

The Role of Sciences and Arts for Boosting the Designing interior Spaces of the Wellbeing of those Affected with Catastrophes (COVID-19 & War as Example)

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Search supervisors

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Abstract

Giving a blind eye to the behavioral sciences in interior design especially called us to shed the light on the most significant aspect of the design process, i.e. the human being, and to attend to her/ his psychological state in order to correct the design process so the start shall be from the human being and end with her/ him. Hence, we need to correlate the theoretical sciences such as psychology, of all its types and schools, with the applied sciences such as design in order to reach the psychological design that is known to be:

The design where psychology shall be the main designing tool

The study was conducted in 2020 with the help of Irtiqaa Development Society in Damascus; a society that holds a large number of displaced families children who came from the governorates and suburbs seeking tranquility and security running away from the dangers of disasters. The controlled group was elected (specialists in art therapy and psychology from this association) in accordance with the statistical probability theory (the group is deliberately aimed).

Keywords:

Interior Design - Art Therapy - PTSD - Evidence-Based Design

Search Terms

The following phrases and terminologies, whenever they occur, shall have the meanings stated next to them: -

Wellbeing Boosting: it is the limitation of the disorders that cause an abnormal change in the human being behavior and psyche which help in self- control and increases her/ his ability to select the behavior suitable for immersion with the new social standards.

Post- traumatic Stress Disorders PTSD: it is a consequent reaction of adults in general, and children in specific, caused by (human catastrophe) or more, such as physical and sexual assault, terrorist attack, war, imprisonment, political detainment, or torture, or (natural catastrophe) such as fire and earthquakes. This interaction between the mind and body makes the individual on a constant perception of the trauma causing the overlap pf a person with his/ her- self, and staying away his/ her emotions.

Artistic Therapy: the America Association defined it as being one of the forms of boosting the wellbeing psychologically and physically using art as the main method for communication and expressing.

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Introduction

Fisher's ⁽¹⁾ definition of psychological design stated that it is the design which creates spaces that psychologically and physically supports the user in order to become an innovative producer. That the psychological design relies in its design product on a personal that dawn on the user's character and understanding her/ his behavior in order to meet her/ his psychological and physical needs. Sternberg* confirms the necessary design of spaces based on the users reactions study. Boosting the wellbeing of the spaces users relates to their perception and understanding of the space (Sternberg,2010); here, we can find out that the overlapping area between psychology, as a theoretical science, and design, as an applied science, correlates in several terminologies, the most significant of which are: study of character, emotion, behaviour, cognition, and relations among persons ², recognizing the space interior design on the mutual dialogue between the space users and the designer so that such dialogue would produce a design product that fits their needs.

Natural and human catastrophes usually cause troubles that affect the surrounding circumstances of human being; such troubles may be social or societal. The social trouble relates to the conflicts, addition, violence... etc. suffered by the family; while the societal troubles are caused by the economic, political, and educational flaw... etc. this negatively reflects on the societal life and societal wellbeing. Some health related natural disasters emerged, COVID-19, besides the emergence of some human disasters represented by wars and conflicts. Such conflicts had huge negative influence unto the children and the elderly

First: Natural Health Related Disasters, COVID-19 as Example:

COVID-19 pandemic changed our lives enormously. It is an unprecedented global biological threat regarding size and duration that is it still continuant, affecting us in whole regardless the skin colour, race, and fortune.³

Despite the fact that COVID-19 is a third viral spread over the past twenty years, it is the first in the twenty-first century that affects countries all over the continents, save Antarctica.⁴

This pandemic was accompanied with home quarantine which took part in causing wellbeing disorders of all social strata without exceptions, especially the children and the elderly. Quarantine helped in increasing depression and anxiety symptoms due to the fear of the negative characteristics of the disease and contracting it; this quarantine helped in increasing the (psychological, physical, and mental) health problems, and built up a barrier hindering immersion with society. Mass media have been having a role in expedition of the psychological disorder process of the elderly that they have supported in their reports that the pandemic targets the elderly ⁵, even children have not been safe against its consequences. During quarantine, they endured a chronic stress period such as compulsory quarantine from their peers due to social distancing. This quarantine caused mental and psychological stresses. Suspending school and prevention going out to parks and playgrounds cause the emergence of post- traumatic stress disorders such as anxiety and acute depression; this catastrophe caused the deterioration of provision of preventive and therapeutic societal services.⁶

1) Ellen Fisher: contemporary interior designer, American researcher, holder of doctorate in psychological design, lecturing professor in the New York College of Interior Design, specialized in EBD based design.

* Esther M. Sternberg: contemporary doctor, expert in physical and psychological wellbeing, lecturer in most of the universities of the European Union, with a wide experience in linkage of senses to the surrounding ambience.

2) Khalil Ibrahim Ali, 2007. Psychological language in architecture. School of Architecture. Baghdad

3) Ahmad A, Mueller C and Tsamakis K: Covid-19 pandemic: A public and global mental health opportunity for social transformation? BMJ. 369(m1383)2020.PubMed/NCBI View Article : Google Scholar

4) Docea AO, Tsatsakis A, Albulescu D, Cristea O, Zlatian O, Vinceti M, Moschos SA, Tsoukalas D, Goumenou M, Drakoulis N, et al: A new threat from an old enemy: Re-emergence of coronavirus (Review). Int J Mol Med.

5) Pan American Health Organization (PAHO): Policy Brief: The impact of COVID-19 on older persons. <https://www.paho.org/en/documents/policy-brief-impact-covid-19-older-persons>. Accessed May 1, 2020

6) Loades ME, Chatburn E, Higson-Sweeney N, Reynolds S, Shafran R, Brigden A, Linney C, McManus MN, Borwick C and Crawley E: Rapid systematic review: the impact of social isolation and loneliness on the mental health of children and adolescents in the context of COVID-19. J Am Acad Child Adolesc Psychiatry. 2020

Persons with health and mental diseases undergone increased relapses of anxiety, depression, hallucination, and paranoia, increasing the percentage of suicide lately.⁷

In a 2020 study in Manitoba, Canada, they found out that COVID-19 pandemic has an effect on children affected with post-traumatic stress disorder due to not returning back to school and social communication with the friends and relatives causing more deterioration of the psychological and physical wellbeing. The study explained that this pandemic caused the suicide of 22 girls aging between 11 – 17 years old.⁸

Second: Health Related Human Catastrophes (Wars as Example):

Mass media all over the world do usually transmit the image of material destruction made to the buildings and infrastructures; however, they are unable to transmit the volume and depth of the psychological influences of war on inhabitants. War in Ukraine destructed the life of everyone despite their identities; we witnessed the panic of children, strife of parents to remain alive, while such conflict underlies the horrors suffered by millions of the elderly, isolated, all alone. A Human Rights Watch report of 2022, addressing the different world conflicts, confirmed how the elderly are exposed to the same violations endured by others mercilessly, including homicide, assault, kidnap, rape, or torture – they might be exposed to larger danger.

The report documents other challenges overtook the displaced children that are facing difficulties to access and obtain aids in Syria and Southern Sudan, in addition to arbitrary detainment and imprisonment in Ethiopia.

Catastrophes and crises must be an alarm for governments and international community to wake up for defining the requirements of the persons affected with catastrophes and addressing their needs. This corresponds to what the World Health Organization confirmed on the necessary attention to the societal and health spaces, especially those dedicated for children and the elderly. In Germany, they started to concentrate on the term “Psychological Designer” who seeks constantly scientific methodologies and designing principles linking psychology to art in order to obtain preventive wellbeing spaces. The question raised here is:-

How can interior design have a positive and preventive influence on those affected with the catastrophes?

In order to answer this question, it was necessary to benefit from the findings of sciences and correlate them in order to find designing bases that help in the production of an interior design which meets the requirements of its users; in order to attend to the wellbeing of those affected with catastrophes and boost it based on the opinion of experts in interior design and psychological and artistic therapy. The survey (Annex 1) aims at reaching designing preventive, not therapeutic, wellbeing spaces for the assessment of quality of usage of some design elements in the interior design taking part in boosting the wellbeing of the space users and change their behaviour based on the findings of some cognitive sciences. Hence, the targeted sample comprised 15 experts of psychological and artistic therapy specialists and 15 academic experts of interior design. It was sufficient to conduct the statistical work suitable for the variables of the research study*. The survey was formulated and distributed under the supervision of specialists coping with the nature of study; the questions were multiple-choice questions, and the answers were of numerous aspects. The survey collection process was conducted personally, between the research and specialist, via personal interview. The survey was prepared pursuant to numerous axes that relate the interior design elements (form – material – colour) with multifunction spaces, i.e. (reception and waiting – diners – sports activities – health swimming pool – group activities – diagnosis – music health boosting – artistic health boosting – sensual training – Movement training).

The statistical processing was conducted depending on the Statistical Package for the Social Sciences SPSS through entering the surveys (subjects responses) according to each question, then feeding many answers to the response degrees

7) Moreno C, Wykes T, Galderisi S, Nordentoft M, Crossley N, Jones N, Cannon M, Correll CU, Byrne L, Carr S, et al: How mental health care should change as a consequence of the COVID-19 pandemic. *Lancet Psychiatry*. 7:813–824. 2020

8) Colin A. Capaldi. 2021. Original quantitative research – Suicide ideation in Canada during the COVID-19 pandemic <https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-41-no-11-2021/suicide-ideation-covid-19-pandemic.html>

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in every access of the study, then, each phrase had a percentage for every phrase, and it was analyzed. Analysis included the following:

- a- Percentages and frequent distributions (qualitative study) and relative weight.
- b- Independent T Test for testing the comparison of study between the first group (interior design experts) and the second group (psychology and artistic therapy experts). The comparison was conducted between the average appraisal of the first group with the average appraisal of the second group through T Test and the immaterial significance for measurement at 95% trust percentage through rule:

(If Sig \geq 0.05, no significant differences)

(If Sig \leq 0.05, there are significant differences in appraisal)

A table comparing the results of the questionnaire among specialists regarding the use of some elements of interior design in the spaces of community centers

Spaces	Design Elements	Psychology and art therapy specialists	Interior design specialists
Waiting room and reception	Blocks walls	<ul style="list-style-type: none"> • vertical angle • curved walls 	<ul style="list-style-type: none"> • vertical angle • curved walls
	cladding materials	<ul style="list-style-type: none"> • Wood 	<ul style="list-style-type: none"> • Wood
	Colors	<ul style="list-style-type: none"> • Calm pastel colors 	<ul style="list-style-type: none"> • neutral
There are significant differences in the evaluation of the axes, which is for interior design			
Work shop	Blocks walls	<ul style="list-style-type: none"> • vertical angle • pyramidal block 	<ul style="list-style-type: none"> • vertical angle • curved walls
	cladding materials	<ul style="list-style-type: none"> • Wood • Metal 	<ul style="list-style-type: none"> • Wood
	Colors	<ul style="list-style-type: none"> • Orange • Calm pastel colors 	<ul style="list-style-type: none"> • Calm pastel colors • neutral
There are significant differences in the evaluation of the axes, which is for interior design			
dining space	Blocks walls	<ul style="list-style-type: none"> • vertical angle 	<ul style="list-style-type: none"> • vertical angle
	cladding materials	<ul style="list-style-type: none"> • Glass • Wood 	<ul style="list-style-type: none"> • Wood
	Colors	<ul style="list-style-type: none"> • Calm pastel colors 	<ul style="list-style-type: none"> • Orange
There are significant differences in the evaluation of the axes, which is in favor of the interior design			
sports	Blocks	<ul style="list-style-type: none"> • Italic 	<ul style="list-style-type: none"> • vertical

space	walls	• Cylinder	angle
	Cladding materials	• Wood	• Coated cement
	Colors	• Calm pastel colors	• Orange
There are significant differences in the evaluation of the axes, which is in favor of psychology and art therapy			
Spa area	Blocks walls	• curved walls	• vertical angle • curved walls
	cladding materials	• Glass	• Coated cement
	Colors	• Blue • Calm pastel colors	• Blue • Calm pastel colors
There are significant differences in the evaluation of the axes, which is in favor of the interior design			
Montessori space	Blocks walls	• Italic	• vertical angle
	cladding materials	• Wood	• Wood
	Colors	• Blue	• Calm pastel colors
There are significant differences in the evaluation of the axes, which is in favor of psychology and art therapy			
Diagnostic spaces	Blocks walls	• vertical angle	• vertical angle
	cladding materials	• Wood	• Wood
	Colors	• Calm pastel colors	• Green and its gradients • neutral
There are significant differences in the evaluation of the axes, which is in favor of interior design specialists			
health promotion spaces with Music	Blocks walls	• قبة • Ball	• curved walls
	cladding materials	• Wood	• Wood
	Colors	• Calm pastel colors	• pastel colors • neutral
There are significant differences in the evaluation of the axes, which is in favor of psychology and art therapy			
health promotion	Blocks walls	• curved walls	• vertical angle • curved walls

spaces with Art		cylinder	
	Cladding materials	<ul style="list-style-type: none"> • Wood • Glass 	<ul style="list-style-type: none"> • Coated cement
	Colors	<ul style="list-style-type: none"> • yellow • Purple • Calm pastel colors 	<ul style="list-style-type: none"> • pastel colors • neutral
There are significant differences in the evaluation of the axes, which is in favor of psychology and art therapy			
Sensory training spaces	Blocks walls	<ul style="list-style-type: none"> • cylinder 	<ul style="list-style-type: none"> • vertical angle
	cladding materials	<ul style="list-style-type: none"> • Wood • Glass 	<ul style="list-style-type: none"> • Wood
	Colors	<ul style="list-style-type: none"> • Green • Calm pastel colors 	<ul style="list-style-type: none"> • neutral
There are significant differences in the evaluation of the axes, which is in favor of psychology and art therapy			
Movement training spaces	Blocks walls	<ul style="list-style-type: none"> • curved walls 	<ul style="list-style-type: none"> • vertical angle • curved walls
	cladding materials	<ul style="list-style-type: none"> • Wood • Glass 	<ul style="list-style-type: none"> • Wood • Uncoated cement
	Colors	<ul style="list-style-type: none"> • pastel colors • Green • Yellow • Orange 	<ul style="list-style-type: none"> • Red • Orange • Yellow
There are significant differences in the evaluation of the axes, which is in favor of the interior design			

Recognizing the form and colour of the interior space of its content and definers helps in resolving the problem of hard immersion with the ambience; it can be achieved through EBD space design that meets the user’s needs.

Findings:

- 1- It was noted that there is a contrast between the answers of interior design specialists and the psychology and artistic therapy specialists highlighting that there is no clear prior structure that assists in the design of the preventive wellbeing spaces which meet the needs of users within such spaces. However, we have now bases to start the coming researches.
- 2- The answers of the specialists in some interior design elements corresponding for the following spaces:
 - Waiting Space: with upright or curved walls, and wooden cladding.
 - Group Activity Space: with upright walls, wooden cladding, using quit colours.
 - Diners Space: with upright walls and wooden cladding.
 - Health Swimming Pool: with curved walls, using blue colour.
 - Montessori Space: it is preferred to clad its walls with wooden material.
 - Diagnosis Space: with upright walls and wooden cladding material.

- Music Space: with curved walls, wooden cladding of space, and using pastel colours.
- Artistic Work Space: with curved walls accompanied with quit pastel colours.
- Sensual Training Space: with wooden cladding material.
- Movement Training Space: with curved walls and wooden walls, accompanied with using the yellow and orange colours.

Appendix 1

The questionnaire is addressed to specialists in interior design, psychologists and art therapy												
Name:		Workplace:				Scientific Major						
The following is a questionnaire that includes inquiries about the methods of using some interior design elements (shape - color - material) within the spaces of the community centers, where the specialist can choose more than one answer												
topics	options	Waiting room and reception	dining	work shop	sports space	Spa area	Montessori	Diagnostic	health promotion spaces with Music	promotion spaces with	Sensory training spaces	Movement training spaces
The right block for a space function	Vertical angle											
	Italic angle											
	Curved walls											
	pyramidal block											
	cylinder block											
	dome - part of a) (sphere											
	Other block											
The appropriate covering material for the function of the space	inner cover (ceilings - walls)	Uncoated cement										
		coated cement										
		Wood										
		Metal										
		Glass										
		Other material										
The right color for space function	Red. Gradients											
	Orange. Gradients											
	Green. Gradients											
	Blue. Gradients											
	Yellow. Gradients											
	Violet. Gradients											
	Calm pastel colors											
	neutral colors White - Black -) (Gray - Beige											