Designing Non-Depressive Urban Built Environment: Case Study of Damietta City, Egypt

MONA MARIA¹, HANY M. AYAD², RANIA RASLAN³ and SALWA TOBAR⁴.

¹ Masters Student, Faculty of Engineering, Alexandria University. Email: mariamona838@gmail.com
² Prof. Dr. of Urban Design, Faculty of Engineering, Alexandria University. Email: hany.m.ayad@gmail.com
³ Dr. of Urban Design, Faculty of Engineering, Alexandria University. Email: rania.raslan@alexu.edu.eg
⁴ Prof. Dr. of psychiatry, Faculty of Medicine, Mansoura University. Email: tobarsalwa@yahoo.com
Re qualifying Our cities for happiness and health.

Urbanization

70% by 2050 (UN, 2015)

Effect on Health

Physical health

Mental health

Urban health

Healthy City 1986

Happy City

Active City

Green City

Is there a relationship between ....? How we can improve M.H through urban design?

Urban built environment

Mental Health
A state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.

**MENTAL HEALTH RELATED ISSUES**

- **1 in 4** people will have a diagnosable mental illness. (WHO)

- Mental disorders are the third largest source of disease burden after cancers and cardiovascular diseases, but the largest source of disability burden 7.4%, (Begg S, et al.2007)

- Many mental health problems are more common in cities: Depression (39% more), Anxiety (21% more) and Schizophrenia (double). (WHO)

- the evidence that urban living causes mental illness is inconclusive and biased by self-selection. (Litman, 2017).

**HEALTH & MENTAL HEALTH**

- Mental disorders are the third largest source of disease burden after cancers and cardiovascular diseases, but the largest source of disability burden 7.4%, (Begg S, et al.2007)

- Many mental health problems are more common in cities: Depression (39% more), Anxiety (21% more) and Schizophrenia (double). (WHO)

- the evidence that urban living causes mental illness is inconclusive and biased by self-selection. (Litman, 2017).
Urban Health Happiness Health

Urban

Urban built environment

External

Internal

Urban spaces

Urban density

Transportation & accessibility

Socio-economic characteristics

Physical health

Mental health

Theoretical study
Practical study.

How to measure Mental health?
- Select the disease: depression
- Select the suitable scale for measuring:
  - Hamilton Rating Scale for Depression (HAM-D or HRSD)
  - Beck Depression Inventory (BDI)
  - Etc....

How to Apply to Urban design?
- Choose a city: Damietta, Egypt.
- Link data to the site using GIS:
  - Green Space
  - Blue Space
  - Density
  - Transportation & Accessibility
  - Socio-Economic Characteristic

- Urban study of the city:
  - 4 areas
  - 445 person
  - 2 - High socio-economic characteristic
  - 2 - Low socio-economic characteristic

Practical study.
Damietta city, Egypt

Location

Economic

Social

Urban

Diversity in the economic base

Tourism

Fishing

Damietta port

Eastern sweets
carpentry

commercial

Hand crafts

Small production unit

No unemployment

Youth & children work

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**INTRODUCTION**

**REVIEW**

**METHODOLOGY**

**CASE STUDY**

**RESULTS**

**CONCLUSION**

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**Low socio-economic characteristic**

**High socio-economic characteristic**

**Damietta (4 areas) – 445 people**

- **Location**
- **Economic**
- **Social**
- **Urban**

- **Green Space**
- **Blue Space**
- **Density**
- **Transportation & Accessibility**
- **Socio-Economic Characteristic**

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- **A**
- **B**
- **C**
- **D**

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- Religious
- Scholastic
- Commercial
- Residential
- Handicraft

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**Introduction**

- **Location**
- **Economic**
- **Social**
- **Urban**
  - **Green Space**
  - **Blue Space**
  - **Density**
  - **Transportation & Accessibility**
  - **Socio-Economic Characteristic**

**High socio-economic characteristic**

**Low socio-economic characteristic**

**Results**

**Case Study**

**Conclusion**

**Review**
**INTRODUCTION**

- **Location**
- **Economic**
- **Social**
- **Urban**

**Methodology**

- **Low socio-economic characteristic**
- **High socio-economic characteristic**

**Case Study**

- **Density & Mixed uses**

**Results**

**Conclusion**
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**Location**

**Economic**

**Social**

**Urban**

**Green Space**

**Blue Space**

**Density**

**Transportation & Accessibility**

**Socio-Economic Characteristic**

---

**Low** socio-economic characteristic

**High** socio-economic characteristic

---

**Transportation & Accessibility**

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**International coastal road**

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**Religious**

**Scholastic**

**Commercial**

**Residential**

**Handicraft**

**Regional public transport station**

**Local public transport station**

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**A**

**B**

**C**

**D**
### Statistical Analysis of the Data

Table (1): Relation Between Severity Of Depressive Symptoms With Areas In Damietta (n=445). **ANALYSIS by SPSS**

<table>
<thead>
<tr>
<th>Area do you live in Damietta</th>
<th>Severity of depressive symptoms</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal (n=97)</td>
<td>Mild (n=105)</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>A</td>
<td>26</td>
<td>26.8</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>20.6</td>
</tr>
<tr>
<td>C</td>
<td>15</td>
<td>15.5</td>
</tr>
<tr>
<td>D</td>
<td>25</td>
<td>25.8</td>
</tr>
<tr>
<td>Others</td>
<td>11</td>
<td>11.3</td>
</tr>
</tbody>
</table>

\[ \chi^2 (p) = 29.428^* (0.021^*) \]

**χ²:** Chi square test  
**p:** p value for comparing between groups  
***: Statistically significant at p ≤ 0.05

(HAM scale) doesn't express a diagnosis of depression disorder but gives indicative scores for symptoms severity.

33.5% of the total sample required for entry into a clinical trial.
indirect evidence of relationship between M.H & Urban built environment.

we can improve M.H through urban built environment.

**Human Needs**

- **socio-economic Characteristic**
  - Low: Poor urban environment
  - High: Rich urban environment

- **Damietta city**
  - Accessibility and proximity to work
  - Focus of:
    - Calm, services and availability of a green area

**Urban Design**

**Human Senses**

- **Direct interaction**
  - With urban built environment attributes (green, blue, ...)
  - During the daily experience
  - Can paint a Mental picture of the place on soul and mind.

**REVIEW**
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**RESULTS**
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Thank You