

# Exploring Visual Representations of Safety in Virtual Relaxation Content: A Correlational Study

Изучение образных представлений о безопасности для подбора виртуального релаксационного контента: корреляционное исследование

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Original research

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## ABSTRACT

**BACKGROUND:** Anxiety disorders are the most common mental disorders, yet only about a quarter of affected individuals receive treatment. This necessitates the development of high-technology care approaches, including virtual reality.

**AIM:** To analyze mental imagery associated with psychological safety and inner comfort to optimize the selection of relaxation content for virtual reality.

**METHODS:** Participants completed standardized questionnaires: the Social Readjustment Rating Scale, the Well-being, Activity, Mood questionnaire, and a Safe Place interview. Statistical analysis included significance testing and one-way analysis of variance. Descriptions of safe places underwent qualitative analysis to identify the frequency of key semantic categories.

**RESULTS:** A total of 192 respondents (18–82 years) were stratified into three age groups: 18–39 ( $n=97$ ), 40–49 ( $n=55$ ), and 50 years and older ( $n=40$ ). Age was negatively correlated with overall stress levels and positively correlated with emotional well-being. The highest stress levels were in the 18–39 age group. For safe place imagery, most descriptions (68.2%) were of natural landscapes, followed by urban motifs (22.9%); intrapsychic and spiritual symbols accounted for 8.9%. Within natural landscapes, water-related images were most frequent (39.5%). The image of a confined personal space was 2.4 times more common in participants aged 50 years and older.

**CONCLUSION:** The highest distress levels were observed in individuals under 40, indicating a greater need for relaxation interventions. Across all age groups, images of water associated with a safe place, while participants aged 50 years and older more frequently preferred personal spaces. The identified semantic categories can form a basis for thematic catalogs in virtual relaxation libraries.

## АННОТАЦИЯ

**ВВЕДЕНИЕ:** Тревожные расстройства являются наиболее распространенными психическими нарушениями, однако лечение получают лишь около четверти пациентов. Это создает потребность в разработке высокотехнологичных подходов к помощи, включая виртуальную реальность.

**ЦЕЛЬ:** Изучить образные представления о психологической безопасности и внутреннем комфорте у людей для оптимизации подбора релаксационного контента для виртуальной реальности.

**МЕТОДЫ:** Участники заполнили стандартизированные опросники: «Шкала оценки социальной адаптации», «Самочувствие, активность, настроение» и «Безопасное место». Были использованы статистические методы для оценки значимости различий и однофакторный дисперсионный анализ. Описания безопасных мест подверглись качественному анализу для определения частоты ключевых смысловых категорий.

**РЕЗУЛЬТАТЫ:** В исследовании участвовали 192 респондента (18–82 года), разделенные на три возрастные группы: 18–39 ( $n=97$ ) лет, 40–49 ( $n=55$ ) и 50 лет и старше ( $n=40$ ). Возраст отрицательно коррелировал с уровнем стресса и положительно — с эмоциональным благополучием. Самый высокий уровень стресса был в группе 18–39 лет. Среди образов безопасного места большинство описаний относились к природным ландшафтам (68,2%), далее следовали урбанистические мотивы (22,9%); внутриспсихические и духовные символы составили 8,9%. Среди природных образов наиболее частыми были изображения, связанные с водой (39,5%). Образ ограниченного личного пространства встречался в 2,4 раза чаще у участников 50 лет и старше.

**ЗАКЛЮЧЕНИЕ:** Наивысший уровень дистресса наблюдался у лиц младше 40 лет, что указывает на их большую потребность в релаксации. Во всех возрастных группах чаще безопасное место ассоциировалось с водоемом, а люди старше 50 лет отдавали предпочтение личному пространству. Выявленные смысловые категории могут лечь в основу тематических каталогов библиотек виртуальной релаксации.

**Keywords:** *psychological safety; image of a safe place; virtual content; anxiety disorders*

**Ключевые слова:** *психологическая безопасность; образ безопасного места; виртуальный контент; тревожные расстройства*

## INTRODUCTION

According to the World Health Organization (WHO), anxiety disorders are the most common mental disorders worldwide, affecting more than 300 million people [1]. These disorders lead to impaired functioning, reduce quality of life, and increase the risk of somatic diseases, including cardiovascular and cerebrovascular diseases [1]. However, only about a quarter of individuals having anxiety disorders receive treatment [1].

Study results indicate an age-related pattern in the manifestation of anxiety disorders. Adolescence and young adulthood are characterized by an increased incidence rate reflecting ongoing psychophysiological changes and personality development [2–5]. The incompleteness

of self-identification processes weakens adaptive capabilities, contributing to the emergence of anxiety-related psychopathological symptoms [6].

According to the literature, anxiety disorders are diagnosed less frequently in older adults. Nevertheless, as the WHO notes, “around 14% of adults aged 60 and over live with a mental disorder; <...> the most common mental health conditions for older adults are depression and anxiety”<sup>1</sup>. There is evidence that anxiety symptoms often manifest in a physical (somatic) form in later life, being a part of anxiety-depressive states [7].

Treatment of anxiety disorders typically involves a combination of psychotherapy and pharmacotherapy [8]. Modern virtual reality (VR) technology enables the creation

<sup>1</sup> World Health Organization. Mental health of older adults [Internet]. Geneva: World Health Organization; c2025 [cited 2025 Nov 11]. Available from: <https://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>

of immersive relaxation environments that can be incorporated into psychotherapeutic interventions [9]. Such environments may enhance the sense of safety, reduce stress, and facilitate reflection and re-evaluation of negative experiences [10].

Despite substantial empirical evidence on the use of VR technologies in education and medicine among non-clinical and clinical populations in various age groups [11–15], research on their application in the prevention and treatment of stress and anxiety remains limited. These works mainly focus on assessing the effects of various immersive technologies, the classification and technical characteristics of VR tools [16, 17], as well as the analysis of the technical solutions themselves. Criteria for selecting specific content (plot) are rarely defined in experimental studies, and as a result, content selection is often insufficiently justified and based primarily on available virtual libraries.

Some studies have demonstrated individual differences in responses to virtual content [18]. However, many relaxation techniques are based on the activation of a patient's mental representation of a safe place and internal visualization of it [19]. This emphasizes the need for a deeper study of the impact of the specific content of VR environments on the subjects interacting with it. An empirical study of unique and characteristic ideas about psychological safety and inner comfort should be conducted for a more conscious and effective use of relaxation practices using VR. The results of such a study can form the basis for the development of personalized intervention programs.

This study analyzes mental imagery associated with psychological safety and inner comfort to optimize the selection of relaxation content for virtual reality devices.

## METHODS

### Study design

A correlational study was conducted.

### Setting

The study was conducted in Moscow in September and October 2024.

### Participants

A simple random sampling method was used.

The inclusion criteria were: aged over 18, living in Moscow, voluntary participation, and cognitive integrity at the level of understanding the instructions and conscious independent completion of psychodiagnostic questionnaires.

The exclusion criterion was non-cooperation in the process of psychodiagnostic research.

### Data sources

Participants were asked to answer questions from three tools:

1. The Social Readjustment Rating Scale (SRRS) questionnaire, modified to reflect contemporary conditions<sup>2</sup> [20, 21]. The instrument yields a stress score for the preceding year (the higher the score, the higher the stress level). According to current research, this is one of the most common tools for assessing critical life events [22].
2. The Well-being, Activity, Mood (WAM) questionnaire [23], designed to assess current functional state. Higher scores indicate more favorable conditions, and low scores indicate less favorable ones.
3. The Safe Place semi-structured interview, developed to address the study objectives based on the relaxation technique of the same name [24]. Respondents were asked to imagine a place where they feel safe and can be alone. They first gave a brief general description of this place, and then elaborated on the image and described everything that happens there, paying special attention to the details, multisensory sensations, and the feelings experienced.

### Statistical analysis

Statistical analyses were performed in the STATISTICA v12.0 (StatSoft, USA) software package and using Microsoft Excel. The following analyses were used: descriptive statistics data (measures of range and measures of central tendency), assessment of distribution normality using the Kolmogorov–Smirnov D-statistic, data weighting procedure, Spearman's rank correlation coefficient (the value of the correlation coefficient R), one-way analysis of variance ANOVA (the F-statistic and the level of significance), the significance of differences in independent groups using the Kruskal–Wallis and Mann–Whitney tests, the proportional representation of a binary variable in independent groups using the F-test. Statistical significance was set at  $p \leq 0.05$ .

<sup>2</sup> The modification consisted in adding fear for the life and health of a loved one due to the lack of news about them to the list of stressors.

The data weighting procedure used the Russian Population Census 2020 as a reference distribution for the age composition of the urban population<sup>3</sup>. Weighting coefficients were calculated as the ratio of the proportion in the target population (urban population of the Russian Federation) to the proportion in the surveyed sample ( $n=192$ ).

Descriptions of the safe place were subjected to qualitative analysis in terms of the main semantic categories and the frequency of their occurrence. The analysis was conducted as follows: the results of the Safe Place semi-structured interview of each respondent were studied and then consolidated into a single text, which was assigned a single thematic category.

The categorization was based on both denotative and connotative meanings. Denotation, or denotative meaning, refers to the objective correlation between a word and the object or situation it designates, whereas connotation, or emotive (connotative) meaning, denotes the meaning arising from the emotionally expressive and evaluative reflection of objects and phenomena in the external world, shaped through their subjective interpretation [16]. The category and theme of a safe place were identified not only based on the direct denotation, but also the available details that clarify the connotation of the image. For example, the word “bedroom”, which lacks a detailed description or a precise denotative reference, was interpreted as an intrapsychic image when it evoked an image of a safe place associated with feelings of peace and recovery. By contrast, the description “a safe place is my apartment where I live right now, a bedroom where I sleep, preferably with curtains closed” was categorized as an urban motif, as it refers to a concrete, physically situated environment. Similarly, a safe place described as “the city of St. Petersburg” or “my favorite city”, when accompanied by specific details, was classified as an urban motif, whereas the phrase “the city where I spent my childhood” was treated as an intrapsychic image. Further classifications followed this same analytical logic.

### Ethical considerations

Ethical principles were met by meeting the following conditions: the survey was anonymous and voluntary; all respondents had the opportunity to opt out at any stage.

No approval from the local ethics committee was obtained for the study.

## RESULTS

### Participants

The study sample comprised 192 Moscow residents selected at random, including 134 women (69.8%) and 58 (30.2%) men; the number of years spent on education was  $13.3 \pm 2.2$  years. The age of the subjects included in the sample ranged from 18 to 82 years, while the interquartile range (50% of the surveyed sample) fell within the interval of 20 to 49 years; the median value was 39 years. Thus, the distribution was left-skewed and allowed the sample to be divided into three age strata: from 18 to 39 years ( $n=97$ ), from 40 to 49 years ( $n=55$ ), and 50 years and older ( $n=40$ ).

### Main results

According to the results of the SRRS questionnaire, the highest level of stress was observed in the 18–39 age group. The results of the one-way analysis of variance ANOVA include the main resultant indicator (F-statistic) and the level of significance ( $p$ ) is presented in Table 1.

Indicators of current functional state also differed across age strata. According to the results of the Kruskal–Wallis test, the characteristics of the WAM questionnaire showed statistically significant differences between age groups for the well-being ( $p=0.001$ ), activity ( $p=0.003$ ), and mood ( $p=0.02$ ) domains. Primary differences observed in the 18–39 age group showed slightly reduced scores of the current emotional state; this group experienced higher stress levels, which is confirmed by pairwise comparison using the Mann–Whitney test (Table 2).

**Table 1. Comparison of stress level across age groups based on the SRRS**

Age groups	Stress level (scores)		F	df	p
	Mean (M)	Standard deviation (SD)			
18–39 years	216.8	138.7	3.53	2	0.03
40–49 years	166.1	116.5			
50 years and older	170.8	111.0			

Note: df — degrees of freedom; F — the value of F-test;  $p$  —  $p$ -significance level ( $p$ -value); SRRS — Social Readjustment Rating Scale.

<sup>3</sup> [The results of the VPN2020. Volume 2. Age and gender composition and marital status] [Internet]. Moscow: Federal'naja sluzhba gosudarstvennoj statistiki; c2022 [cited 2024 Nov 11]. Russian. Available from: [https://rosstat.gov.ru/vpn/2020/Tom2\\_Vozrastno\\_polovoj\\_sostav\\_i\\_sostoyanie\\_v\\_brake](https://rosstat.gov.ru/vpn/2020/Tom2_Vozrastno_polovoj_sostav_i_sostoyanie_v_brake)

**Table 2. Comparison of WAM Subscales scores across groups**

WAM		Mediana	Q <sub>1</sub>	Q <sub>3</sub>	H	df	p
<b>Well-being</b>							
Age groups	18-39 years	45.0	36.0	52.0	14.7	2	0.001
	40-49 years	51.0	44.0	57.0			
	50 years and older	51.5	44.0	57.0			
<b>Activity</b>							
Age groups	18-39 years	43.0	33.0	49.0	11.52	2	0.003
	40-49 years	47.0	38.0	55.0			
	50 years and older	47.0	38.5	57.0			
<b>Mood</b>							
Age groups	18-39 years	52.0	43.0	59.0	7.83	2	0.02
	40-49 years	54.0	49.0	59.0			
	50 years and older	56.5	50.0	62.5			

Note: df — degrees of freedom; p — p-significance level (p-value); WAM — Well-being, Activity, Mood Questionnaire Subscales.

Sex and educational level were not significantly associated ( $p > 0.05$ ) with the total stress level score and the characteristics of the current functional state. The age of the surveyed sample was negatively correlated with the total stress level score ( $R = -0.17$ ,  $p = 0.02$ ) and positively with the characteristics of the current emotional state (well-being  $R = 0.25$ ,  $p = 0.001$ ; activity  $R = 0.21$ ,  $p = 0.01$ ; mood  $R = 0.17$ ,  $p = 0.02$ ). Taking the results of the SRRS questionnaire in the surveyed sample into account, the stress score decreases with age, while a lower prevalence of unfavorable functional states decreases across these domains.

Correlations between the WAM questionnaire subscales and the total stress level score were weak: for the well-being and activity subscales,  $R = -0.14$ ,  $p = 0.05$ ; for the mood subscale,  $R = -0.18$ ,  $p = 0.01$  due to the abnormal distribution of the age variable ( $d = 0.19$ ,  $p \leq 0.01$ ), which confirms the correct use of age stratification in this analysis.

Overall, indicators of psychological well-being, as reflected in measures of current functional state, were consistent with the observed patterns of overall stress across all age groups.

The second stage was devoted to semantic analysis of the responses.

Analysis of thematic categorization of safe place images among respondents ( $n = 192$ ), the analysis showed that the vast majority of descriptions ( $n = 131$ , 68.2%) were those of natural landscapes, followed by urban motifs ( $n = 44$ , 22.9%) and a small number of intrapsychic images ( $n = 12$ , 6.3%) or attributes and symbols of spirituality ( $n = 5$ , 2.6%).

After applying age-based proportional weighting, the distribution of safe place image categories in the urban population of the Russian Federation (Table 3): the largest proportion of images are those of natural landscapes (39.5%), urban motifs account for half as many descriptions (17.2%), and a small percentage of cases contain intrapsychic images (3.4%) and attributes of spirituality (2.8%).

Comparative analysis of the proportional representation of safe place image categories across age strata, based on F-test results, revealed no significant between-group differences ( $p > 0.05$ ). The distribution of categories within each age group was consistent with that observed in the general urban population. The results are provided in Table 4.

A more detailed analysis of the content within thematic safe place categories revealed frequency differences depending on the age stratum. Specifically, the distribution of more narrowly defined safe place images within the broader categories (natural landscapes, urban motifs, intrapsychic images, and attributes of spirituality) was examined. Safe place images were most varied in the group of 18 to 39 years and least varied in the group of 50 years and older, with 18 and 8 distinct images identified, respectively. The described result could be explained by higher exploratory activity and less stable world views at an earlier age, as well as the factual diversity, variability, and heterogeneity of the environment that influenced the formation of the worldview of the younger generation.

The two most common categories (natural landscapes, urban motifs) were then examined in greater detail. The analysis of the frequency of image-related terms denoting images in these thematic categories allowed identification of the most common safe place images within them. The results are presented in Table 5.

In all age groups of the surveyed urban sample, a body of water image (sea, river, lake, ocean, fountain), categorized as a "natural landscape", was cited as a safe place with statistically similar frequency ( $p > 0.05$ , pairwise Fisher's exact test). These percentages were 26.8% in the 18-39 age group, 36.4% in the 40-49 age group, and 20.0% in the 50 years and older group. The image of a body of water as a place associated with psychological safety

**Table 3. Thematic content of safe place images (n=192)**

No.	Category of images	Detailed content	Sample (%)	Proportionally weighted distribution of safe-place imagery categories (%)
1	Natural landscapes	An alley lined with trees, a swing in the garden, a hammock in the park, a forest, the edge of a forest, a field, a glade, a meadow, a lawn, a cottage, a summer house, a mountaintop, mountains, a beach, a body of water (a sea, a river, a lake, an ocean, a fountain), a quiet island, a fishing area, sunsets	68.2	39.5
2	Urban motifs	A city park, city streets, a car, a bus, a lake in the city, a guarded house or apartment, a gym, one's favorite city, a kitchen, a bathroom, my room	22.9	17.2
3	Intrapsychic images	A den; a soft sofa with 10 pillows; a bedroom; the city where I spent my childhood	6.3	3.4
4	Attributes of spirituality	A church, a temple, a cathedral, a mosque, a cemetery	2.6	2.9

**Table 4. Representation of safe place image categories across age strata, abs. (%)**

Category of images	18–39 years (n=97)	40–49 years (n=55)	50 years and older (n=40)
Natural landscapes	67 (69.1%)	38 (69.1%)	26 (65.0%)
Urban motifs	22 (22.7%)	11 (20.0%)	11 (27.5%)
Intrapsychic images	6 (6.2%)	4 (7.3%)	2 (5.0%)
Attributes of spirituality	2 (2.0%)	2 (3.6%)	1 (2.5%)

and inner comfort was reported, without age differences, by 54 people (28.1% of the cases), representing nearly one quarter of the sample.

Another frequently reported safe place image was a stable familiar, and habitually organized personal space: “my room”, “a guarded house or apartment”, “a cottage”, “a summer house”. The combination of these images explains the overlap between the selected “natural landscapes” and “urban motifs” categories, since “my room”, “a guarded house or apartment”, when included in the larger thematic categories, were classified as urban motifs, and “a cottage” and “a summer house” as natural landscapes. This image was reported by 53 respondents, comprising 27.6% of the cases, representing approximately one quarter of the sample.

As shown in Table 5, personal space images were reported in 15 of 97 cases (15.5%) in the 18–39 age group, 14 cases out of 55 (25.5%) in the 40–49 age group, and 24 cases out of 40 (60.0%) in the 50 years and older group.

A comparative analysis of the proportional representation of this image in age groups using the F-test revealed personal space images statistically more often in the group aged 50 years and older ( $p=0.001$ ) than in the younger age groups, 3.9 times when compared to the 18–39 age group and 2.4 times when compared to the 40–49 age group.

All other images in the described groups account for less than 10% and do not statistically significantly distinguish the age groups ( $p \geq 0.05$  according to the F-test results). In the 18–39 age group, these include a “church”, “favorite city”, “a place of rest”, “a health resort”, “outdoors”, “a glade”, “a field”, “a forest”, “a car”, “a swing”, “a road”, “a cottage”, “mountains”, “a bathroom”, “a library”; in the 40–49 age group, “a forest”, “a den”, “a beach”, “a glade”, “a field”, “a place of rest”, “a church”, “a car”, “favorite city”, “a kitchen”, “a road”, “a cemetery”, “a house”; in the 50 years and older group, “a glade”, “outdoors”, “a gym”, “a church”, “a house”, “an aircraft cabin”.

**Table 5. Differences in safe place image content across age strata**

Image		Frequency, abs. (%)		
		18–39 years (n=97)	40–49 years (n=55)	50 years and older (n=40)
A body of water	A sea, a river, a lake, an ocean, a fountain	26 (26.8%)	20 (36.4%)	8 (20.0%)
Personal space	My room, a guarded house or apartment, a cottage, a summer house	15 (15.5%)	14 (25.5%)	24 (60.0%)

## DISCUSSION

This study aims to identify and analyze mental imagery associated with psychological safety and inner comfort across different age groups to inform the selection of relaxation content for virtual reality devices [25].

A statistical analysis of the studied urban sample conducted during the first stage of the study suggested three age strata. This stratification may reflect the cultural and historical context that shaped the respondents' worldview. Individuals within the same age cohort tend to share patterns of beliefs, attitudes, values, and behaviors, since they grew up in the same historical environment<sup>4</sup>. Although there is no single, generally accepted time frame that defines generations at the moment [26] and researchers often hold different views [27], this must be considered when conducting the analysis. We believe that the obtained age division of the sample is determined by the following circumstances.

The worldview of the 18–39 age group ( $n=97$ ) formed during the period of the most powerful scientific and technical breakthrough in the field of information technologies, the era of globalization and the change in forms of communication; the participants of the 40–49 age group ( $n=55$ ) were shaped by a transitional historical period, and responders aged 50 years and older ( $n=40$ ) were brought up on the traditional values of a more traditional sociocultural environment, they used books and official sources as ways of transferring knowledge and obtaining information, the speed and scope of communication were low.

The age groups identified in this study differ in the characteristics of psychological well-being, namely: the highest stress level was observed among the 18–39 age group while those aged 50 years and older were least susceptible to social stressors. Respondents in the 40–49 age group showed intermediate levels. It is possible that this case may reflect age-related differences in life fulfillment, since older generations have achieved key life goals and experience less external and internal pressure in this respect.

The lower stress level of the older generation may also be related to the cultural context of their upbringing, since their early childhood development was in a period characterized by greater social stability and a more consistent system

of values and life goals. Intergenerational differences in the speed of scientific and technological progress, manifested in the constantly accelerating development of information and communication technologies, are undoubtedly important.

Assessment of the functional state of respondents in the selected age strata showed that current psychological well-being was associated with both social stress and age group. Respondents aged 18 to 39 experienced a greater level of stress compared to older respondents, which was reflected at the functional level by lower well-being, activity, and mood scores in the urban sample at the time of the survey. Similar data on the age-related pattern of psychological well-being in modern society have been reported in international studies [28].

The thematic content of relaxation images was grouped into four main categories: natural landscapes, urban motifs, intrapsychic images and attributes of spirituality. Typically, various natural landscapes are included in the virtual context libraries used in research [29], which appears appropriate for most users: our study showed that the safe place imagery most commonly includes natural landscapes (about 70% of cases), while solitary urban motifs are less common (about 20% of cases). However, the results show that individual differences in image selection may be important. Although no age-related differences were observed at the level of generalized thematic categories, there are differences between the safe place imagery among representatives of different age strata when comparing the frequency of occurrence of specific, rather than generalized thematic, images of psychological safety and inner comfort. Safe place images were most varied in the group of 18 to 39 years and least varied in the group of 50 years and older. The reduced variability of imagery at older ages can be explained by available results of studies of social activity at different ages, which confirm that social engagement in later life is often limited to the private family sphere [30–32].

Images of water and personal space or home are the most common safe place images (one in four urban residents). In older people, the range of images associated with psychological safety narrowed toward personal space and home: in the group aged 50 years and older, such images are much more common than in the younger age

<sup>4</sup> Hoover E. The Millennial Muddle. How stereotyping students became a thriving industry and a bundle of contradictions. *The Chronicle of Higher Education* [Internet]. 2009 Oct 11 [cited 2025 Aug 30]. Available from: <https://web.archive.org/web/20110713233331/http://chronicle.com/article/The-Millennial-Muddle-How/48772>

groups. Since personal space is, typically, an enclosed area with boundaries separating it from the outside world and is distinctly owned by an individual, preference for these images may reflect these types of safe places value isolation and a barrier between the internal (individual) and external worlds. Younger individuals appear to be more oriented toward interaction with the external environment.

These findings are consistent with existing literature on age-related narrowing of psychological space toward one's own territory or home with age as a resource for psychological security; younger individuals associate security with social resources (positive environment) and older adults with intellectual and personal means (experience, knowledge) [19].

Age differences do not affect the choice of various water bodies as a relaxation image of a safe place in the surveyed sample. This consistency may be explained by both the archetypal symbolism of the water itself and its physical properties: when an individual is submerged in water, this produces sensations of weightlessness and that one can immerse oneself in a state of harmony and complete relaxation. In culture, water has many mythological and sacred meanings. Across cultures, water carries diverse mythological and sacred meanings: for Buddhists, it symbolizes the eternal flow of the material world and life itself; in Christianity, it is associated with purification, renewal, and baptism. Although the characteristics of water are ambivalent (it is a sacred element endowed with cleansing and protective powers, both a means of healing and a source of danger, an instrument of sorcery), a modern stressed person, to find peace of mind, turns to water as a cleansing spring restoring psychological balance, evoking feelings of safety and calm [33].

This study will be extended to further explore the relationship between the selection of safety- and comfort-related images, and the level of stress and functional state. To support this analysis, verbal data units will first be identified and formalized, representing the next stage of the research.

The scientific novelty of the study lies in its attempt to systematize safe place imagery to develop an individual approach to the use of virtual reality in psychological care for anxiety disorders and comprehensive medical rehabilitation, including psychological rehabilitation [34]. In addition, the identified categories in this work can serve as the basis for filling thematic catalogs of virtual libraries. The identified facts and an attempt to classify them can be

useful in the development of individualized algorithms and psychocorrective programs using immersive technologies: the identified age preferences, according to which psychological safety and internal comfort for people over 50 years of age are associated with an enclosed and secluded personal space, must be considered.

This study was exploratory in nature and had several limitations. In particular, the limited reproducibility may be related to the uneven age distribution in the analyzed sample. This factor may partly account for the weak correlations observed between age, stress levels, and indicators of well-being, activity, and mood.

Future research should employ a more rigorous experimental design with adequate representation of age ranges in the sample and direct testing of specific virtual environments. A similar study in specific clinical groups could also add to the studied safe place image phenomenology. The categories used in the content analysis of the subjects' reports can be further refined and formalized using assessment scales.

## CONCLUSION

The presented results suggest that people in the age range up to 40 years experience the highest level of stress in the surveyed urban respondents, suggesting a greater need for relaxation interventions. The study also showed that the choice of theme and imagery for relaxation content can be directly related to age-specific characteristics of the target population in need of appropriate psychocorrection measures. Further research using a more rigorous design with balanced age representation, as well as studies involving clinical samples, is warranted.

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