	With two way ANOVA the result produced as diners who are highly satisfied may experience the highest levels of dining euphoria when they pay attention to music, while those with moderate satisfaction might experience a smaller increase in euphoria depending on their attention level (Section 5.5.1)	*Customers want experience*	*Music plays a very important role in creating good experience*
	Reason for visiting restaurant- outing with family & friends (57.5%) (Section 5.2.1)	*Go to restaurant for leisure with family, friends*	*Family Time*
	Diners who paid attention to music rated the sound environment as significantly more pleasant compared to those who did not pay attention	*Music creates pleasant experience*	*Pleasant experience*

	(p=.000). Those who did not pay attention also rated the sound environment less pleasant compared to participants with neutral attention (p=.027). (Section 5.4.1)		
Presentation	The most pleasant assessments of the sound environment are linked to the welcoming ambience (Section 5.4)	*Nice look, Pleasant environment*	*Cozy Ambience*
	There is difference among diners' perception about dining euphoria in the satisfying experience and dissatisfying experience (p=.000); satisfying and moderately satisfying experience (p=.000). diners are more likely to feel intense dining euphoria during meals if they are more on satisfying experience.(Section 5.5.1)	*Adopted according to need of customer*	*Customization needed*
	Preference for music genre-Indian music(23.4%, western music(18.8%),instrumental (15.7%), popular movie song (14.7% ethnic/traditional (10.7%),classical/ghazal (7.1%), contemporary (9.6%) (Section 5.3.2)	*Genres, soft, mild, romantic*	*Segment wise Music preferences based on genre*
	High sensitive diners are finding the restaurants pleasant and that is why less annoying and low sensitive diners want more excitement so they are more annoyed in their aural environment (Section 6.3)	*negative, annoying, Bad music, speaker, Loud volume*	*Noisy ambiance*
Song	music, particularly live and soft genres, is the most significant contributor to a pleasant auditory experience in restaurants (Section 5.2.3)	*Soothing sound, positive, soft, romantic*	*Mild Music ay create soothing environment*

Table 9.2: Narrative Joint Display of FGD & Experiment Results

Broad Themes	Survey Findings	FGD Findings (Descriptions)	Integrated Sub-Categories/Conclusion
Ethnic Food	The findings demonstrate that, when compared to the control group, the intervention group's dining experience at ethnic restaurants is much improved by pleasing sound of ethnic music. (section7.7)	*Did not find pleasure because of loud music, some restaurants play throughout the season Bihu songs*	*Uncomfortable Loud Music*
	The comparison with the EG shows a significant difference, reinforcing that the intervention (the presence of ethnic instrumental music of Assamese, Bodo, Naga and Bengali) significantly impacts the perception of authenticity. When compared to the Control Group (Bollywood instrumental music), the Ethnomusicological Group believes their experience to be far more genuine (Section 7.5)	*Some restaurants play loud Bollywood music which does not suit the image of the ethnic restaurant*	*Ethnic food with Bollywood Music*
Presentation	The Ethnomusicological Group's respondents found the restaurant's ambiance to be highly welcoming, as compared to the Control Group who felt the atmosphere to be less welcoming (Section 7.9).	*Nice look, visual presentation, psychology, music*	*Presentation of the service offering*

Songs	*Diners perceive that the choice of ethnic music (Assamese, Bodo, Naga and Bengali) being played in the Ethnomusicological Group has strong musical fit with Assamese cuisine, Bodo cuisine, Naga cuisine and Bengali cuisine respectively (Section 7.3)*	*Slow, ethnic song. Off beat music, Bihu Songs Not every time, selective songs, Bhupen Hazarika, Jayanta Hazarika, Tokari Geet, Khogen Mahanta, Angarag Papon Mahanta, Zubeen Garg*	*Types and genre of music preference in ethnic restaurants*

9.5.1. Meta Inferences and Interpretation:

The integration process continues after the identification and organization of the findings of different approaches into columns. In the next stage, relationships are established between the FGD and survey outcomes and FGD and experiment outcomes for consistencies, inconsistencies, or conflicting findings. These linkages shall enhance the interpretations and also called as meta -inferences. Fetters (2019) suggested the use of the labels 'convergence,' 'complementarity,' 'expansion,' and 'divergence' are useful in structuring the interpretation of the 'fit' among the findings. 'Convergence' is referred to the agreement between the two sets of findings. "Complementarity" arises when the findings show distinct but non-contradictory interpretations, 'Expansion' arises when some findings overlap but keeps space for detail interpretation. Lastly, "divergence" arises when there are contradictory interpretations between the two sets of results. Meta-inferences, or integrated understandings highlights that –

(I) **FGD& Survey**

Convergence determines the positive agreement between the two sets i.e., FGD and survey findings. As figured out by the participants of FGD, sources of sound like sizzler ordered by other guests, music, conversations of others, fan, AC and other mechanical gadgets, natural sound like breeze etc. these sound influences them and their behavior. This is in line with the survey finds where the respondents described different sounds as pleasant, unpleasant and neutral in *Section 5.2*.

Again, another agreement between the two approaches is related to the noise or unpleasant sound created by their co-diners like talking laughing, baby crying etc. In the results of section 5.6 found that diners who prefer loud

music perceive the music level in the restaurant as being closer to their preferences, while those preferring soft or medium levels experienced it as loud and is in convergence with the findings of FGD- *"Loud Bollywood music is played. In that case, people would not prefer."*

Findings of FGD mention that loud music turns the experience to be a bad one. This matches the survey finding where diners (47.5%) finds the music volume was "Good" followed by 32.2% diners opined the music as "Too Soft". Lower frequency is observed for "Irritating" (3.3%), "Too Loud" (5.3%), "Can't Hear Any Music" (4.3%), and "Does Not Matter At All" (7.4%) (*Section 6.2.3).*

It is found in FGD that '*People go to restaurant for leisure with family and friends'* which matches with survey findings that more than half of the diners visit restaurant as a way of outing with family and friends.

FGD specifies that music creates a pleasant experience which is in line with the survey outcomes. Diners who paid attention to music rated the sound environment as significantly more pleasant compared to those who did not pay attention. Those who did not pay attention also rated the sound environment less pleasant compared to participants with neutral attention (*Section 5.4.1*)

Survey reveals that the most pleasant assessments of the sound environment are linked to the welcoming ambience (*Section 5.4*) which was also advocated by FGD as pleasant environment makes cozy ambiance.

FGD specifies mild music enhances experience and supported by survey that music, particularly live and soft genres, is the most significant contributor to a pleasant auditory experience in restaurants (*Section 5.2.3*).

Complementarity addresses different but not contradictory agreement. In FGD only one category under age shows difference in terms of their attentiveness towards music (*Section 5.7*) whereas in qualitative discussion it was said by one of the respondents that age is not a bar for music listening and choice, it depends upon vibes of the diners. Another point of distinct and non-contradictory agreement is that in FGD the participants were emphasizing on customer experience and the findings of survey complements it. Diners who are highly satisfied may experience the highest levels of dining

euphoria when they pay attention to music, while those with moderate satisfaction might experience a smaller increase in euphoria depending on their attention level (*Section 5.5.1*).

There is ***divergence*** in the thoughts of two sets of respondents regarding live music. Among survey respondents, those who do not prefer live music reported higher satisfaction with their restaurant experience compared to those who prefer live music. Those who do not prefer live music rate the restaurant ambiance more positively than those who prefer live music (*Section 5.8.3*). But among the FGD participants the preference is more towards live music (*Section 8.2.4*).

FGD shows that loud volume, bad speaker, annoyance leads to noise. This is dissented in the survey findings showing that highly sensitive diners are finding the restaurants pleasant, and that is why they feel less annoying; while neutral and low sensitive diners want more excitement in the same environment so they are more annoyed in their aural environment. They may want volume to be raised up for making the environment pleasant for them (*Section 6.3*)

In case of ***expansion***, FGD findings address proper presentation by customization and adapting to the needs of the customer. This has the potential to make the dining experience better. Survey confirms that diners are more likely to feel intense dining euphoria during meals if they are more on satisfying experience (*Section 5.5.1*)

Another point of expansion of agreement is that in FGD it was observed that the participants were stressing on customer experience and the findings of survey complements it. Diners who are highly satisfied may experience the highest levels of dining euphoria when they pay attention to music, while those with moderate satisfaction might experience a smaller increase in euphoria depending on their attention level (*Section 5.5.1*).

Again, FGD specifies on genre and use of mild, soft music and survey expanded this agreement. Preference for music genre-Indian music (23.4%, western music (18.8%), instrumental (15.7%), popular movie song

(14.7% ethnic/traditional (10.7%), classical/ghazal (7.1%), contemporary (9.6%) (Section 5.3.2).

(II) FGD & Experiment

There is ***convergence*** of findings of the two sets on the points that uncomfortable and loud music makes the experience unpleasant. Experiment reveals that when compared to the control group, the intervention group's dining experience at ethnic restaurants is much improved by pleasing sound of ethnic music. (section7.7). FGD pointed out that the Bollywood music in ethnic restaurants may be replaced by songs of different community or songs by renowned local singers Dr. Bhupen Hazarika, Jayanta Hazarika, Khogen Mahanta etc. This idea is supported in the findings of experiment where the Ethnomusicological Group shows a significant difference with the Control Group, reinforcing that the intervention (the presence of ethnic instrumental music of Assamese, Bodo, Naga and Bengali) significantly impacts the perception of authenticity. When compared to the control group (Bollywood instrumental music), the intervention group believes their experience to be far more genuine (*Section 7.5*).

There is an expansion of findings of FGD that presentation of the ambiance could be enhanced not only by flavours but also by visual presentation, music and thus overall psychological presentation is needed to enhance the diners' experience (Section 8.2.8). Experiment confirms that the intervention group's respondents find the restaurant's ambiance to be highly welcoming, as compared to the control group who felt the atmosphere to be less welcoming because of ethnic music (*Section 7.9*).

As ***complementarity*** addresses different but non- contradictory agreement, the FGD pointed out that songs representing the culture is important. While representing culture it is not like that always Bihu songs should be played, may be Tokari Geet, Borgeet, songs of Khogen Mahanta, Bhupen Hazarika, Zubeen Garg, Angarag Papon Mahanta can also be played. When playing songs of popular artists selection of songs should be done very carefully. It was confirmed by the experiment that musical fit is very essential. Diners perceive that the choice of ethnic music (Assamese, Bodo, Naga and Bengali)

being played in the Ethnomusicological Group has strong musical fit with Assamese cuisine, Bodo cuisine, Naga cuisine and Bengali cuisine respectively (*Section 7.3*)

The meta inferences highlight how the three sets of findings converge, diverge, complements and expands in itself. This triangulation of findings of FGD with survey and experiment reflects neutrality or unerring nature of the findings of the work in totality. The joint display with narratives helped in bringing the findings of all the approaches in a single platform. This synthesis and integration of the findings enabled drawing a conclusion culminating all the three approaches. Thus, this triangulation helps in detailed exploration and understanding of impact of soundscape in diners' experience.

However, the triangulation could be conducted with limited variables and thus could not be used for the entire work, and for all the objectives exhaustively. However, limited its reach is, the results of the triangulations confirm the authenticity of the individual approaches.