**Overstimulation in Public Airports**

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**ABSTRACT**

The purpose of this study was to find the evolving issues of overstimulation that are currently affecting the general population in public spaces such as airports. The prolonged exposure to these stimuli can cause psychological stress, anxiety, dissociation, and irritability. This literature review explored how 9/11 impacted airport design and historically altered the way airports function leading to these newly developed spaces that cause psychological stress. Alongside the shift in airport design, the technological boom evolved the way we see and digest media. In combination of these historical impacts, public spaces are now filled with screens of overloaded information and stimulus our brains cannot absorb. This review is to not only acknowledge a new trending issue that has little research, but combat the psychological and physical responses while encountering these spaces.

Austin-Bergstrom International Airport is selected as a case study due to its rapid passenger growth in the previous years leading to it encounter some of the issues due to the shift in airport design and popularization of air travel. Austin-Bergstrom is used to gauge these trending issues and provide design consideration to combat future issues in public airports with the steady rise of travel.

**SIGNIFICANCE OF STUDY**

Overstimulation is a rapidly growing phenomenon in response to the rapid increase of technology and virtual space that allows for advertisements, marketing, and other excessive visual clutter to consume media and streets. Littering malls, tvs in homes, and displays of public space research shows this has a negative psychological affect on peoples health.

**WHY IS ADDRESSING OVERSTIMULATION IMPORTANT?**

- Understanding psychological distress impacted by overstimulating environments in airports
- Address common stressors in airports that cause overstimulation
- Create a more comfortable and welcoming space that is not overwhelming to its visitors

**NEGATIVE EFFECTS OF OVERSTIMULATION**

- Psychological Stress
- Anxiety or Fear
  - Neuropsych symptoms such as Bulimia
  - Frequent Headaches
  - Gastro-intestinal Disturbances
  - Depression
  - Cardiovascular Problems
- Avoidance/Disassociation as a response
- Emotional Stress
- Stimulus Dependency
- Fostering shorter attention-spans
- Instability or Hypersensitiveness
- Disturbance

(Vinson & Pearson, 1971; Sue & Omura, 2013; Bas-Salitza & Cermaik, 2010; Robson, 2017)

**RESEARCH QUESTIONS**

1. What environmental factors add to the causation of overstimulation in airports?
   - Is this a new phenomenon or one that has built over time and technology?

2. How can we design to decrease overstimulation in public spaces, such as airports that negatively affect the general public?

3. What design solutions can be implemented to better improve wayfinding, passenger experience, and psychological health?

**METHODOLOGY**

The previous questions guided and were probed during this study. This literature review was conducted to find the impacts of overstimulation in public spaces such as airports. There is little research on the effects of overstimulation as it is a new phenomenon following the quickly evolving technological boom. This is a currently trending issue not widely researched or applied to its consequences in public spaces. The primary method used to conduct this literature review was through the exploration and analysis of scholarly articles, case studies, and peer reviewed journals. This research was sourced from the following databases and magazines: Google Scholar, EBSCO, ISTOR and ArchDaily. Terms used to conduct this search: airports, design, visuals, overstimulation, sensory, stimulation, way finding, signage, universal design, technology, and stimulus.

The articles examined were used with specific research criteria including the psychological impacts on clients, customers, or travelers in a public space and the harm due to overexposure to these external environmental stimuli.

**REFERENCES**

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CONCEPTUAL FRAMEWORK

- Gestalt Theory
- Color Theory
- Person-Environment

Design Considerations & Inspiration

- Clear & concise signage
- User-friendliness
- Wayfinding

Example of design in spatial hierarchy: representing a structure in space, using the principle of size and scale to help orient the viewer.

- In 2016, Austin-Bergstrom International Airport was the 4th fastest-growing airport in the United States with $32 billion in implementation per year. This was an extension from area making it the fastest-growing airport throughout the United States. With this, the airport continues to struggle to cope with the number of daily travelers. Upgrading signs and the look of seating throughout the airport.

- Reconfiguration and expansion of emerging spaces: Updating and expanding these sections will accommodate the increase needs of the airport, ensuring the rise of prosperity in commercial travel.

- Improving the availability of signage will decrease confusion and anxiety.

AUSTIN BERGSTROM AIRPORT FLOOR PLANS

Austin-Bergstrom Airport Floor Plans were not accessible due to obvious security risks. Reconstructing a floor plan was a challenge. Using two different floorplans achieved while in conversation with the firm CRANE from New York who worked with Austin-Bergstrom in a professional sense along with the Master plans available online, I gathered up information on much as I could to relate this into a likeable plan of the building. I spent time watching hours of footage of the building and looking at and comparing maps to construct this plan. Below I show some of the components and maps I used to pull this plan together even with floor plans that weren’t detailed enough to visibly see its components.

REFERENCES


