

Decoration of Ceramic Tile by Outsible Materials, as a Universal Method of Treating Children under the Conditions of Hospital

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Abstract

A modern person, being subjected to ever-increasing loads, is forced to constantly think about the preservation of health and efficiency. Consultative and treatment centers have gradually become important objects of maintaining health, in which people spend quite a large part of their time, starting from the first days of life. Unfortunately, in recent years, a significant proportion of patients at medical centers and clinics have been composed of children of different age groups, as the most vulnerable part of society carrying the burden of the social life of a metropolis. This article analyzes the possibility of using overglaze painting to create visual images of any degree of complexity on the surface of ceramic tiles when designing medical centers for treating children.

Keywords: children's medical centers, ceramic tiles, overglaze paints, overglaze painting, decal

1. Introduction

A modern person, being subjected to ever-increasing loads, is forced to constantly think about the preservation of health and efficiency. Consultative and treatment centers have gradually become important objects of maintaining health, in which people spend quite a large part of their time, starting from the first days of life. Unfortunately, in recent years, a significant proportion of patients at medical centers and clinics have been composed of children of different age groups, as the most vulnerable part of society carrying the burden of the social life of a metropolis. Providing medical care to children, especially preschool children, is complicated by the fact that the child is difficult to be motivated for treatment and recovery if he is not included in this process emotionally. Children being in the hospital walls, not having a number of favorite toys and familiar things, find it difficult to

escape from pain or waiting for upcoming procedures, which in itself delays recovery. And among other things, skipping classes in kindergarten, circles, studios or elementary school, does not allow the child to develop, learn new things, turns him off from among his peers.

2. Discussion of the problem and solution

Therefore, when a child is in the hospital, it is important not only to provide emotional support to young patients, but also to help them in their proper age development and education [1-4]. Today, most of the competent design and content of children's medical centers is solved by sponsoring organizations. From the very beginning, the design of children's departments is thought out as a complex of rooms with elements of home comfort and positive color solutions (Fig. 1).



Fig. 1: a) polyclinic in the city of Saratov [5], b) children's hospital in the city of Kaliningrad [6]

First of all, it concerns gaming areas and recreation and eating areas. The “domestication” of play zones in children’s clinics and treatment centers relieves emotional stress and has a good effect on the process of treatment and the subsequent rehabilitation of young patients, but does not solve the problems of teaching and developing a child.

In addition, if the hospital hall or play area is quite simple to “domesticate” by giving them coziness with the color of the walls, furniture or decorative elements, and creating training zones with visual aids and wall demonstration images, then in hospital wards

the creation of such an environment is difficult due there are beds, bedside tables and the need for periodic sterilization and quartz treatment.

A weakened little patient should be protected from additional infections, therefore the rooms of hospital wards should be sterile, have a certain level of humidity, temperature, lighting and air disinfection. But at the same time, the child needs to switch attention from the disease and procedures to games that motivate him to recover (Fig. 2).



Fig. 2: Area for games and training of children's hospital, g. Essentuki [7]

There are quite strict requirements for sanitary and epidemiological rules and regulations for the surfaces in the rooms of hospital wards. They should be: durable, smooth, fireproof, antistatic, simple for daily wet cleaning, and also resistant to the effects of disinfectants, ultraviolet radiation and biological fluids. Ceramic tile fully meets these requirements and is the most often used finishing material due to its environmental safety, hygiene,

high wear resistance and reasonable price (Fig. 3).

The problem of creating an emotionally positive zone in the hospital wards of children’s departments can be solved by using illustrations for fairy tales and children’s books that help the child form an internal positive response to treatment and recovery, as well as visual aids for the development of the child etc.) [8].



Fig. 3: A small patient studies the inscriptions on a ceramic tile in a medical center with interest [9]

The ability to form a positive emotional background with the help of images and to give the child new knowledge and skills in the children’s hospital wards is directly related to the possibility of using certain materials under conditions of constant sterilization, quartz treatment and other types of processing.

The restriction in the use of most art materials due to the

impossibility of sterilizing them by chemical and mechanical processing (oil painting, watercolor, pastel, gouache, etc.) significantly narrows the search for versatility, bringing to the forefront the decoration of ceramic tiles with overglaze overglaze paints, the most budget and versatile by the possibilities of which is the method of decal.

Overglaze paints are used to decorate baked glazed ceramic products and consist of a mixture of powder-fusible frit (flux) and ceramic pigments. When firing, the low-melting flux obtains adhesion to the ceramic glaze related to it in composition, allowing the pigment to either penetrate the glaze or to be fixed vitrified on its surface.

The universality of the decolating method of ceramic tiles lies in its simplicity, environmental friendliness (paints that have been

calcined - 760-950 ° C, do not emit any harmful substances into the atmosphere, as they are covered with a layer of glass) and it is possible to use an image of any degree of complexity, not limited to the ceramist's personal professional experience.

Putting decals on ceramic tiles makes it possible to surround young patients with the best world works created by artists by illustrators (Fig. 4), and make the recovery period shorter.



Fig. 4: Ceramic tiles decorated with decals (a) [10]; (b) [11]

One way to raise the emotional background of young patients in our opinion would be to place a contour image for coloring on the wall tile adjacent to the bed (Fig. 5 [10]).

The presence today in the sale of children's water markers, bright

and harmless, makes it possible to create such children's art directly on the walls of the chamber. The ability to easily erase the pen from the surface of the tile with a damp cloth will allow even a recumbent child to escape from the pain and switch to creativity.



a



б

Fig. 5: a) examples of decals for coloring [12] b) a variant of bedside tiles with decals on the example of a ward in a children's hospital [13]

3. Conclusions

Visual materials in the form of images or letters and numbers on the tiles can also be located on the floor of the play area, where it will be easy for small patients to carry out various game actions with them; from getting the first reading or writing skills to studying the rules of the road or role-playing games.

And the use of ceramic tiles as a basis for teaching hours makes it possible to create a visual image of time intervals for an interactive learning game for preschoolers. Looking closely at the most familiar materials, one can understand that creating the zone of greatest comfort in children's medical institutions often requires

not so much financial expenditures as a non-standard approach to the use of traditional materials.

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