

Qualitative Study on Playing-related Injury of College Student Pianists

Xiaoyu Miao *

Faculty of Human Ecology, Universiti Putra Malaysia, 43400 UPM, Serdang, Selangor, Malaysia

* Corresponding author Email: mmmiaoy@163.com

Abstract. This study aimed to investigate student pianists' playing-related musculoskeletal disorder (PRMD) from the perspective of qualitative research. This study used a transcendental phenomenological approach to collect data through one-on-one interviews and focus group discussions. Four themes emerged in these data: experiencing memories of PRMD, pianist's self-awareness, social support, and deal with injury. The findings are highly relevant regarding self-awareness, social relationships, education, and healthcare and provide educators and healthcare personnel with an experienced way to understand the PRMD of student pianists. The results show that maintaining student pianists' playing careers and coping with PRMD requires joint efforts from multiple fields, including the pianists themselves to establish good self-awareness, social relations to provide support and help, higher education institutions to provide and strengthen health education, and health care personnel to develop tailored ways to deal with injury for pianists. The study suggests that more research in the future could focus on the experiences of musicians and the group of tertiary music students. The study also hopes that this kind of research can be paid attention to and valued by music education, health education, and medical care to develop suitable PRMD intervention and treatment strategies for different types of musicians.

Keywords: College Student Pianists; Playing-related Musculoskeletal Disorder (PRMD); Experience; Self-awareness; Social Support.

1. Introduction

Current literature suggests that musicians face a variety of health problems during their careers, with the prevalence of PRMD ranging from 39%-87% (Shanoff et al., 2019; Walankar & Patil, 2021; Zieba et al., 2019), the prevalence of playing-related musculoskeletal disorder (PRMD) in pianists is 26-93% (Bragge et al., 2006; Şebnem et al., 2021). Even 50%-84% of musicians have lifelong PRMD (Ting & Rucker, 2019; Wolff et al., 2021). While most literature has focused on professional musicians, college student musicians are also a vulnerable group to PRMD. 25-43% of college student musicians admit that they have experienced or are experiencing PRMD (Spahn et al., 2004), and Brandfonbrener (2009) found that the incidence of pain related to performance was as high as 85% among first-year college music students. Some students experience PRMD even before they go to college.

PRMD is defined as "pain, weakness, numbness, tingling or other symptoms that interfere with the ability to play the instrument at the level you are accustomed to" (Zaza, 1998). PRMD affects musicians in various aspects, including physical, emotional, and social relationships (Crude et al., 2020). For young student musicians, PRMD has more serious impacts and consequences. Past literature has found that inexperienced musicians are more susceptible to PRMD (Borger et al., 2021;). In addition, PRMD may cause music students to delay learning or even abandon their studies (Kok et al., 2016; Arnason et al., 2014; Ioannou et al., 2018). In order to provide appropriate health education to college student musicians and develop the best injury coping methods, it is necessary to understand the experience of college student pianists related to PRMD. As Guptill (2010) mentions, it will only prove effective if healthcare professionals understand the nature of the challenges experienced. The reality is that many clinicians who treat musculoskeletal disorders have less

exposure to musicians in their daily practice, so they are not able to provide appropriate prevention and treatment measures tailored to the professional needs of musicians (Yang et al., 2021).

In addition, most current studies have focused on the prevalence and risk factors for PRMD, with little investigation of the experience of musicians and even fewer student musicians and pianists. In the literature search, this study found a few qualitative studies related to the PRMD of student musicians. The results of these studies show that student musicians have the same strong identification of the musicians' identity as professional musicians, and they also enjoy the process of creating and performing music. Therefore, they are willing to persist in playing despite the high risk of injury (Park et al., 2007; McCready & Reid, 2007). Suffer from PRMD has varying degrees of consequences on student musicians' musical performance, physical health, psychological state, and social relations (Austen, 2020; Steemers et al., 2020). These studies also highlight the benefits of studying student musicians' experiences in coping with their PRMD, as well as the importance of providing student musicians with good health education, occupational therapy, and a supportive work environment (Santos & Queirós, 2019; Green & Baadjies, 2018; Bandong & Sprague, 2017; Ericsson, 2022; Salonen, 2018).

The purpose of this study was to investigate the experiences of injured college student pianists and to provide an experience way for educators, healthcare providers, and stakeholders to understand college student pianists who suffer from PRMD, thereby providing suitable preventive and therapeutic measures to college student pianists.

2. Methods

This study was carried out under the philosophical framework of transcendental phenomenology. This study aimed to investigate college student pianists' experiences related to PRMD, so it was necessary to find a framework that could support the participant's narrative as the center of the outcome. The method of transcendental phenomenology, which prioritizes the subjective inner experience of the individual, perfectly fits this requirement. First, transcendental phenomenology can start a deep dialogue by returning to the lived experience of the thing itself (the student pianist); Secondly, it relates to the body's relationship with the world, enabling a better understanding of the lived experience of the physically injured pianist (Moustakas, 1994).

2.1. Participant

One-on-one interview	12 college student pianists
Focus group discussion	6 students in focus group 1 7 students in focus group 2
Age	17-28 years
Educational background	17 undergraduates 8 postgraduate students
Age to start learning piano	4-18 years old

Figure 1. Demographic Information

25 college student pianists from 7 institutions of higher education in China participated in this study, 12 of whom participated in a one-to-one interview. In order to ensure the anonymity of the participants, the names of the participants were hidden and replaced by Pianist 1, Pianist 2...Pianist 12. 13 students participated in the focus group discussion, of which 6 college student pianists from the Conservatory of Music served as Focus Group 1 and 7 college student pianists from non-conservatory music served as Focus Group 2. See Figure 1 for details. All participants received informed consent prior to enrollment, and the study was formally approved by the University Putra Malaysia (UPM) Institutional Review Board. Participants were recruited through paper

questionnaires and recommendations from piano teachers in higher education institutions, and participants had the right to decide whether to participate in or withdraw from the interview.

2.2. Data Collection and Analysis

Both the one-on-one interview and focus group discussion in this study was conducted in a semi-structured form, and the interview contents centered on the participants' lived experiences related to PRMD, including their behaviors, thoughts, perspectives, feelings, and other experiences related to PRMD. Due to the phenomenological characteristics, the interviews were in-depth (Moustakas, 1994), the one-to-one interview was about 45 minutes, and the focus group discussion was about 1.5 hours. All were conducted through face-to-face or video telephone interviews, which were recorded and transcribed verbatim with the consent of the participants.

The data were analyzed using the phenomenological data analysis method of Creswell & Poth (2016) (the simplified version of the Stevieck-ColaizziKeen method discussed by Moustakas (1994)), and the steps included:

1. Describe the personal experience of the phenomenon being studied,
2. develop an important statement,
3. group important statements then into larger units of information called "unit of meaning" or themes,
4. write a description of the phenomenon experienced by the participants,
5. write a description of "how" the experience occurred, and
6. write a comprehensive description of the phenomenon.

2.3. Credibility

In order to ensure the validity and reliability of the study. The researcher needed to confirm that all participants met the recruitment requirements through the pilot study to ensure that the interview guide could be directed to the research goal and that the interview results could obtain real and in-depth information. This study collected data through one-on-one interviews and focus group discussions to examine whether common themes applied to all participants. After the interview, the researcher recorded the interview content verbatim and gave it to the participants for confirmation, clarification, and supplementation. At the same time, in the data collection and analysis process, the researcher always maintained contact with the supervisory committee members, professional pianists, and clinicians, listened to the opinions of professionals, and accepted their scrutiny of the research process.

2.4. Result

Four themes related to college student pianists' experiences were identified in the data: experiencing memories of PRMD, pianists' self-awareness, social support, and deal with injury.

3. Experiencing Memories of PRMD

Each participant's description included their unique memories associated with PRMD, experiences that were painful, helpless, and memorable for them. These memories were related to physical feelings and experiences, decreased ability to play, causes of suffering from PRMD, psychological problems and negative emotions.

Most participants' profound memory of suffering from PRMD was physical pain and discomfort. Hands, shoulders, neck, and lower back were among the body parts that participants reported being injured, with varying degrees of pain, stiffness, soreness, weakness, and even chills, tremors, and cramps. Participants with severe conditions also experienced insomnia, anxiety, depression, and other

mental suffering caused by physical pain. Participants also reported a significant decrease in their ability to play due to physical pain and could not perform at the same level as before the injury. For example, participants with tenosynovitis felt stiff and weak fingers, participants with wrist pain felt that "body power was stuck in the wrist," and participants with stiff and sore shoulders felt that "their shoulders were filled with cement."

These physical discomfort made it difficult for the participants to perform at a normal level. They also had to reduce the time they played the piano and reduce or give up playing difficult piano works to adapt to their physical condition. Pianist 1 mentioned that after the injury, her preference for repertoire changed from skillful works to ones that are lyrical and slow. She said:

Before, I particularly enjoyed playing difficult, technically, and acoustically strong piano works. I enjoy the sense of accomplishment and passion these works bring me. When the audience hears me play these pieces, they would also think that I am a very talented pianist. At that time, I particularly enjoyed playing piano works by composers such as Liszt, Rachmaninoff, and Prokofiev.....After the injury, I was no longer obsessed with these works. I thought a piece of art must be stunning in shape and, more importantly, endowed with more connotation. So playing the piano is the same thing. Your excellent playing skills do not necessarily prove that you are a good pianist; a good pianist should be able to interpret the meaning of the work. For example, when I was playing Schubert's improvisation D.994 No.3, the same note in the first bar, I would think of the distant church bell moving closer to me and find the feeling of being far and close. I think it is also meaningful and wise to explore these subtleties.

When participants recalled the causes of their injuries, they subconsciously looked to their internal causes rather than external ones. They believed that they pursue the improvement of performance ability by over-practicing and ignoring physical health problems and pursuing complex performance techniques while ignoring the body's ability to bear. The lack of knowledge and understanding of PRMD led to the inability to manage the injured body properly. Psychological reasons such as low self-esteem, peer pressure, and perfectionism also indirectly lead to injury. As Pianist 4 said, "I blamed myself so much... It is only when the physical condition is irreversible that you find yourself overusing your body, which could have been avoided."

In addition to this, participants identified causes related to playing the piano as the root cause of the injury, believing that "if I were not a pianist, I would not have suffered musculoskeletal disease at all." Participants reported that piano composition, playing technique, playing habits, and playing techniques all contributed to injury to varying degrees. A member of Focus Group 1 described:

When I was in high school, my goal was to go to any music college in the country. In addition to academic classes, I often play the piano until late at night or even all night. In fact, before entering the university, my body began to feel uncomfortable. For example, when I was playing running piano works, my hands would become very stiff and keep making orders. When playing octaves and seventh chords, I could not transfer the strength of my arms and body to the keys, and sometimes I felt that my forearms, forearms, and shoulders were extremely sore. However, due to the preparation for the exam, I had to repeat these playing techniques in the case of pain, which led to the aggravation of PRMD.

Participants also had vivid memories of their mental state and emotional response to experiencing PRMD. Pianist 5 mentioned that she suffers from insomnia due to chronic mental stress and suffering from PRMD and that every night she experiences the feeling that "the day feels like a year." After Pianist 10 and a member of Focus Group 2 suffered from PRMD, they showed symptoms of performance anxiety, such as sweating palms, finger cramping, and nervousness. In addition, all

participants mentioned their sadness, depression, worry, fear, anger, despair, and other negative emotions caused by PRMD, and even the idea of giving up piano playing due to strong negative emotions. Pianist 4 shared her emotional changes after suffering PRMD, generally a process from disbelief to gradual acceptance of reality:

When I learned of my injury, I was initially surprised and overwhelmed. Then there was the fear that I would not be able to play the piano or that I would be limited in playing the piano. The third point is unease. During the whole treatment process, especially during that month (her doctor told her to rest for a month), I was very uneasy because I could not play the piano. During that month, I was anxious and worried about when I would get better and whether I could cure it. Then I was very anxious, looking forward to my return soon... When the doctor told me that he had treated many other piano players like me, I was a little relieved because I was not alone in suffering. Some of my peers suffered much more than me, but everyone was holding on, so I had to hold on.

3.1. Pianists' Self-awareness

Participants developed a pianist-related self-awareness when they decided to become professional pianists or earlier. Participants' self-awareness can be reflected in the formation of consciousness, the strong sense of identity, and the fear of losing identity.

Participants often became aware of their identity as pianists at a certain point in their relationship with piano performance, whether when they decided to become a pianist, won a piano competition, were discovered to be musically talented, or entered music school. A few participants described identifying themselves as a pianist from an earlier age. A member of Focus Group 1 also said, "Since I can remember, I have no other plan in my life except to play the piano. The piano has become my career in my life, so I always think I am a pianist." Pianist 12 is an outstanding young piano player. Although she is still a senior student, she has accumulated rich experience in piano playing. She described:

You know, it's kind of narcissistic to say that, but maybe in a way, I'm not just a college student studying piano. I'm also a young piano player. In my four years of college, I hardly spent a semester in school.....I spend almost all my spare time practicing the piano. Sometimes my body does experience significant discomfort, but there is no way to avoid it. I viewed myself as a pianist from a very young age. When I was very young, I was called a "young pianist" when I was performing. Some teachers, experts, listeners and journalists would call me a "piano genius". It is an exaggeration, but I feel like I have been a pianist since I was conscious of playing the piano.

After the pianist's self-awareness emerged, participants would have a strong sense of identity as a pianist. They would develop a sense of pride and honor for their identity. Participants believed that the pianist's identity had special and important significance to them, and it embodied their personal value, personal ability, social identity, survival ability, and self-cognition. So participants were reluctant to pause or stop playing, even with severe physical pain. As Pianist 4 said, "Without being a pianist, I do not know what kind of individual I am... Being a piano player is what I know of myself, and the piano is part of my soul." Pianist 11 also affirmed the importance of identity to him:

It (pianists' identity) means my ability, it means what I can do, it means what others think of me, it means my identity, it means my future career and my future path, and it is also an expression of my social identity.

It was precisely because of the participants' strong sense of identity as a pianist that they felt uneasy and self-doubt after suffering from PRMD, resulting in the sense of identity conflict between "pianist"

and "patient" and a fear of losing their identity as a pianist because they were unable to continue playing due to illness. Pianist 11 mentioned:

I am a pianist and a patient at the same time. I find it strange that one is a good identity and one is a bad one. I often wonder why I have to face such an embarrassing situation. Other people's perceptions of me will also have problems, and people may think that I am a bad pianist because I am injured.

After the injury, participants doubted their ability to become professional pianists in the future, worried that their physical condition would deteriorate, their performance would continue to decline and even lost confidence as a pianist. Pianist 4 mentioned, "As a student pianist, I can accept physical pain, but I really cannot accept not being able to play in the future." Pianist 8, who was forced to stop playing due to severe tenosynovitis, was also worried that he would lose his love for life because he could not continue playing and would not realize his dreams related to playing. He said:

I really could not stop playing the piano. I have taken playing the piano as my lifelong faith. Without it, I will lose my love for life and not know how to realize my dream and value. So no matter how difficult and physical discomfort I encounter, I will stick to it as always. I just hope that in the future, my physical condition is not so bad that I cannot play.

3.2. Social Support

As college student pianists whose economy and personality are not completely independent, social relationships profoundly influence them. They would be injured because of the influence of social relations and would also get help and support from social relations after the injury.

The social relationships of the participants' parents, piano teachers, classmates, friends, and even the audience and competition judges all potentially impacted their health. Among them, parents and piano teachers had the most prominent influence. Parents' excessive expectations, inappropriate education methods, and desire to control their children would lead participants to be in a depressed, high-pressure, and tense parent-child relationship for a long time and over-practice in order to meet the requirements of parents, which indirectly led to injuries. Pianist 12 mentioned that her mother was extremely demanding and controlling. Her mother made it her "career" to train her to become a professional pianist, which caused great psychological pressure on her. She said:

Most of the time, my mother treated my study and piano playing like an entrepreneur undertaking a critical project. When I did not meet her expectations and did not do well in a competition, she was more upset than I was, and she would verbally attack me or use senseless violence. Although I had always loved the piano, my mother's behaviors made me feel anxious, depressed, and afraid. I even panicked every time I practiced the piano for a long time. I could not think about my mother and what she said, or I would feel cold and shiver all over. My mother was very supportive when I was growing up, but her devotion to me as if I were her career took my breath away.

The excessive severity of the piano teacher would force the participants to stay in intense practice and mental stress for a long time. Improper playing methods and techniques taught by poor teachers could directly lead to injuries to participants. In addition, almost all of the participants' piano teachers had no awareness of injury education and could only help students cope with PRMD based on their own personal experiences. Negative comments and attitudes from classmates, viewers, and judges also aggravated the participants' illness to some extent. Pianist 3 described his experience:

After the injury, every time I performed on stage, there seemed to be some problems, and I could feel the attitude of the audience towards me was negative, questioning, and

laughing. They might talk about why my playing is getting worse, and they might think I am a lazy pianist. But the more I tried to perfect my performance, the harder I practiced, the worse I got. I am really sorry...

Negative relationships caused participants to feel emotionally distant from others and want to run away or avoid the person who caused them harm. Pianist 5 mentioned that when she suffered from PRMD and psychological problems due to excessive discipline from her parents and teachers, she wanted to "want to build a wall, isolate herself or keep them out." However, after the participants received help and support from their social relationships, they regained and re-established close social relationships and were more comfortable with PRMD.

After PRMD, participants' parents provided companionship, understanding, and financial support and reduced harsh and excessive expectations. The piano teacher would also help the participants adjust their playing habits and optimize their playing techniques. Classmates and friends would share their experiences of coping with PRMD with participants. Even some of the audience showed understanding and tolerance for the participants. The change in social relations' attitude towards the participants created a supportive work environment, allowing them to cope with the injury and continue their playing careers more calmly. Some participants also developed sympathy for other injured pianists and took the initiative to share with them the measures and experiences of coping with injuries. As pianist 4 said, "Because I have been in the rain, I want to give others an umbrella." Pianist 9 said, "I am happy to share my experience with other pianists. I do not want others to suffer the same pain as me."

3.3. Deal with Injury

The coping methods used by the participants focused on self-care and seeking medical care. However, due to the fear of trouble, poor economic situation, and no time to seek medical treatment, participants preferred self-care and only sought the help of healthcare personnel when the situation was more serious.

During the self-care, the participants preferred to improve their playing methods and techniques, and they would try to find more ergonomic, less labor-saving, and less harmful playing methods to practice and play the piano. A member of Focus Group 1 described that the correct technique of exertion in playing should be "to imagine the feeling of a drop of water flowing from the shoulder to the upper arm, then to the forearm, and finally to the fingertips through the wrist." After Pianist 1 was injured, she would think about which technique was more suitable for her. she said, "I first think about what kind of power I should use, how to use my whole body instead of just my fingers to play, to save energy and reduce physical damage". In addition, they also tried to prevent and alleviate PRMD by improving their quality of life, improving their lifestyle habits, and adjusting their mental state. Pianist 3 mentioned that she would adjust her body and mind to the best state before practicing the piano and constantly give herself positive psychological suggestions to overcome the difficulties encountered in the process of playing. She said:

I get my body and mind in perfect shape before practicing piano. After this adjustment, I can basically complete my practice tasks normally and also overcome the physical pain during the performance. To be specific, I would do some stretching exercises before practice, play scales to move my fingers, adjust my mood, and give myself positive psychological suggestions. Especially if I was learning difficult techniques or I was not in good health. I would say to myself, "You can learn these techniques well. You must believe in yourself. Your body will not get worse." In short, my methods were to improve my motivation and overcome my negative attitude.

All participants had received different forms of health care treatment. They were more willing to seek treatment and were more positive than professional pianists. They would actively cooperate with the

therapist and not worry about the negative impact of therapy on their future career, as professional musicians do. Perhaps because of geography, Chinese medicine was the preferred treatment for the participants. Participants considered traditional Chinese medicine to be the treatment with the least side effects and to help them treat PRMD from a body conditioning perspective. They often used massage, acupuncture, moxibustion, and medicine to relieve and treat PRMD. Participants then chose physical therapy such as massage, heat therapy, and electrotherapy. Participants with severe cases were given the drug by mouth or injection. Pianist 12 mentioned that she had tried almost every form of therapy available to her:

I have had anti-inflammatories and injections of triamcinolone acetonide. I have had both my hands splinted. I also tried physical therapy. I also did electrotherapy and massage. And I have also received acupuncture from traditional Chinese medicine. I think I have tried everything I can (with helpless smile).

Participants generally reported that their therapists lacked experience working with pianists and did not fully understand their situation and needs, so they gave them inappropriate advice. For example, the therapists of Pianist 2, Pianist 7, and Pianist 12 tried to persuade them to give up playing, but this was not acceptable to them. In addition, none of the participants were completely cured. The symptoms of most participants were only relieved to vary degrees but were easy to relapse after long-term playing. Even some participants did not get significant relief after receiving treatment. Although participants were aware of the fact that PRMD is difficult to cure, they still actively cooperated with the treatment and trusted the therapist. Participants tended to think that they were not relieved or cured because of the difficult-to-treat properties of PRMD, not because of the therapist. Pianist 1's response nicely summed up the thoughts of most participants:

When I chose a therapist, I would choose someone I trust. For example, I chose an acupuncturist because my friends and classmates think his technique is very good. I am not worried about my career if news of the injury gets out. First, I am just a student. Second, doctors outside the music industry should not spread the news about musicians getting hurt. It is not beneficial for them either.

4. Discussion

Participants' experiences with PRMD showed high correlations in four areas: self-awareness, social relationships, education, and health care. As shown in Figure 2.

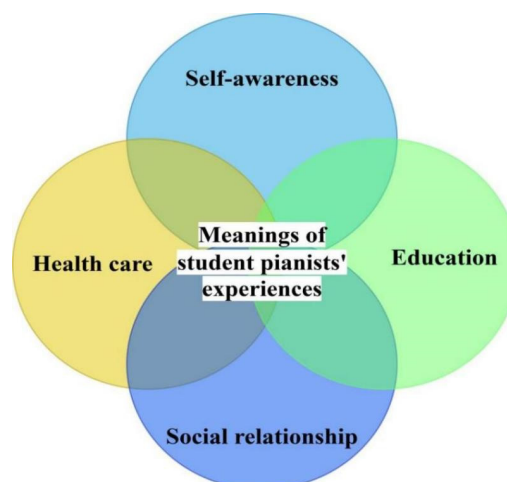


Figure 2. Meanings of the college student pianists' experience

First, participants' self-awareness ran through their experiences with PRMD, and they were experiencing the "relationship with themselves" every moment. Self-awareness is defined as "your ability to perceive and understand the things that make you who you are as an individual, including

your personality, actions, values, beliefs, emotions, and thoughts "(Goleman et al., 2002). The participants' self-awareness of pianists emerged from the moment they decided to become professional pianists. Because of their love for piano performance, they had a strong sense of identity as a pianist. They felt the sense of pride and honor generated by the sense of identity and even thought that playing the piano embodied their self-value and social value. Therefore, after suffering from PRMD, they would realize the deterioration of their physical condition, the decline of their piano-playing ability, and the doubts from others. They would have strong negative emotions, become low self-esteem, sensitivity, and loss of self-confidence. Participants feared that they would not be able to become professional pianists in the future due to physical reasons, that they would not be able to fulfill their dreams related to piano playing, or even that their career would end before it even began.

As college student pianists with low self-decision-making and incomplete independence, social relationships played an important role in their experience, and participants continued to experience their "relationship with others." Past literature has affirmed the importance of social support systems (relationships capable of providing material and spiritual help and support) to a person's attainment of health and well-being (Coyle, 2002; Wong, 2020). Participants were injured indirectly by strained relationships with parents, piano teachers, classmates, and audience members and faced alienation from others' emotional space and the breakdown of social support systems. After receiving emotional support and substantive help from social relationships in coping with the injury, participants re-established close social relationships with others and were able to cope with health problems more easily in good relationships.

The participants' experiences also reflect the education they received. The participants generally had parents who expected too much of them and overly strict piano teachers. Their parents and teachers put them in a high-stress environment for a long time, forcing them to over-practice and eventually develop physical problems. The piano teachers of some participants did not have good playing ability and teaching abilities, which caused the participants to develop bad playing habits and wrong playing techniques at the early stage of professional learning, thus increasing the possibility of injuries caused by bad playing ways in their long-term playing career. In addition, there was a lack of health education at the universities the participants attended, which made them less aware that they could suffer PRMD while playing piano, and lack the knowledge and strategies to cope with PRMD after injury. In conclusion, there was a causal relationship between college student pianists suffering from PRMD and the improper education style, the lack of teachers' ability, and the lack of health education.

Participants' experiences are highly relevant to the healthcare field. Although the participants continued to seek treatment, their PRMD was only in remission and not cured. On the one hand, this reflects the lack of recognized and useful measures in the field of healthcare to deal with pianist PRMD; On the other hand, participants also said that some of the measures developed for the pianist were not reasonable because the therapist did not understand the pianist's experience and did not think about their situation and needs from the pianist's perspective. So the study of participants' experiences could help healthcare providers gain insight into college student pianists and consider the pianist's experiences and needs when developing the ways to deal with injuries.

In conclusion, these findings suggest that providing a supportive work environment for injured pianists requires a concerted effort from multiple fields. College student pianists should cultivate good self-awareness, clearly understand their current situation after suffering from PRMD, maintain their identity as pianists and their love for the performance career, have certain control over negative psychology and emotions, and actively cooperate with intervention and treatment. At the same time, a positive social relationship should be established for injured college student pianists, an inclusive working environment should be provided to reduce the doubts and mistrust they face after injury, and help them maintain a social support system. In addition, higher education institutions should attach importance to the injury education of college student pianists, provide relevant courses or guidance, and cultivate students' awareness of injury prevention and response. Pianist teachers should also improve their professional ability, teaching ability, and awareness of injury education to prevent college student pianists from suffering PRMD due to inappropriate music education. Finally, the

musician-related healthcare field should value musicians' experiences and understand their needs and dilemmas so that the ways to deal with injuries can be tailored to them.

5. Relevance and Limitations

This study investigated the experiences of college student pianists with PRMD. These experiences revolved around their recollections of experiences related to PRMD, their self-awareness related to pianists, the influence and support of their social relationships, and the ways to deal with PRMD they used. The study further found a high correlation between college student pianists' experience and four areas of self-awareness, social relationships, education, and healthcare. These findings shed new light on the field of PRMD research. College student pianists' knowledge, thoughts, and feelings about their experiences with PRMD are primarily derived from their self-awareness, as well as their role identification and value judgment as pianists, and they even directly affect the severity and progression of PRMD. Good self-awareness would enable college student pianists to face PRMD more calmly and take self-care. Social connections also run through the student pianist's experience. They are both risk factors for the participants to suffer from PRMD and people who can offer help and support. This study also suggests that college student pianists should be helped to build good and supportive social relationships so that they can get support from social relationships and have the ability to help others who have similar experiences. Finally, the results of this study can help educators and healthcare providers to understand the PRMD of college student pianists in an experience way and to provide them with appropriate help and intervention. However, this study, like other phenomenological studies, aims to seek a detailed description of the life experiences of individuals (college student pianists) and elucidate the nature of phenomena (PRMD) rather than an objective assessment of social phenomena based on large sample size. So there are limitations of small sample sizes and the inability to generalize the results to a wider population. Although the study results are not representative of the experiences of college student pianists in other regions due to limitations on study locations and study numbers. This study could provide a new clue, inspire other pianists who have had similar experiences to pay attention to their health problems, and inspire more people to pay attention to the experiences of injured pianists. In addition, due to the limitations of professional knowledge, the ways to deal with injuries presented in this study can only represent the strategies used by participants, and whether they can be applied to more pianists needs to be tested by healthcare professionals.

6. Conclusion

The results showed that the participants' experiences are highly relevant to the areas of self-awareness, social relationships, education, and healthcare. This study could provide an experience-based perspective to understand the college student pianists' PRMD. This study hoped that more research in the future would focus on the experience of musicians and on this vulnerable group of music students. It is also hoped that the education and healthcare fields will pay attention and value to this type of research so as to develop more effective and practical ways to deal with injuries.

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