

Design in a Context of Social Equity: Concerning Therapy Rooms in Schools

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ABSTRACT

This paper, suggests a contemplation on the vital importance that design represents for the human being as an integrating factor in society, enabling safe therapeutic spaces in schools, aiming for social equity, in the context of the SARS CoV2 pandemic. Furthermore, we look upon the increase of mental disorders (anxiety and depression) among students, caused by quarantines, and how this could lead to greater demand for therapy spaces in schools. We also analyze examples of existing therapy rooms, and one project for a room, to be implemented in the same inclusive school. Reflecting on a concept of social design, from the observational point of view, of sensoriocognitive comfort, in their contemplation of the hypothetical, revitalizing and multisensory ergonomic enjoyment of its collective well-being.

Keywords: Design, Social equity, Therapy rooms, Welfare

INTRODUCTION

The pandemic caused by SARS CoV2 virus, has forced us, not only to drastically change our social habits, but it has also mandated an inhibition to be with our relatives, peers, co-workers, and friends, for some periods of time, depending on the outbreak on the country, concerning the lockdowns felt across the globe. This reality had a severe impact among young people, who felt trapped indoors, not being able to attend school, to socialize with their peers and to engage in social behaviors. Online platforms were the primary means of communication, but the privation of social interaction has been proved to have a severe impact on children, adolescents and even adults' mental health (Loades, 2020). Studies show an increase of about 25% in cases of anxiety and depression in young people, motivated by the pandemic and the lockdowns. UNICEF alerts of the high impact, on the mental health and well-being of children and young people, that the confinements, continues to cause, as well as some type of loss in terms of education, in more than 1,6 billion children (UNESCO, 2020). The school emerges as a lifesaver, a space for education, socialization, and therapy, although not always equipped for the current reality that the world is going

through. The classroom gives way to the therapy room, within the school itself, where students learn to deal with the new reality. Design emerges as an enabling tool to create suitable spaces for this new learning process, in a conceptual perspective for the user, for his senses and multisensory, in the contexts and somatosensory and synesthetic situations, focusing on sensory and multisensory perception, where space, equipment, colour, and feeling take place.

METHODOLOGY

We intend to analyze existing cases, using a mixed theoretical, qualitative, and quantitative methodology, based on literary review, case study, data review, and interviews. Thus, this paper aims to assess the real potential of these therapy rooms in schools, their usability, and benefits for target audience, and also how designers can use guidelines to design safer and more inclusive therapy rooms, that might ultimately improve the experience in school.

EDUCATION IN TIMES OF A PANDEMIC

Anna Feitosa (2018, p. 333) states that “Man is born an individual and becomes a person, in expressive and affective contact with others and with himself”. In this sense, “man is a praxic being, eminently cultural, open to the world, to others and to transcendence (...), he exists and is humanized in the other.” (Feitosa, 2018, pp. 333–334). She also defends that, in this sense, “Well-Being is a state of consciousness resulting from a conscious process of balancing Internal, Inter and Transpersonal relationships, in a given sociocultural context.” (Feitosa, 2018, pp. 333–334).

Also, (Guessoum, 2020, Brooks et al., 2020, Loades et al. 2020) refer the importance of social touch to develop cognition, relationships, emotions, attachment, as well as to be able to control one’s response in stressful situations. They imply social distancing and school closure (quarantine) may increase loneliness among young students, which may also lead to anxiety, depression, and other mental health problems. The pandemic forced the world to lockdown, in order to stop SARS CoV2 virus from spreading further. That decision would ultimately have a high price to pay, for our younger generations.

“Education makes an essential contribution to building inclusive and democratic societies, in which different opinions can be expressed freely and in which a wide variety of voices can be heard, in the pursuit of social cohesion and in the celebration of diversity.” (UNESCO, 2020, p. 8).

Equity in Schools

This concept has been re-dimensioned considering the pressing needs, especially of an educational, cultural, and scientific nature, to find and equate the most solid and promising hypotheses for the investigation and development of fostering and dynamizing projects, of processes that can enable human

inclusion in the most varied areas and diverse levels of knowledge and presentation in the performance of functions in a scope as holistic as imagination can reach. Equity in schools, essentially with regard to the teaching/learning of different subjects to students conditioned by limitations or disadvantages of a different nature, especially sensory, cognitive or neuromotor, in analogy and together with students without these constraints, is a basic principle, structured and grounded in an exploratory study carried out in an equitable educational and educommunicational way, which urgently needs to be carried out in a broad multisensory dimension and based on criteria of rigor, clarity and objectivity in which coherent confirmation is observed through experimental or comparative verification.

The scientific, disciplinary, multidisciplinary and transdisciplinary theme, within the scope of educommunicative and cultural pedagogical specificities to be pursued in equity, imposes the obligation and duty to assess and feature details and to consider solution hypotheses in relation to problems that make teaching/learning difficult, from pre-school and basic education to higher and more complex levels, to students with and without learning difficulties, mainly in an equitable didactic context in the classroom. This educational establishments that promote 'inclusive', with specific programs, are equipped with therapy rooms and trained professionals to welcome students with special educational needs, allowing a healthy development of the child in a school environment, unfortunately the number of these schools is insufficient to meet the needs of all students. This is a requirement that should be mandatory in all schools as they are included in the classification of Individual Environmental Factors: "(...) in the immediate environment of the individual, encompassing spaces such as the home, the workplace and the school. This level includes the physical and material characteristics of the environment in which the individual finds himself, as well as direct contact with other individuals, such as family, acquaintances, colleagues, and strangers." (ICF-WHO, 2004, p. 19).

The creation of an inclusive space is a process that is constantly adapting, as it depends on the students and their needs as they grow. This adaptation is also made to the teaching method, which may need to be adjusted to more specialized teaching, or the help of a SEN therapist/teacher at school on a part-time or full-time basis. Therapy spaces in inclusive schools, like classrooms, should offer a safe environment, without distractions and capable of keeping the user interested in the activity. However, schools often do not have adequate spaces to carry out the therapies necessary. The spaces assigned to therapeutic activities are usually shared spaces, in rooms or offices adapted for this purpose, which causes some problems such as: inadequate lighting, lack of storage for equipment, poor spatial organization, which forces, for example, a restructuring of the room from session to session. According to interviewed therapists, on some occasions, they use medical offices (out of school) to carry out their sessions, which is counterproductive as most users often react badly to the hospital environment. A room prepared for therapy purpose will eliminate possible sources of distraction, encourage therapeutic activity and will be prepared according to the needs of the therapists and users.

RESULTS AND DISCUSSION

Anxiety and Depression in Students

Anxiety is a normal reaction to stress, that can warn us in dangerous situations, and make us stay alert, for example. Anxiety disorders, on the other hand, involve excessive fear or anxiety, which can interfere with our daily life, and are the most common of mental disorders, affecting nearly 30% of adults, throughout their lives. There are several treatments available that can bring back a sense of normality to life, (Muskin, 2021). Depression, or depressive disorder, is a serious and common disease, which negatively affects the individual's life, his way of thinking, acting, and feeling the world around him. It can cause a series of emotional and physical problems, preventing the person from feeling pleasure, or interest in daily activities, and reducing the ability to work. Like anxiety disorder, depression also has treatments available, (Torres, 2020). Both disorders can differ from mild to severe symptoms and emerge from a very young age settling with the individual.

In a study analysis (Mireia Orgilés et al., 2021), concerning anxiety and depression levels increase after lockdown, carried out with young students from Italy, Spain, and Portugal, it was concluded that in 515 participants, 19% of children and adolescents showed depressive symptoms, and the 38% presented anxiety symptomatology, after mandatory confinement. It was also found that Spanish students had a higher rate of symptoms of anxiety (56%) and depression (26.4%) compared to Italian students (34,1% anxiety and 19,8% depression) and Portuguese students (26,5% anxiety and 8,5% depression). The explanation given for this difference in results assumes that it may be related to more restrictive measures for confinement in Spain, with no to little chance of going outside, contrary to what happened in Portugal, where confinement allowed short hygienic walks, no time limited. These results are also related to the stress and anxiety parents felt during quarantine, the fear of infecting a relative, and the fear of contracting the disease itself.

Yet another study analysis (Oliveira, Oliveira & Barbosa, 2021), shows that during periods of confinement, some students, mainly with SEN, saw their access to education limited or even denied (25,5% of the total inquired), either because they did not have technological equipment that allowed them to access remote teaching, or activities were not adapted for students with disabilities, or cognitive difficulties that prevented them from operating alone and learning by the same means. This problem is global (UNESCO, 2020), more than 90% of the student population was affected by school lockdowns, due to the COVID-19 pandemic, they predict that the consequences of this disruption of normality will be unprecedented in the history of education. It is also mentioned that social differences and disparities in access to technological means seriously increase the risk of learning loss or dropping out of school, increase in anxiety and stress, by the most disadvantaged.

“Responses to the COVID-19 crisis, which has affected 1.6 billion students, have not paid enough attention to including all students. While 55% of low-income countries have opted for online distance learning in primary and secondary education, only 12% of families in least developed countries

have access to the internet at home. (...) Overall, around 40% of low- and lower-middle-income countries do not support students at risk of exclusion.” (UNESCO, 2020, p. 15). They call on nations to broaden their understanding of inclusive education so that all students can be included, regardless of their origin, identity, skills, or abilities. Not only about learning, but for some students, schools are also the primary if not the only provider of a warm meal, and a safe place. When on quarantine, some families struggled to provide for their children, increasing the stress levels, already at a peak.

Inclusive Design for Social Equity

Design, in a context of social equity, is extremely important as it works on the needs of each individual and the same individual in the community, thus, it can be perceived as a tool that allows to transform spaces, equipment, and environments, according to the target audience requirements. Promoting social inclusion, for the intrapersonal and sociocognitive enrichment in the relationship and interaction in human society, where there can be no lack of space for anyone, in citizenship and equity.

“Environmental factors interact with body functions”, acoustic and thermal concerns (materials), quality of air, the identification of spaces of permanence or exit, the orientation and positioning of objects in a space, light and vision, sounds and hearing, the materials, textures of floor, walls and ceiling, hygiene and safety fire resistance, and even the colors present, are characteristics that allow instilling sensations of comfort and well-being to its users (ICF-WHO, 2004). The CDPD recommends a universal design to increase functionality and accommodate the needs of everyone, regardless of age, size, or abilities. Incorporating full access installations early on increases the cost by 1%, compared to 5% or more upon completion (UNESCO, 2020, p. 21). When transforming an existing space, the changes will occur mainly in terms of the organization of spaces and the use of existing equipment. However, these can also be changed with materials that allow a better use of space, or improve acoustic and thermal conditions, for example.

A design project, made from scratch, will allow the choice of location of all equipment, lighting points and construction materials, as well as the choice of room size and placement or omission of windows, for example. As for the work carried out by the therapist in both spaces, and according to the results obtained in interviews, the choice of a space, designed from scratch, or an adapted space, is irrelevant, since the therapy and the therapist adjust themselves to the spaces they are given. They only showed interest in the existence of fixed spaces for therapy, in schools, so that students or users get used to a certain workspace. The importance of maintaining therapy at school is related to keeping students with SEN integrated into the classes they are destined for, involving them as much as possible in teaching activities. Sharing experiences with their peers hence, including them in society. The purpose of the space will also influence colour selection. In spaces with too many visual stimuli, for example, choosing a neutral colour will be a better option, however, in a project developed for children, the choice lies in vibrant colours, those that draw attention, either to the space or to the equipment



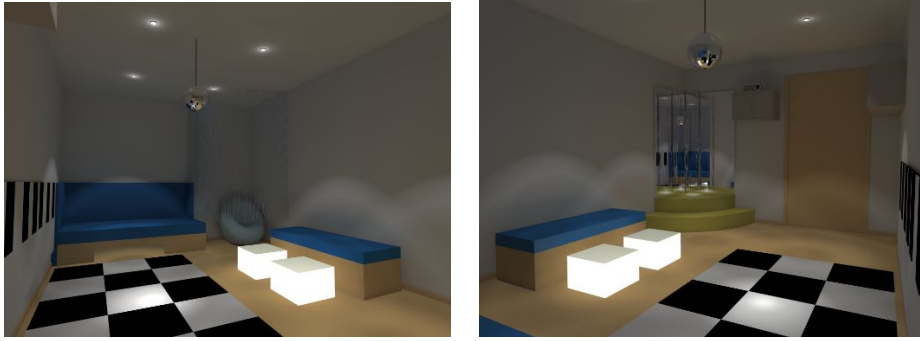
Figures 1 and 2: Therapy rooms, for physiotherapy, psychomotricity, and speech therapy, in Centro Helen Keller, Lisbon, Portugal. (Photo by author, 2016)

(see Figures 1 and 2). The designer can also choose to use patterns increasing visual stimulation, although bearing in mind that this use is not excessive, as it can cause optical illusion and confusion. Colours are present in everything around us and influence our choices and decision-making. These can be based on the energy of the colour in question, our personal preference, or the psychological influence each colour has on us.

“Light and colour, in particular, may affect behavior and social interaction. Therefore, they must serve as psychological aids to recovery, or at the very best be instrumental in the development and maintenance of well-being.” (Mahnke, 1996, p. 163).

The therapy rooms at Center Helen Keller are designed for the needs of the students who study there. The aim of these rooms is that students do not have to leave the school for (individual) therapies, being able to return quickly to their classes. The state encourages the integration of students with SEN for a minimum period of 60% of the activities carried out in the classroom, so that the number of students per class can be reduced, which can become difficult to fulfill if the student must leave school for therapy (Viana, 2016). Therapy rooms at the school also promote the well-being and confidence of students, as they get to know the spaces and professionals they deal with daily, becoming more receptive during therapy. As for specific rooms, such as a Snoezelen room, or a multisensory therapy room (see Figures 3 and 4), experts such as Rompa and Forbrain Snoezelen Room, recommended the use of rooms with quadrangular or rectangular plans to facilitate the arrangement of equipment, but this recommendation does not prevent the development of spaces with other formats. The recommended dimensions are between 20 to 60 square meters, avoiding very small or very large spaces. When working spaces with larger areas, it is recommended to create different ‘islands’ with various sensory characteristics, for the user not to feel lost in the space. In small areas, however, a designer should consider room for the therapist to circulate, and for a wheelchair if any user requires one.

Furthermore, Saes (2019a), one of the authors, presents a thorough doctoral research which explores the design of therapy rooms in inclusive schools,



Figures 3 and 4: Snoezelen room designed for Centro Helen Keller, Lisbon, Portugal. (Project by author, 2019)

presenting guidelines for the construction of these same rooms, praising the importance, for students with disability, to have such rooms in schools. With the fast increase of anxiety and depression cases, soon a vast majority of students might need to attend therapy. A therapy room in school which allows working individually or in groups, could help to put an end to the taboo that still haunts mental illness.

CONCLUSION

This article allowed us to research the harmful effects that, not only the pandemic caused by the Sars-Cov2 virus, but also the consequences resulting from the several confinements at home, left on young students, but also permitted us to inquire about the teaching and therapy spaces in school, aiming to show the usability and benefits of these therapy rooms for target users, based on solutions originated within the scope of doctoral research, by author, to improve these same spaces, while presenting the importance design can have in social equity.

We can also conclude that inclusive design is able to create interchangeable and adaptable spaces for necessary therapies in schools, changing the space characteristics, such as choice of materials according to hygiene, safety, acoustic and thermal comfort, fire resistant; colours of the space according to target audience, allowing the therapist to work proposed activity with equipment as well as the space as tool, while promoting inclusion of the students who undergo therapies at school together with their peers. These characteristics can be altered depending on the needs for each school, institution, association, aiming to foster safe and comfortable spaces for users, therapists, teachers, those who wish to use the room.

Future investigation about the process post pandemic would be beneficial, as we are yet to understand the real impact this pandemic will have on society. Schools, classrooms, therapy rooms, are spaces that should promote the well-being of the student, returning to normality, providing not only an apt space for socializing and learning, but also a space for healing, so important in the years that will follow the end of the pandemic.

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