

Textile Art as Psychocultural Therapy: Exploring Body–Mind Connections and Cultural Expression through Chinese Grass Cloth

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ABSTRACT

Natural forms serve as an important source of inspiration, profoundly influencing the design language and spiritual essence of textile art as a medium of psychocultural reflection and therapeutic expression. This study aims to explore the innovative application potential of Chinese grass cloth in textile art based on natural forms within a psychosomatic and cultural context. Objectives: (1) To understand public perception of grass cloth and textile art, as well as market demand from a cultural psychology and health aesthetics perspective; (2) To explore the physical properties of grass cloth and its experimental artistic practices methods in simulating and interpreting natural forms as expressions of embodied healing and mindfulness; (3) The study used a convenience sampling technique to distribute online questionnaires, obtaining 308 valid samples to assess public perception of traditional Chinese grass cloth and textile art as potential channels of psychosocial well-being and cultural identity. Additionally, material experiments involving various treatments of grass cloth tested its ability to simulate natural forms, textures, and colors that evoke sensory awareness and mind–body integration. Based on these findings, textile art installations inspired by specific natural forms were created. Research findings indicate that diverse fabric manipulation processes and interactive technologies can effectively expand the expressive dimensions of grass cloth in terms of natural texture, form, and aesthetic appeal. The project created art installations based on natural forms, fully validating the immense potential of grass cloth in conveying natural imagery and innovating artistic expression. Combining the aesthetic connotations of natural forms with the material characteristics of grass cloth not only enriches the expressive language of contemporary textile art but also provides an effective pathway for the contemporary transformation and innovative application of traditional materials in health humanities and therapeutic design. In terms of cultural heritage preservation and product development, this study explores new ways for Chinese grass cloth to carry and transform natural imagery, enhancing the cultural value of traditional craftsmanship through artistic innovation that bridges art, psychology, and wellness. In terms of artistic innovation, the experimental application of natural-inspired grass cloth provides contemporary textile art with a form language that embodies Eastern cultural characteristics and biomimetic qualities rooted in mind–body connectivity and psychosomatic aesthetics.

Keywords: Textile Art, Natural form, Psychocultural Therapy, Psychosomatic Aesthetics, Health Humanities

INTRODUCTION

Nature has been recognized as the most reliable source of inspiration for designers, profoundly influences human visual expression and creative thinking within the framework of psychosomatic response and emotional

well-being (Aziz, 2016). From traditional painting to contemporary design and craftsmanship, the textures, structures, and imagery found in natural elements have been continuously borrowed and reinterpreted by artists, evolving into a transcendent cultural symbol system that connects art, mind, and healing. With the widespread dissemination of biomimicry and sustainable development concepts, nature-inspired design has garnered significant attention in both aesthetic innovation and psychocultural wellness contexts (Ganesan et al., 2025). Especially in the field of textile art, biomimicry has been applied to develop innovative textiles that evoke sensory engagement and promote therapeutic reflection (Das et al., 2015). Nature is not only viewed as a source of aesthetic inspiration but also as a driving force behind material innovation and process restructuring (Jazmik, 2021). This study focuses on grass cloth, a traditional Chinese natural textile, to explore its experimental application in textile art inspired by natural forms as a medium of psychocultural therapy and cultural expression.

Chinese grass cloth, named Xiabu, is a natural fabric made from ramie fiber through manual weaving that embodies cultural memory and psychosomatic resonance (Liao & Yang, 2016). The origins of grass cloth can be traced back to approximately 6,000 years ago in China. Clothing made from grass cloth has a rough and stiff texture, excellent breathability, and possesses hydrophilic and antibacterial properties that align with wellness-oriented material qualities and lifestyle medicine perspectives. Grass cloth holds a significant place in the history of China's textile industry, as it embodies the Chinese people's long-standing history and aesthetic sensibilities interwoven with cultural identity and emotional continuity (Lin et al., 2022). However, the rapid development of mechanized production has dealt a severe blow to the traditional production model of the grass cloth industry and disrupted its role in cultural and psychological continuity. In recent years, with the advancement of intangible cultural heritage protection efforts, the rise of traditional cultural trends, and under the guidance of sustainable and eco-friendly principles, grass cloth has emerged as an important vehicle for the revival of traditional crafts and for re-establishing body-mind-culture harmony through creative engagement. Nevertheless, within the context of modern design, grass cloth still faces challenges such as limited product styles and outdated design language, necessitating breakthroughs in material experimentation and design expression. Existing research has pointed out that integrating traditional textiles with modern visual culture and natural imagery through craft techniques not only enriches the artistic expression of traditional textiles but also contributes to the inheritance of traditional culture (Chen, 2023). The rich textures, structures, and tactile qualities of natural grass cloth offer boundless possibilities for experimental transformations in textile materials and for therapeutic engagement through sensory and cultural embodiment.

This paper aims to explore the application methods and craft techniques of grass cloth in textile art as a medium of psychocultural therapy and embodied creativity. First, through questionnaires and field research, we will investigate the public's level of awareness of grass cloth, usage experience, purchasing intentions, and willingness to participate in grass cloth-related art activities as forms of psychosocial engagement and cultural healing. By analyzing these data, we will reveal the value of grass cloth in contemporary society and its development potential from both cultural and health psychology perspectives. Second, combining materials science with artistic practice, experimental techniques were applied based on the physical properties of grass cloth. These included collage, layering, drawn thread, twisting, burning, and crystallization processes to test its expressive potential in simulating natural textures and structures linked to therapeutic tactility and mindful materiality. Additionally, touch-sensing interactive technology is integrated to achieve visual and sound interaction effects that stimulate body-mind connectivity and emotional awareness. Finally, an interactive art installation created using grass cloth as a medium, based on the lichen forms found on tree bark surfaces, will be developed to validate its feasibility as an artistic expression and public acceptance. The research results show that through the integration of natural imagery and the reconstruction of material vocabulary, grass cloth demonstrates significant innovative potential and cultural expressiveness in contemporary textile art and offers a pathway for psychosomatic exploration within the framework of health humanities.

In summary, this study not only aims to explore innovative applications of grass cloth but also seeks to establish an artistic creation model that integrates natural aesthetics with textile material experimentation as a medium for psychocultural therapy and mind-body engagement.. This process carries significant implications across ecological ethics, cultural heritage, and design education. On one hand, it responds to the current call in the art and design field for sustainable materials and biomimetic concepts; on the other hand, it provides a new path for the transformation of traditional Chinese handicrafts in a contemporary context, enriching the expressive dimensions of textile art in both form and content and supporting cultural, psychological, and psychosomatic resonance..

Objectives

1. To understand public perception of grass cloth and textile art, as well as market demand from a psychocultural and psychosomatic perspective.

2. To explore the physical properties of grass cloth and its experimental artistic practices methods in simulating and interpreting natural forms while examining their therapeutic and mind–body expressive potential.
3. To validate the feasibility and artistic expressiveness of using grass cloth as the core medium, combined with fabric manipulation and interactive technology, in creating textile art installations inspired by nature that foster cultural engagement, emotional well-being, and psychosomatic resonance.

LITERATURE REVIEW

Nature as a Source of Inspiration in Textile Art and Design

Nature has long been regarded as a primary source of inspiration for design, art, and material innovation with implications for psychosomatic engagement and mind–body expression.. Ram (2025) explored how Indian textiles and fashion design draw inspiration from nature, examining floral, botanical, and animal motifs alongside the concept of organic patterns in textile design. Biomimicry has been applied to the fields of textiles and fashion. Das et al. (2015) emphasized that biomimicry can serve as a source of inspiration for developing innovative textiles. Similarly, Beans (2023) demonstrated that nature-inspired biomimetic fashion not only expands the aesthetic possibilities of fashion design but also offers pathways to sustainable practices. These perspectives underscore nature's significance as both a conceptual and material foundation for textile and fashion design with potential applications in psychocultural therapy and health humanities. Other studies enrich textiles based on current scientific advancements. For instance, Singh et al. (2012) analyzed ten biomimetic smart fabric design methodologies, demonstrating the integration of nature-inspired design into textiles alongside the concurrent advancement of biomimetic materials and polymer science supporting psychosomatic and sensory experiences through material innovation. Collectively, these studies affirm that natural forms are not merely aesthetic references but act as functional blueprints for material and artistic innovation with relevance to psychocultural healing and mind–body creative practices.

Textile Material Experiment and Fabric Manipulation

Several studies have explored the expressiveness of fabrics and the aesthetic interpretation of natural forms in textile practices with implications for psychocultural engagement and mind–body experience. Srisongmuang et al. (2022) conducted experiments on uneven angles between yarn twist and weft direction, demonstrating how simplified natural leaf morphologies influence a fabric's visual and tactile properties that can evoke sensory awareness and psychosomatic response. Chen (2023) employed “homespun-collage” as a primary medium to demonstrate practical methods for reinterpreting traditional materials like homespun cloth as tools for therapeutic and cultural reflection. Their findings indicate that material experimentation is crucial for textile development and expression and can support psychocultural creativity..

Grass cloth, as a traditional Chinese textile, is used not only for clothing and accessories but also for crafting mosquito nets, bedding, handicrafts, and grass cloth paintings that integrate cultural heritage with psychosomatic experience (Liao & Yang, 2016). Although its experimental application in contemporary textile art has not been fully explored, its natural fiber texture, durability, stiffness, and organic grain hold significant potential for artistic expression. Fabric manipulation can transform a piece of fabric into a three-dimensional material to create contrast, build fullness, and produce surface effects (Fawzy Abdel Wahab, 2022). There are several fabric manipulation techniques such as gathering, Shirring, pleating, tucking, smocking, quilting, stitching, beads and beading, patchworking, and applique that can enhance psychocultural and psychosomatic expression. As methods for reshaping base fabrics, these techniques foster creative innovation and support mind–body connection through material experimentation (Burns, 2022). Therefore, when combined with fabric manipulation techniques, grass cloth holds the potential to reinterpret natural imagery in textile art as a medium of psychocultural therapy and embodied aesthetic experience.

Interactive Textile Art

Interactive technology plays a significant role in expanding the expressive dimensions of textile art. Nualdaisri (2022) examined the integration of diverse weaving techniques, yarn types, and textile innovations into Thai silk to create interactive art installations, unlocking new possibilities for the ancient Thai silk. Lim (2017) explored the potential of integrating interactivity into knitted fabrics, where flexible electronic components embedded within textiles can create sensory experiences that engage touch, hearing, and aesthetics. Guridi et al. (2021) examined how electronic textiles can be applied to traditional textile arts. Integrating technology with crafts that carry strong cultural identity helps attract new audiences, revitalize traditional techniques, and create new tools for expression and creativity. There are several practical cases that demonstrate how textile materials can gain new value through

interactive design. Colchester (2009) presented several case studies of textile projects incorporating interactive design. For instance, Maggie Orth designed a series of products printed with thermochromic ink that changes color when electrically heated conductive yarns are activated, investigating the potential relationship between textiles, lighting, and color. For grass cloth, such approaches imply the possibility of expanding beyond conventional uses into immersive textile installations, where natural imagery can be conveyed through interactive experiences.

In summary, while prior research has emphasized the value of biomimicry, material innovation, and technological integration, there is a clear research gap in exploring the experimental application of Chinese grass cloth as a medium that embodies both natural aesthetics and cultural heritage. This study aims to address this gap by examining how grass cloth can be manipulated and combined with interactive technology to create contemporary textile art inspired by natural forms that support mind–body connectivity and therapeutic cultural expression.

CONCEPTUAL FRAMEWORK

This study focuses on exploring the expressive potential of Chinese grass cloth by integrating natural form inspiration, biomimicry, and fabric manipulation with interactive technologies to support psychocultural engagement and mind–body reflection. Through questionnaire surveys, field research, and material experiments, the research examines both theoretical and practical approaches. Core practices such as tie-dyeing, fabric manipulation, and interactive applications are employed to create textile art installations, aiming to provide new methods for the inheritance and innovation of grass cloth while fostering psychocultural expression and cultural well-being and to establish a new research paradigm for regenerating traditional textiles (Figure 1).

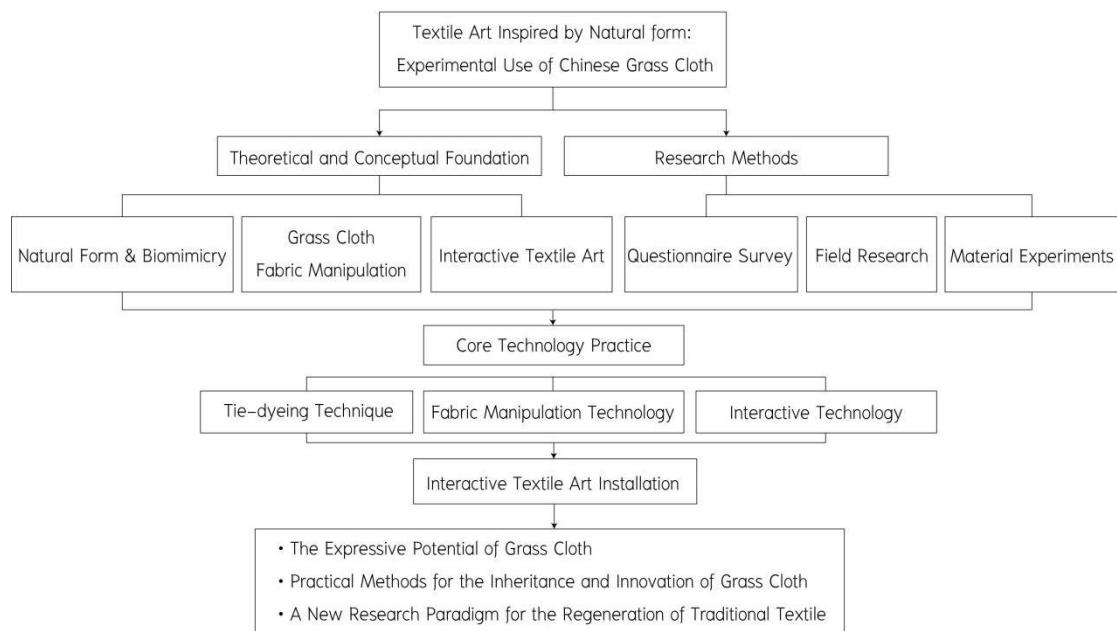


Figure 1 Research framework

RESEARCH METHODOLOGY

This study employs a mixed-method approach, combining quantitative and qualitative data analysis to explore the innovative application of grass cloth in the field of textile art with a focus on psychocultural engagement and mind–body expression. The research methods include questionnaire surveys, field research, and material experiments, aiming to explore in depth the application of natural forms in textile art, particularly experimental artistic practices using grass cloth as a medium that foster psychosomatic awareness, therapeutic interaction, and cultural reflection.

Data Collection

Questionnaire Survey

Researchers can use questionnaires to obtain information about participants' thoughts, feelings, attitudes, beliefs, values, cognition, personality, and behavioral intentions (Johnson & Christensen, 2000). To understand the public's perception and acceptance of Chinese grass cloth as a medium for textile art, this study designed and distributed a questionnaire online via the Wenjuanxing platform. The questionnaire comprised 10 questions, primarily focusing on innovative applications of grass cloth and textile art, as shown in Table 2. Professional terms used in the questionnaire design, such as "grass cloth" and "textile art," were accompanied by concise annotations to ensure participants could accurately understand them. Prior to questionnaire distribution, all participants will receive an informed consent form, as shown in Table 1. Before participating in the study, participants were informed of the study's purpose, benefits, risks, the time required, and the level of confidentiality. A statement was provided indicating that participation in the study was voluntary, and participants could withdraw or refuse to participate at any time without penalty.

Table 1. Informed Consent Form.

Informed Consent	
<p>Thank you for participating in this study. Before completing this questionnaire, please ensure that you fully understand the purpose of this research. All information you provide will be strictly confidential and used solely for academic research purposes. This study is entirely voluntary, and you have the right to withdraw at any time during the process without any adverse consequences.</p> <p>Purpose of the research: This study focuses on "Textile Art Inspired by Natural Forms: Experimental Applications of Chinese grass cloth." The aim is to explore experimental artistic practices in simulating and interpreting natural forms using grass cloth, and to validate the feasibility and artistic expressiveness of grass cloth as a core medium in creating contemporary textile artworks inspired by nature.</p> <p>The questionnaire will take approximately 5 minutes to complete. Your participation will significantly enhance the outcomes and effectiveness of this research. We sincerely appreciate your support. If you agree to the above terms and wish to participate, please proceed to complete the questionnaire.</p>	

Table 2. Online Questionnaire Form

Perception Survey on Chinese Grass Cloth and Textile Art		
No.	Questions	Options
1	What is your gender?	<input type="checkbox"/> Male <input type="checkbox"/> Female
2	What is your age range?	<input type="checkbox"/> Under18 <input type="checkbox"/> 18-25 <input type="checkbox"/> 26-30 <input type="checkbox"/> 31-40 <input type="checkbox"/> 41-50 <input type="checkbox"/> 51-60 <input type="checkbox"/> Over60
3	Do you know about grass cloth?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4	Do you have experience making handicrafts using grass cloth or other textile fabrics?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5	What type of product do you think could increase the added value of grass cloth? (Multiple choices)	<input type="checkbox"/> Artworks <input type="checkbox"/> Cultural and creative products <input type="checkbox"/> Home goods <input type="checkbox"/> Clothing and accessories <input type="checkbox"/> Souvenirs <input type="checkbox"/> Other Please list _____
6	Would you be interested in purchasing creative products made from grass cloth or participating in experiential activities related to grass cloth art design?	<input type="checkbox"/> Yes <input type="checkbox"/> No
7	Are you familiar with textile art?	<input type="checkbox"/> Yes <input type="checkbox"/> No
8	Which natural elements in textile art do you find appealing? (Multiple choices)	<input type="checkbox"/> Natural texture <input type="checkbox"/> Natural shape <input type="checkbox"/> Natural tactus <input type="checkbox"/> Natural color <input type="checkbox"/> Natural odour <input type="checkbox"/> Other Please list _____
9	Do you think that using grass cloth as a medium in textile art creation is conducive to the development of grass cloth?	<input type="checkbox"/> Yes <input type="checkbox"/> No
10	Do you think that researching methods of fabric manipulation will help preserve and innovate the intangible cultural heritage of grass cloth weaving techniques?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Field Research

Field research among operators, designers, and weavers engaged in grass cloth-related work. This approach involves living and working alongside local residents to conduct research (Burgess, 2003). This allows for in-depth observation of certain behaviors and documentation in a manner that does not harm the subjects being observed (Jackson, 1987). Information on the development and production of grass cloth products was collected from

representative grass cloth enterprises and studios in Jiangxi Province, namely Gu Xia Jin Zao, Xian Yun, and Bo Dao Fang.

Material Experiments

Experimentation is a method for obtaining knowledge with practical application value (Sørensen et al., 2010). This study aims to conduct material experiments based on the information and data collected in the first phase. The material experiments primarily focus on the fabric manipulation and morphological simulation of grass cloth, aiming to validate its feasibility and expressive potential in natural morphological manifestations. The experimental results will be evaluated based on the texture, morphological changes, and artistic expressiveness of the grass cloth, and will provide technical support for subsequent creative practices.

Creating Interactive Textile Art Installations

At this stage, the experimental results were summarized and presented in the form of textile artworks. The research continued to explore how to use grass cloth to express natural forms in actual artistic creation, using both visual and tactile effects to showcase the subtle and varied textures and forms found in nature.

RESULTS

The research findings are primarily divided into three phases: questionnaire survey and field research, material experimentation, and interactive textile art installation creation. The study used a combination of quantitative and qualitative methods to reveal the contemporary public's perception and market demand for grass cloth and textile art, the feasibility of grass cloth materials in mimicking natural forms, and the innovative potential of grass cloth in textile art.

Phase 1: Data Collection

Questionnaire Survey

The questionnaire was distributed via the Chinese online platform Wenjuanxing, starting on August 13, 2024, and ending on August 27, 2024. This survey collected a total of 308 valid questionnaires, aiming to gain a deeper understanding of the public's views on Chinese grass cloth and textile art. The survey content covered respondents' basic information, their level of familiarity with grass cloth, usage experience, and their willingness to purchase grass cloth-related products and participate in grass cloth-related art activities. By analyzing these data, we aim to reveal the value of grass cloth in contemporary society and its development potential in the field of textile art, providing a reference basis for product development and cultural heritage preservation. Researchers conducted statistical analysis based on the questionnaire feedback and presented the results in chart form.

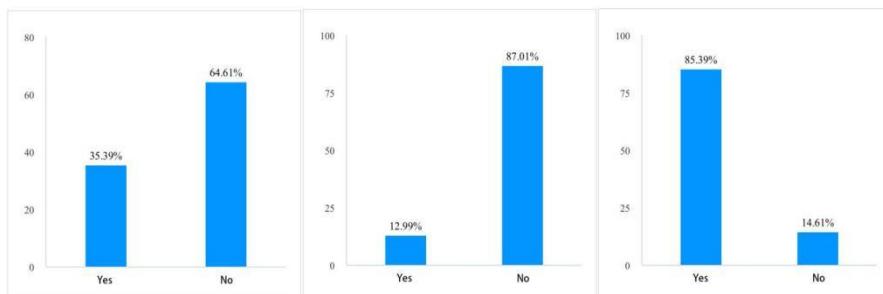


Figure 2. The Results of Questions 3, 4, and 6.

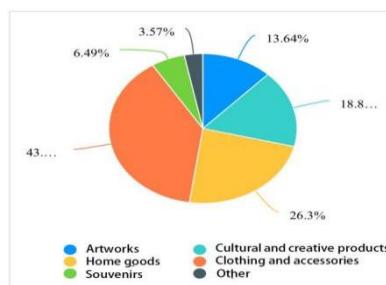


Figure 3. The Result of Questions 5

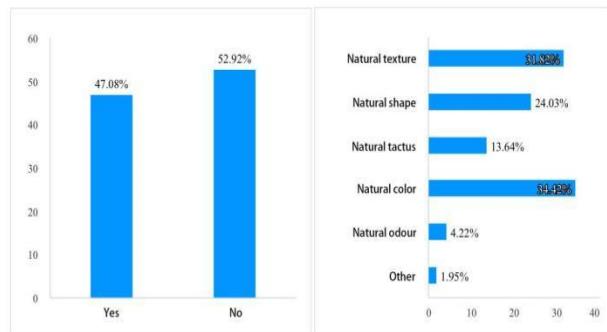


Figure 4. The Results of Questions 7 and 8

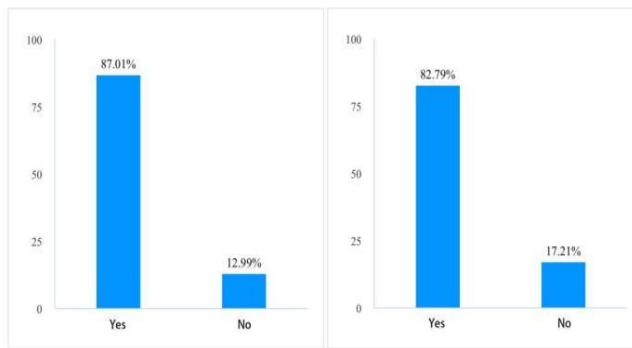


Figure 5. The Results of Questions 9 and 10

The result of the questionnaire is organized as follows:

The results of the questionnaire survey indicate that the general public has a relatively low overall awareness of grass cloth. As shown in Figure 2, 64.61% of respondents stated that they were unfamiliar with grass cloth, this result aligns with the current situation where grass cloth is a local handicraft lacking systematic promotion. 87.01% of respondents had no experience using grass cloth or other textile materials for handmade creations. However, 85.39% of respondents expressed willingness to purchase grass cloth creative products or participate in related experiential activities, revealing the public's high interest and potential consumption intent toward grass cloth.

Respondents' preferences for grass cloth products primarily focus on categories such as clothing and accessories, home goods, artworks and cultural products. As shown in Figure 3, clothing and accessories are the most market-attractive category, with 43.51% of respondents believing that such products can enhance the added value of grass cloth. 58.77% of respondents believe that home goods, cultural and creative products and artworks have the potential to enhance the added value of grass cloth, which aligns with the results from field research. In the product development of Gu xia Jin chao, Xian yun, and Bo dao Fang, clothing and accessories have achieved the most outstanding sales performance, followed by home goods. Artworks have also gained customer recognition for their innovation and cultural narrative capabilities. This indicates that the future development of grass cloth should not only focus on daily necessities but also emphasize the integration of cultural connotations and design innovation to meet consumers' demands for personalization and cultural expression.

Additionally, as shown in Figure 4, over half (52.92%) of respondents indicated a lack of understanding of textile art, highlighting the absence of textile art education and popularization. Meanwhile, the survey revealed that natural colors and textures are the most appealing elements in textile art. Therefore, in the promotion of grass cloth, it is not only necessary to enhance the public's basic understanding and education but also to strengthen the value of grass cloth in contemporary art and lifestyle aesthetics.

Participants believe that using grass cloth as a medium in textile art creation is beneficial for the development of grass cloth, as shown in Figure 5, 82.79% of participants believe that artistic fabric manipulation are conducive to the inheritance and innovation of grass cloth. This indicates that most participants believe that using grass cloth as a medium in textile art is advantageous and hold a positive attitude toward the positive role of fabric manipulation in the innovation of grass cloth. This may reflect people's recognition and anticipation of the integration of traditional craftsmanship with modern art.

In summary, in the future promotion and development of grass cloth, it is important to combine modern art with traditional craftsmanship and explore diverse forms to attract more consumer attention and participation. At the same time, strengthening education and publicity about textile art will help raise public awareness and promote the inheritance and innovation of grass cloth culture.

Field Research

Data collected from field research to three grass cloth enterprises and studios—Gu Xia Jin chao, Xian yun, and Bo dao Fang—reveals that grass cloth companies have been continuously enhancing their deep processing capabilities and developing a series of grass cloth derivatives in recent years, as shown in Table 3. The appearance design of most grass cloth products follows a minimalist style or traditional classic style. Field research revealed that clothing and accessories are the most popular in the market, with hats, bags, and earrings having the best sales, consistent with the results of the first-phase questionnaire survey. Next are home goods and artworks, such as door curtains, tea mats, bed linens, and decorative art objects, which also appeal to customers. Currently, Gu Xia Jin Zao has developed grass cloth paintings, but due to their overly traditional content, they are not very popular. In contrast, Bo Dao Fang has designed decorative artworks based on regional cultural themes and art installations inspired by plants, which have been well-received by customers. This demonstrates that the content, form, and cultural messaging of products are all factors that must be considered in the development of grass cloth products.

Table 3. Types of Grass Cloth Products and Brand Features

Brand	Company Location	Brand Features	Grass Cloth Product Type	Clothing and Accessories	Home Goods	Artworks, Cultural and creative products
Gu Xia Jin Zao	Wanzhai County, Yichun City, Jiangxi Province.	Leveraging the ancient town of Wanzhai to create a distinctive cultural tourism brand.	Clothing and accessories, home goods, decorative paintings.	 	 	 
Xian Yun	Zhushan District, Jingdezhen City, Jiangxi Province.	Leveraging internet marketing and online store promotions to build a youthful Xia Bu lifestyle brand.	Clothing and accessories, home goods.	 	 	/
Bo Dao Fang	Xinjian District, Nanchang City, Jiangxi Province.	Leveraging university resources to develop derivative products of grass cloth, creating personalized cultural and creative brands.	Accessories, home goods, cultural and creative products, artworks.	 	 	 
Gu Xia Jin Zao	Wanzhai County, Yichun City, Jiangxi Province.	Leveraging the ancient town of Wanzhai to create a distinctive cultural tourism brand.	Clothing and accessories, home goods, decorative paintings.	 	 	 

Phase 2: Material Experiments

This study uses grass cloth as an experimental medium and explores its rich potential in natural form simulation and textile interaction design from multiple dimensions, including dyeing techniques, fabric manipulation, and interaction technology. The results are shown in Table 4.

Table 4. Experimental Results

Experimental Results
Experiment 1: Natural patterns are formed on ramie fabric through tie-dyeing and dip-dyeing techniques.



Picture: The effect of different tightness levels in tie-dyeing and dip-dyeing.

Comment: Tying the thread too tightly can result in insufficient dye coverage. Loosely tying the thread and twisting it yields the richest texture. Be sure to wash and soak the grass cloth before dyeing, otherwise the resist dyeing effect will not be good.

Experiment 2: Using fabric manipulation techniques such as curling, layering, collage, and drawn thread to imitate the forms and textures of fungi, lichens, and mosses.



Picture: Using fabric manipulation to reshape natural texture.

Comment: Grass cloth is exceptionally stiff and holds its shape well, achieving excellent stability without the need for setting spray or heat. The fabric manipulation process can simulate natural forms to create rich textures in grass cloth.

Experiment 3: Using burning and drawn thread techniques to mimic the shapes of lichens and flowers.



Picture: Using the destruction technique in fabric manipulation to shape natural forms.

Comment: The burning speed of grass cloth is easy to control, and the yarn does not unravel after burning, making it easier to shape with excellent results. After removing the weft threads, secure iron wire to the warp threads before cutting and dyeing, achieving a light and natural effect.

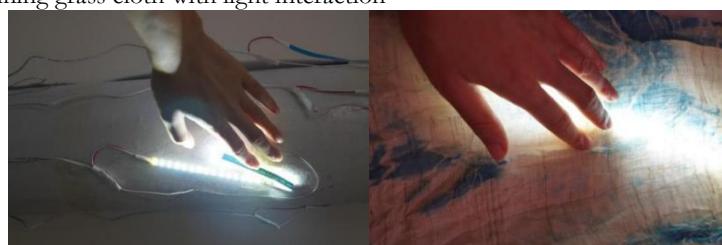
Experiment 4: Using alum to create a crystallized effect on yarn to mimic the texture of long lichen.



Picture: Creating a crystalline texture effect on yarn.

Comment: Mix alum and boiling water in a 1:2 ratio and stir thoroughly. Dip the yarn into the mixture, then remove and air-dry to achieve a crystallized yarn effect. The higher the alum concentration, the more pronounced the crystallization effect.

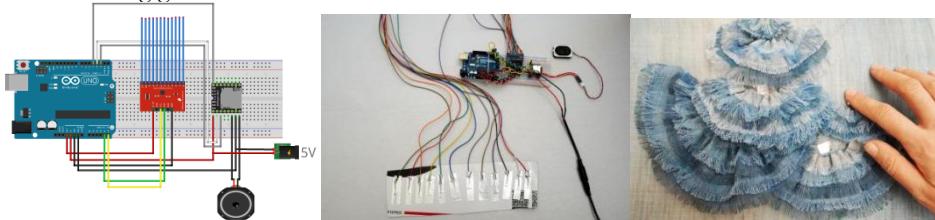
Experiment 5: Combining grass cloth with light interaction



Picture: Interactive effect testing.

Comment: Using sensor metal wires, light strips, sensor modules, and power cables, install them on the back of grass cloth according to the design's specified positions and shapes, enabling grass cloth to engage in visual interaction, touch, and communication.

Experiment 6: Combining grass cloth with sonic interaction.



Picture: Circuit diagram and Interactive effect testing.

Comment: Uses an 830-hole breadboard, Arduino UNO development board, MPR121 multi-channel touch sensor, MP3 module, speaker, SD card, and 5V power adapter. Principle: The MPR121 capacitive touch sensor detects touch input across 12 channels. When a touch is detected, the corresponding audio file is played via the DFPlayer Mini module. The 12 audio files are different plant-themed music tracks generated by a MIDI plant sound generator. This integration of technology enables grass cloth to engage in sonic interaction, touch, and communication.

Material experimentation offers a multidimensional space for exploring the application of grass cloth in textile art. The study validated the physical properties and aesthetic potential of grass cloth through dyeing techniques, fabric manipulation, and interactive technologies.

First, the experimental results of dyeing techniques show that tie-dyeing and dip-dyeing can create rich textural effects through control of tension. This process preserves the rustic essence of ramie fabric while showcasing the randomness and diversity of its natural texture, highlighting its unique advantages in simulating natural colors and textures. Second, fabric manipulation techniques such as curling, layering, collage and drawn thread break through the original physical properties of grass cloth, endowing it with new expressive forms. This demonstrates that grass cloth can not only present natural textures on a two-dimensional plane but also showcase complex formal beauty in three-dimensional shapes.

In destructive experiments, burning and drawn thread techniques further expand the expressive boundaries of grass cloth, enabling it to manifest rich morphological effects. This method embodies the dynamic balance between “destruction” and “regeneration” in traditional materials, and also provides a new interpretive angle for the application of grass cloth in the contemporary textile art context. Experiments with alum crystallization have generated crystal structures on the surface of grass cloth yarns, creating a natural mineral texture and infusing the fabric with a unique natural ambience.

By integrating light interaction and sonic interaction technology, grass cloth has successfully achieved a cross-disciplinary fusion between traditional textile materials and modern technology. This experiment validates the application potential of grass cloth in interactive textile art. When grass cloth is endowed with interactive attributes, its expressiveness and cultural value are enhanced, thereby breaking through the limitations of traditional craftsmanship and entering broader contemporary art and design fields.

Overall, these experiments not only highlight the multifaceted expressiveness of grass cloth in reproducing natural forms but also provide practical evidence for its cross-disciplinary application in contemporary textile art and interactive design.

Phase 3: Creating Interactive Textile Art Installations

Based on the research results of the first two phases, the third phase further applies grass cloth to the practice of interactive textile art installations. The installation themed “The Mark of the Tree” draws inspiration from the texture of tree trunks and the growth of lichen, abstracting natural forms and reinterpreting them through fabric manipulation. The natural texture and stiffness of the grass cloth are fully utilized in this process, creating a surface of the installation a natural rhythm of life.

In interactive design, the work combines sensor modules, light strips, and metal wires to achieve the effect of light and shadow flowing with the audience's touch (Figure 6). Figure 7 shows the production process of this textile art installation. The two-second delay mechanism for the lights to turn off not only enhances the interactive fun of the work but also provides viewers with an extended sensory experience (Figure 8). This dynamic transformation highlights the dialogue between nature and technology, materials and viewers, preserving the handmade texture of grass cloth while infusing it with a new contemporary context.

Audience members demonstrated active engagement with the installation during the interactive process, indicating that when grass cloth transitions from a static object to a dynamic medium, its cultural and artistic appeal

significantly increases. This transformation breaks through the traditional functional attributes of textile materials, transforming them into a comprehensive medium for cultural narratives, interactive experiences, and artistic innovation.



Figure 6. Appearance Changes of Textile Art Installations under Interaction



Figure 7. The Production Process of Textile Art Installations

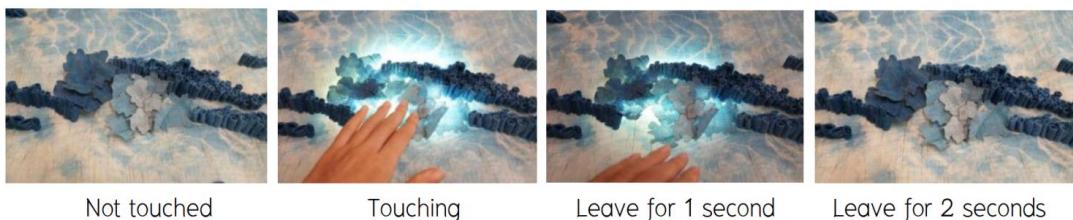


Figure 8. Visual Changes during Interaction

After completing the work, the researchers solicited feedback from the audience to expand the creative boundaries of the textile art installation. The audience expressed interest and appreciation for this art form and concept, demonstrating that traditional grass cloth becomes more appealing to audiences when integrated with modern textile innovation and interactive technologies.

CONCLUSION AND DISCUSSION

Conclusion

This study explores the expressive potential and innovative pathways of grass cloth in contemporary textile art as a medium for psychocultural therapy and mind–body engagement. Through three phases—questionnaire survey and field research, material experiments, and creating interactive textile art installations—it reveals the current state of recognition of grass cloth in contemporary society, its expressive potential in textile art, and its innovative value in cross-disciplinary interactions with implications for psychosomatic aesthetics and cultural well-being. Material experiments validated grass cloth's multidimensional expressive capabilities in dyeing, fabric manipulation, and interactive technologies, highlighting its advantages in simulating natural forms and cross-disciplinary art. Art installation practices further demonstrate that grass cloth not only carries cultural narratives but can also achieve interactivity and immersion through diverse processes and technologies that promote psychocultural reflection and mind–body connectivity.

Research findings indicate that the future development of grass cloth can integrate diverse design approaches and technological methods to achieve both cultural preservation and innovation while supporting psychosomatic and health humanities perspectives. This not only provides practical guidance for the protection and development of grass cloth but also offers a new research paradigm for the regeneration of traditional textile in a modern context.

The value of this research lies in providing methodological frameworks and practical cases for the inheritance and innovation of grass cloth, but its limitations include a limited sample scope and insufficient experimental depth. Future research could further expand cross-regional surveys, integrate more mature interactive technologies, and explore the possibilities of grass cloth within an internationalized art and design context, thereby promoting the regeneration and dissemination of this traditional textile material in contemporary culture with relevance to psychocultural therapy, psychosomatic art, and health humanities.

Discussion

The stiffness, clear texture, and natural properties of grass cloth make it easy to carry the translation of natural forms that engage psychocultural perception and mind–body awareness. Although the general public has limited awareness of grass cloth, there is a clear latent demand for it. Fabric manipulation techniques and interactive technologies have enhanced the innovation, dissemination, and appeal of grass cloth while fostering therapeutic interaction and psychocultural engagement. The research findings analyze the expressive characteristics of natural forms, textures, and colors, validate the practical applications of grass cloth in dyeing, fabric manipulation, and interaction, and demonstrate its feasibility and artistic expressiveness as a core medium through installation art with relevance to psychosomatic aesthetics and mind–body connectivity.

However, the sample in this study focused on Chinese audiences and Jiangxi grass cloth brands, with limited coverage of craftsmanship and a lack of systematic evaluation of interaction durability. Future research directions could include cross-regional, cross-cultural comparative studies and longitudinal research, expanding craftsmanship methods and interactive technologies while conducting experiential evaluations, and establishing a replicable design paradigm for natural forms, grass cloth craftsmanship, and interactive applications that support psychosomatic engagement, cultural well-being, and health humanities.

RECOMMENDATIONS

Research Applicability and Expansion

The findings of this study suggest that Chinese grass cloth can be positioned not only as a medium for artistic creation but also as a bridge connecting cultural heritage and contemporary art while supporting psychocultural engagement and mind–body reflection. The material experiments and interactive installations demonstrated that grass cloth possesses strong adaptability in simulating natural forms, enabling its application in fashion, product design, and cultural industries with potential for therapeutic and psychosomatic expression. Moreover, the research offers practical guidance for integrating traditional craft with interactive technologies, expanding possibilities for art education, cultural tourism, and sustainable product development while fostering cultural well-being and psychosomatic awareness.

Future Research

Future studies could extend the scope beyond Jiangxi to conduct cross-regional and cross-cultural comparative analysis, revealing the global relevance of grass cloth in psychocultural and mind–body contexts. Longitudinal studies may further investigate audience perception and cultural narrativity within interactive textile installations to examine psychosomatic responses and emotional engagement. In addition, the exploration of advanced technologies such as smart textiles and augmented reality may enrich the expressive dimensions of grass cloth. This expansion would provide a replicable model for combining natural inspiration, cultural heritage, and artistic innovation in contemporary textile practices with relevance to health humanities and psychocultural therapy.

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