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Patients living with chronic non-cancer pain receiving opioid therapy in Japan: a grounded theory study

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ABSTRACT

Through an examination of personal narratives, we sought to elucidate the experiences of people receiving chronic opioid therapy for chronic non-cancer pain. The participants were 34 adult volunteer outpatients treated in pain clinics. Data were collected using semi-structured interviews and analyzed using the grounded theory approach. The participants described their daily life experiences of chronic pain and opioid therapy. Informed consent and ethical approval were obtained. Six categories were extracted: “Barriers to living with chronic pain,” “Facing injustice or extreme chronic pain and catastrophizing,” “Making an attempt to improve one’s condition,” “Ambivalence about medical treatment,” “Finding a compromise while living with chronic pain,” and “Regaining a life.” These findings expand our understanding of Japanese patients with chronic non-cancer pain who receive opioid treatment and how they cope in their daily lives.

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Key words: Chronic non-cancer pain, Grounded theory, Opioid therapy, Lived experience

1. Background

Approximately 45.2% of Japanese adults have chronic pain. However, 50% of these individuals discontinue treatment despite persistence of pain because of dissatisfaction with treatment¹⁾. Many Japanese adults with chronic musculoskeletal pain lose or change their occupation, leave college, or miss work²⁾. Chronic pain can cause physical disability, depression, lower quality of life (QoL), and financial and employment difficulties³⁻⁶⁾. The findings of the inaugural “Meeting on Chronic Pain”⁷⁾ were used to propose measures for improving QoL of such patients. Subsequently, a comprehensive program incorporating many social aspects, including the evaluation of activities of daily living (ADL) and QoL, as well as patient education, was implemented^{2, 3, 8)}. However, there have been fewer Japanese nursing studies focusing on chronic non-cancer pain than on chronic cancer-related pain. At least one study⁹⁾ found that Japanese nurses often handle chronic pain incorrectly.

Opioids have been widely used for the management of acute, chronic, cancer, and non-cancer pain worldwide¹⁰⁾. However, the efficacy of opioid analgesics for patients with chronic non-cancer pain is unclear¹¹⁻¹³⁾. Previous

studies^{11, 14)} have reported that opioid therapy is useful for alleviating chronic pain symptoms, improving QoL, and reducing treatment costs. Consequently, opioid prescriptions for chronic pain have increased dramatically^{15, 16)}. In older adults with chronic pain and no significant comorbidity, short-term opioid use is associated with a reduction in pain intensity and better physical functioning^{17, 18)}. However, this trend has been accompanied by greatly increased levels of prescription opioid overdose, abuse, addiction, and diversion¹⁹⁻²¹⁾. In addition, there is insufficient evidence to validate the effectiveness of long-term opioid therapy for chronic pain improvement²²⁾. In Japan, opioid therapies are mostly restricted to patients with cancer pain, and opioid drugs available to patients with chronic non-cancer pain are limited to codeine phosphate, morphine hydrochloride, fentanyl, buprenorphine, pentazocine, and tramadol²³⁾. These factors have limited the widespread use of opioid therapy. Regarding the literature, fewer Japanese studies have focused on chronic non-cancer than cancer-related pain, and there have been almost no reports on Japanese patients with chronic non-cancer pain receiving opioid therapy.

To date, research on chronic non-cancer pain has

focused on quantitative aspects measured using objective tools based on numeric, verbal, and visual analog scales (VAS). Although these are useful in objectively quantifying pain, they do not reflect the multidimensional experience of life for outpatients with chronic non-cancer pain receiving opioid therapy. Also, little qualitative research^{24, 25)} has been conducted on patients' perspectives of chronic non-cancer pain, especially those receiving opioid therapy²⁶⁻²⁸⁾. Narratives, or meaning-making reconstructions of life events, are an important source of qualitative information²⁹⁾.

Through an examination of personal narratives using a grounded theory approach, we sought to elucidate the experiences of individuals receiving opioid therapy for chronic non-cancer pain.

2. Methods

2.1 Design

The grounded theory approach of simultaneous data collection and constant comparative analysis was implemented. The purpose of this qualitative study was to examine the lived experiences of adults receiving opioid therapy for relief of chronic non-cancer pain through the examination of data obtained through serial recorded narrative interviews. The lead author, a registered nurse and public health nurse with qualitative research experience in the field of chronic pain in Japan, conducted each interview one on one.

2.2 Patients

The study cohort consisted of individuals who used opioid analgesic prescriptions for non-cancer pain. The specific inclusion criteria were as follows: adults aged 20 years and older who were receiving strong or weak opioid therapy at a pain clinic and whose chronic pain had continued for at least six months. Individuals diagnosed with dementia were excluded.

Participants were recruited from pain clinics in two hospitals in Sapporo. Data were collected between March 2014 and January 2015 at one hospital and between February 2015 and April 2016 at the other. The lead author visited the outpatient department of both hospitals and requested the appropriate specialist to identify the relevant patients, who were then briefly interviewed to determine eligibility and interest. Participants were recruited at the respective clinics while awaiting treatment in the outpatient ward.

Owing to the limited number of persons able and willing to verbalize their experiences, theoretical

sampling was achieved by collecting further data about emerging categories during interviews instead of seeking participants with specific experiences. Interviews were conducted until data saturation was achieved. As a result, we conducted 34 patient interviews. Two participants had a cooling off period of three and four months, respectively.

2.3 Data Collection

In-depth serial interviews, conducted in the privacy of the participant's home or other agreed-upon location, were audio recorded. The first interview was conducted in a private space in the hospital while the second was held at either the participant's home or the hospital.

Participants were interviewed two times. The first interview, semi-structured using an interview guide, consisted of six open questions: "What happened to cause your pain?" "What problems have you encountered?" "How do you manage your pain?" "What is the worst part of having chronic pain or what has changed because of it?" "What is it like to be taking long-term opioids for chronic non-cancer pain?" and "What do you hope for the future?" This interview guide was based on previous qualitative research on chronic non-cancer pain treated with opioid therapy²⁶⁻²⁸⁾. During the second interview, the participants validated the content of the first interview and the meanings of statements were clarified. The interviews, which lasted 1–2.5 h, were audio recorded and transcribed verbatim.

Medical history was obtained using a structured interview. The following variables were recorded: age, sex, occupation, pain location, duration of continuous pain, and duration of opioid therapy. Current pain status severity was assessed using a VAS consisting of a 10 centimeter horizontal line, with start and end points labeled "no pain" and "worst possible pain," respectively³⁰⁾. To evaluate pain intensity and interference with QoL during the last month, the self-reported Japanese version of the Short Form 36 version 2 (SF36v2) was used. The SF36v2 is a commonly used measure with considerable evidence supporting its reliability and validity across samples and languages³¹⁾.

2.4 Data Analysis

We used a modified grounded theory approach to code and analyze transcripts³²⁾. First, we read and completed field notes on interview transcripts and discussed emerging thematic topics. Then, we combined 76 final deductive codes, based on broad topics from the semi-structured interview guide, with inductive codes

(i.e., those that emerged from the interview content and subsequent analytic discussions and field notes). After repeated independent iteration of transcript coding and group discussion, we developed distinct codebooks for patient interviews. Two leading pain and palliative care nursing researchers versed in qualitative data analysis and two pain clinic specialists recurrently examined the data in parts and in their entirety to verify inter-rater reliability of the coding scheme. We resolved coding discrepancies through consensus.

2.5 Rigor

Methods to enhance the standards of rigor, credibility, and fittingness were utilized^{33, 34}. Credibility was established by conducting participant interviews at two points. After the initial interview, records were transcribed, and an initial analysis of the transcript was made. The second interview was used to validate the codes with the participant as well as to achieve clarity. Credibility was also established through the careful use of a literature review³⁵. The initial literature review was conducted to confirm the existence of a gap in the literature. After data collection and analysis, a

literature review employing comparative analysis with existing research was conducted. This twofold method was used to limit the influence of the literature on category construction. Fittingness, or the transferability of findings, was confirmed by the comparative analysis, with the goal of illustrating parallels with existing research regarding the use of opioid therapy for chronic non-cancer pain³².

2.6 Ethical Considerations

Ethical clearance was obtained from the university and the industry partner hospital ethics committees. Anonymity and confidentiality were assured. All participants were given a plain language statement and an opportunity to ask questions about the study. Pseudonyms and codes were allocated for all data including field notes and identifying information was stored separately. Written informed consent was obtained prior to each interview.

3. Results

We conducted 34 outpatient interviews (Table 1). Fifty-two percent of the patients were elderly and 50%

Table 1. Participants' Characteristics (N = 34)

Characteristic	n (%)	
Age (years)	22-40	3 (8.8)
	41-64	13 (38.3)
	65-74	12 (35.3)
	75+	6 (17.6)
Sex	Women	17 (50.0)
	Men	17 (50.0)
Pain duration, years, mean \pm SD	11.3 \pm 9.6	
Opioid therapy, years, mean \pm SD	3.5 \pm 2.8	
Current pain status (VAS), mean \pm SD	4.0 \pm 2.6	
<i>Opioid therapy (multiple other)</i>	Morphine, oral	12 (35.3)
	Fentanyl, transdermal	5 (14.7)
	Buprenorphine, transdermal	2 (5.9)
	Tramadol hydrochloride, oral	4 (11.8)
	Tramadol hydrochloride/acetaminophen, oral	14 (41.2)
Pain location	Codeine, oral	2 (5.9)
	Head pain/trigeminal neuralgia	5 (14.7)
	Breast/back neuralgia	6 (17.6)
	Lower-back pain	8 (23.5)
	Interstitial cystitis/phallus pain	5 (14.7)
	Extremity complex regional pain syndrome	10 (29.4)
SF36v2 (maximum score, 100 points)	Physical functioning	58.7 \pm 30.2
	Physical role functioning	58.5 \pm 33.2
	Body pain	36.7 \pm 21.0
	General health perception	47.2 \pm 27.7
	Vitality	44.7 \pm 21.8
	Social functioning	51.8 \pm 37.6
	Emotional role functioning	66.9 \pm 31.9
Mental health	56.9 \pm 25.9	

Note. SD = standard deviation, VAS = visual analog scale, SF36v2 = Short Form 36 version 2.

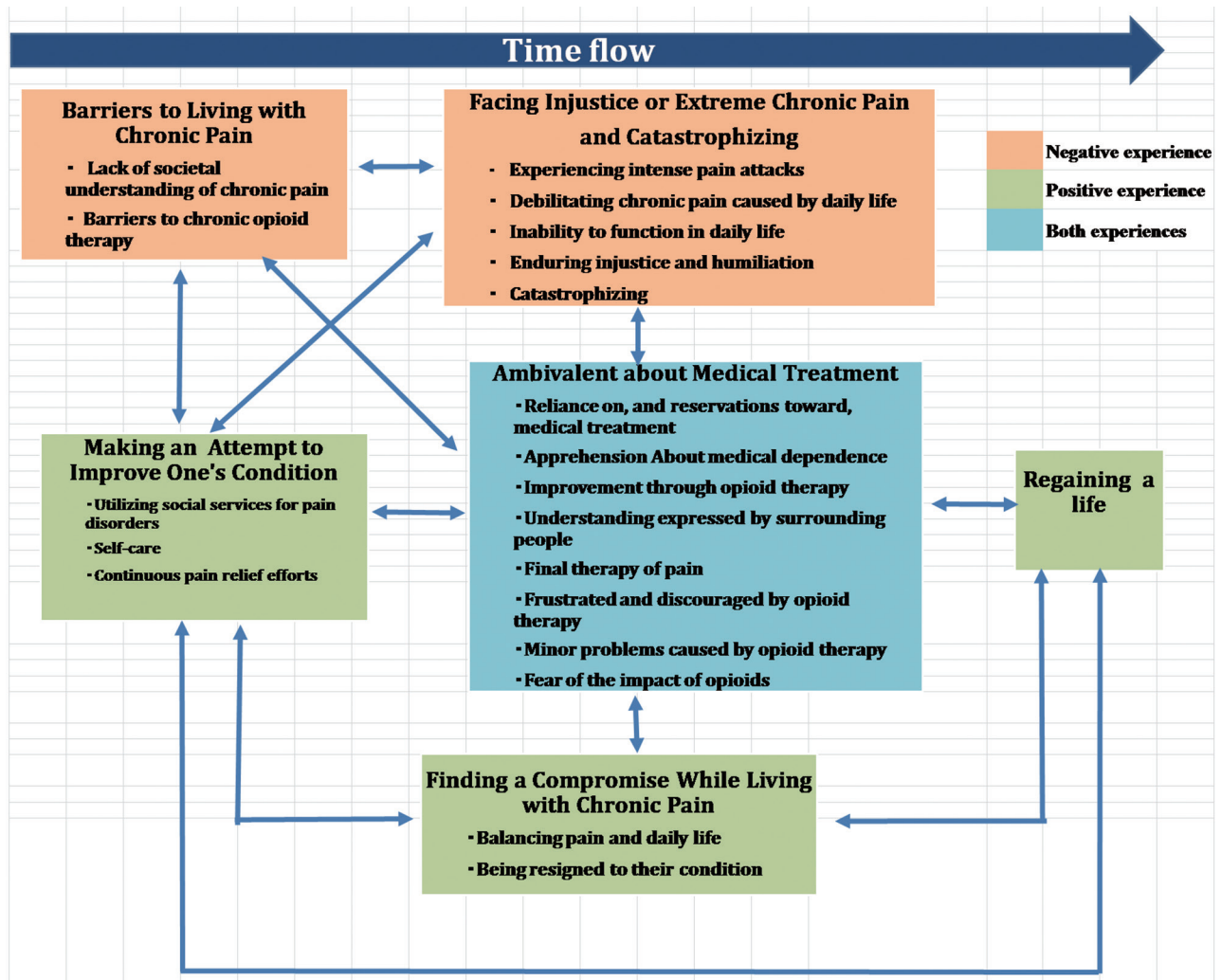


Figure 1. Six categories and their associations regarding the living with chronic non-cancer pain while receiving opioid therapy in Japan.

were women. The mean durations of chronic pain and opioid administration were 11.3 ± 9.6 years and 3.5 ± 2.8 years, respectively. The mean current pain status (VAS) score was 4.0 ± 2.6 . All participants reported SF36v2 scores that were lower than the Japanese average³⁶.

Six categories reflecting participants' experiences of opioid therapy were extracted (Figure 1): "Barriers to living with chronic pain," "Facing injustice or extreme chronic pain and catastrophizing," "Making an attempt to improve one's condition," "Ambivalence about medical treatment," "Finding a compromise while living with chronic pain," and "Regaining a life."

3 • 1 Barriers to Living with Chronic Pain

Participants reported stigma and two types of barriers.

Lack of societal understanding of chronic pain. Several knowledge barriers about pain treatment were

noted, such as lack of knowledge regarding pain clinics, pain treatment, and neuropathic pain, and difficulty understanding the concept of prescriptions: "I think others cannot understand why I go to the department of anesthesiology. Still others do not understand what a pain clinic is for. I said I was going there to reduce pain. Others said, what is anesthesiology?" (7-540)

Concerned family and friends often interfered, and participants had trouble explaining their pain because of social incomprehension. Therefore, they kept it a secret: "Even physicians will not understand my pain because they have none." (1-752) "I'm just not saying I had my hurt leg. I keep it secret. Because I fear that I will lose a chance to go back to my job." (2-303-305)

Barriers to chronic opioid therapy. Participants frequently experienced negativity, stigma, bias, and disdain because they were undergoing chronic opioid therapy: "I can't throw away garbage because I don't want my

neighbors to see the patches and think I am a drug addict!" (12-2355- 2357)

Participants often spoke of the barriers to obtaining their medications from pharmacists and medical professionals: *"Morphine is not easily available" (7-1468) and "If I change pharmacies suddenly, they may not have an available stock, and I would have to make another visit. How tiring!" (7-565)*

3 • 2 Facing Injustice or Extreme Chronic Pain and Catastrophizing

Participants engaged in catastrophizing and experienced feelings of injustice while living with chronic pain.

Experiencing intense pain attacks. Many patients described living with uncertain, intense, and serious pain attacks: *"I'm scared because of the suddenness and severity of pain."* (3-164)

Debilitating chronic pain caused by daily life. Chronic pain was influenced by one's surroundings (i.e., temperature, weather, stress, outside stimuli). The pain varied in intensity but participants were constantly aware of it: *"I live with my parents now. Surprisingly, I am now stressed, which has worsened my pain."* (7-188)

Inability to function in daily life. Participants lost their ability to adapt to situations and reported difficulties in the emotional, physical, and role domains.

Emotional. Loss or abandonment of hope, religion, vitality, and ability to effectively function on an emotional level (e.g., emotional imbalance, fear of increased pain, exhaustion associated with posttraumatic stress disorder, hesitation to try new things) was common: *"Every time I saw traffic accidents on TV, I felt sick and impatient and my heart rate increased, and I ended up thinking about the person who caused my accident."* (1-877-883)

Physical. Problems in physical functioning were common. The loss of the ability to perform self-care necessitated hospitalization in some cases: *"I can't sleep or eat when the pain comes; this condition has continued for a long time."* (3-258)

Role. Inability to perform role functions in social and work relationships was common: *"For example, when I attend social gatherings and party, it is very bad, because I need my pain drugs. When someone asks me, 'Do you have a health problem?' I always say, 'It's okay.' I'm lying, always. I am considering not attending such events anymore."* (7-250)

Enduring injustice and humiliation. For most participants, the onset of chronic pain involved injustice or

uncertain outcomes, and a struggle with this injustice: *"I had a goal that I was working toward, but one drunk person ruined my life in an instant."* (1-889)

Participants received various long-term treatments for pain relief, and the nature of the pain changed over time. They allowed repeated work-ups, attempted last-resort treatments, and seized every opportunity for pain relief: *"Perhaps I should not have been operated on, but I allowed it because I wanted to be free of sudden pain...All in all, my treatment involved abdominal and visceral nerve blocks."* (5-147)

Catastrophizing. Catastrophizing was defined as the abandonment of any hope for the future and lack of concern for life due to sensitivity to surroundings or chronic pain. Lack of concern for life consisted of the innermost desire to terminate pain, with or without a suicide plan, attempt, or hoping for an accident: *"I cannot overcome my pain. I honestly hope to be run over by a truck so that I am not responsible for my death."* (10-1406)

3 • 3 Making an Attempt to Improve One's Condition

Participants had made many attempts to improve their condition.

Utilizing social services for pain disorders. Some participants had received welfare and social security services because of their pain disorder and family problems. One participant spoke of his utilization of social welfare to meet the requirements of day-to-day life, because he was hemiplegic and had serious pain attacks at times: *"My home was entirely renovated for my care, but it was still hard to live there. It so happened that a nursing home was built right in front of my house. I moved there because of the free rooms, accessible bathrooms, nursing staff, and care and cleaning. My wife would visit every so often, but I am so damaged that I'm better left alone."* (3-311)

Self-care. Participants spoke about self-care in daily life to improve their condition, in terms of functioning, pain, and health: *"I could walk a long distance. But, I thought that I could not go home by myself, if I had pain increase; so, I went back home on the way. I had strolled in the cold winter... If I thought I was tired, I may go home on the way. When I feel well, I will walk around the park...I always do."* (13-2099)

In addition, they spoke about trying to understand their medicine: *"I thought that patients should study medicine. Though the pharmacist can give me details about my medication, I can learn better from people's*

experiences. *In this age of the internet, I can collect information from anywhere.*" (7-2079)

Continuous pain relief efforts. Participants were unable to stop thinking about curing the pain, and tried new methods:

"I know that it is lingering pain, but I hope it goes away. I believe it will. I'm not giving up. Not at all. I'd like it to be 0 (VAS)." (6-2333)

3 • 4 Ambivalence About Medical Treatment

Ambivalence about receiving opioid therapy and medical treatment involved a thankful attitude regarding the benefits of treatment as well as negativity because of the associated experiences.

Reliance on, and reserve toward, medical treatment. Participants underwent various long-term treatments for pain relief. They experienced dependence on medical treatment and trust in medical specialists. At the same time, they hesitated to ask their physician about treatment: *"I am reliant on medicines even though they do not provide complete relief; I don't know what would happen if I didn't take them. My fear is of the pain."* (6-2423) *"I hope my prescription has been changed from morphine powder to pills, but I can't ask my doctor, which is distressing."* (5-1069-71)

Apprehension about medical dependence. Having taken various medicines for pain relief, participants experienced drug tolerance and became doubtful about treatment. They considered a reduction in drug use because of their health: *"I would like to avoid drugs, but the pain is too much to bear. I really dislike taking medication orally."* (6-2439)

Improvement through opioid therapy. Participants reported that opioid therapy improved QoL and pain levels. In addition, participants thought they were lucky that they did not experience serious side effects: *"My joints and fractured body are sore and throbbing, but I think the pills have been effective. So, if I took the medicine after I received an epidural block, I could ease...So, I can sleep since then."* (1-667)

Understanding expressed by surrounding people. Participants frequently stated that only people close to them, such as family, friends, and medical professionals, understood the need for opioid therapy for chronic non-cancer pain. A participant who was in a work accident that caused neuroparalysis in the lower half of his body with chronic pain said the following: *"My wife said she wasn't worried because I was taking prescribed medication. She understood that the medication was*

for a very serious condition but was also clear about the fact that it was necessary for pain relief." (3-985)

Final therapy for pain. Some participants referred to opioid therapy as a last resort: *"I could not be cured and tried various medications. So, I finally took morphine."* (2-482)

Frustrated and discouraged by opioid therapy. Participants often experienced frustration with opioid therapy. The strong side effects interfered with their daily lives, and their pain increased if medication was interrupted. They also talked about opioid overdoses failing to bring relief: *"At first, I thought morphine didn't have an effect, but when I stopped drinking it, the pain spread everywhere"* (1-657-63) *"I took two doses of the drug when my pain got to 100 (VAS). I was going to work, and because one does had not worked, I took the second. But when I took two doses, I had vomited. My physician scolded me for having taken an extra dose."* (5-460-464)

Some participants felt discouraged by the failure of opioid therapy. A nurse receiving opioid therapy from a pain physician said: *"I have two type pains, which from osteoarthritis of the knee and internal pain, and morphine has had no effect osteoarthritis pain."* (5-889)

One participant who went through withdrawal symptoms due to medication interruption stated: *"When I started opioid therapy, my doctor said, 'You will be given a drug and patient narcotic management numbers. Please make up your mind.' At that time, I gave consent easily because I had so much pain. When I think of it now, I regret having agreed...But the quantity of morphine was so little, I thought it would be OK to drink it thrice a day. I regretted it a little."* (7-996-1214)

Minor damage caused by opioid therapy. Participants frequently experienced minor side effects and damage in daily life because of opioid treatment such as constipation, erectile dysfunction, nausea, and economic problems, and received care for side effects: *"I had no sexual desire. This was surely because of morphine treatment."* (10-2675-77) *"I tried taking a fentanyl patch last year in the hospital. I had increased the quantity from 1 mg to 3 mg (2 mg + 1 mg), but I abandoned it because of the large amount of money required. The buprenorphine tape is relatively cheap, so, I take that now."* (21-666)

Fear of the impact of opioids. There was dread related to the impact of opioid treatment. Some participants were careful about revealing details surrounding their chronic

opioid therapy because of the fear of prejudice: *“Though I can talk about having pain, morphine is a bit of a taboo. Out of the fear of not being able to return to work, I never told anyone about taking morphine.”* (2-337)

In addition, patients feared drug withdrawal symptoms and serious side effects of chronic opioid therapy. One patient aged over 75 switched from a strong opioid (morphine) to a weak opioid (codeine) because he had serious side effects from receiving long opioid therapy: *“I became a senile old man, those days. No mistake. I did strange things and couldn’t pick up food with chopsticks. I realized there was a problem, so my daughter found a neurology hospital I could visit. The physician there told me to stop taking morphine. Although I initially told him my pain clinic doctor was in charge, I eventually backed the new doctor’s decision and switched to codeine. The pain was gone in about a week. Yes, I could recover from dementia.”* (13-2119, 2980)

A patient with trigeminal neuralgia who received a gasserian ganglion block and who had withdrawal symptoms because of stopping morphine by herself recounted her experience: *“...And because it gave me peace of mind and relief (when I had serious pain attacks), I had taken morphine for nearly a decade. However, I regretted having resorted to drugs.”* (7-823) *“The symptoms that still remain are drug dependent. In other words, my mental withdrawal symptoms are more difficult to manage than the physical pain. I’m afraid of taking opioid drugs; so, I thought this drug is remaining.”* (7-2089-2111)

3 • 5 Finding a Compromise While Living with Chronic Pain

This category consisted of balancing pain and daily life and being resigned to one’s condition.

Balancing pain and daily life. This was defined as the act and mindset of achieving equilibrium between chronic pain management and level of functioning in life domains. Participants described that they endured severe pain and remained active, maintained social relationships by going to the hospital, and adjusted their routine according to the pain level: *“...At any rate, I must move my body now, even if it hurts. In short, I have to move, eat to gain strength. Not being able to move because of pain is worse than experiencing pain.”* (1-840)

Participants referred directly to the experience of thinking positive and making the best of their situation: *“I never fall ill; I am still healthy and do not even catch a cold.”* (3-730-735)

Being resigned to their condition. Participants had resigned themselves to their condition, pain, and medical treatment. In addition, they had reconciled chronic pain caused by self-accounts: *“Earlier, I was in a lot more pain. Maybe my body is adjusting to pain”* (6-1849-51) *“Or rather made their cause, and I had cleaned it when the machines were moving, I got caught in (the roller in the factory), so, I caused my accident.”* (6-1260)

3 • 6 Regaining a Life”

Regaining a life involved consciously leading a fulfilling life and being thankful for support and the fact that treatment reduced pain and led to improved functioning and QoL: *“So, maybe, let’s think positive! Until now, I couldn’t go to my parents’ house, put too much effort into work, or meet people because of the pain.”* (7-1661-1663)

4. Discussion

To our knowledge, this study was the first to qualitatively examine the experience of chronic opioid therapy in Asian outpatients with chronic non-cancer pain. Most studies to date have used quantitative methods to examine QoL issues surrounding chronic pain and opioid use. This study was unique in Japan in that it examined opioid therapy from the patients’ perspective using a grounded theory approach.

Only three qualitative studies have examined life before and after opioid use for chronic non-cancer pain. Like our results, Vallerand and Nowak²⁶⁾ identified that life before opioid pain control involved desperation, thoughts of suicide, willingness to endure humiliation, and inability to function (emotional, physical, role). However, patients experienced desperation and had thoughts of suicide even after opioid therapy when facing injustice or extreme chronic pain and catastrophizing. In a recent study³⁷⁾, patients with chronic pain who engaged in catastrophizing significantly increased their morphine consumption, resulting in an increased risk of overdose. It might be that people with chronic non-cancer pain do not find relief from traditional medical techniques including opioids, and that they must learn to live with it²⁴⁾. Healthcare professionals should offer patients alternative and complementary therapy (ACT) to help them find a compromise regarding their chronic pain, mental state, and daily life. In addition, healthcare professionals can help patients regain normalcy even if pain does not subside.

This study illustrates the barriers individuals

encounter when undergoing long-term opioid therapy for treatment of chronic non-cancer pain in Japan. Like this study, Vallerand and Nowak²⁷⁾ identified that patients receiving chronic opioid therapy cope with numerous barriers to maintaining their pain management regimen. These barriers are associated with family, friends, the healthcare system, and society at large. In addition, they showed that there is a gap in the understanding of chronic pain in society. In a study of health service facilities for the elderly requiring care in Japan⁹⁾, nurses tended to have a misconception regarding how residents complained of pain and their pain sensitivity. Furthermore, organizational strategies for pain management were not reported by nurses and care workers. This may cause a gap in the understanding of pain because healthcare professionals lack pain management education for chronic non-cancer pain in Japan. In Nakamura et al.'s study³⁸⁾, the degree of satisfaction with treatment was low, and 66% of the patients had switched medical facilities. The reason cited for visiting new facilities or discontinuing treatment was the inefficacy of treatment. The first treating facility was an orthopedics in slightly more than 60% of all responders, while the share of orthopedics as the treating facility decreased to about 50% after the first change of the treating facility. However, there was no marked change in the use of folk remedies (massage, acupuncture). Therefore, the degree of satisfaction with treatment at medical facilities was lower than that with folk remedies, suggesting that the initial treatment provided at medical facilities may not be adequate. To diminish or alleviate barriers and reduce stigma, ongoing education about chronic pain and non-cancer opioid therapy are recommended for healthcare professionals.

In another study³⁹⁾, physical limitations were a major barrier for individuals living with chronic pain. Although inability to function leads to impairment²⁶⁾, being worn out from living with debilitating chronic pain extends beyond physical impairment. Participants experienced intense pain attacks and had debilitating chronic pain caused by daily life even though they were receiving opioid therapy. In addition, they experienced ambivalence about receiving opioid therapy. Participants had both positive and negative experiences with opioid therapy, including drugs with little response and unmanageable side effects. Awareness of the benefits and consequences of opioid therapy with chronic non-cancer pain will enable healthcare professionals to intervene appropriately and act as advocates for patients.

Participants experienced a dilemma regarding medical treatments. Reliance on medical treatment made them apprehensive about dependence. It is, therefore, necessary to establish a relationship of trust with the patient before suggesting opioid therapy²³⁾. Nakamura et al.³⁸⁾ showed that persons with chronic musculoskeletal pain in Japan often decided to discontinue treatment or seek no treatment for chronic pain persisting for three years or more, on grounds such as "I did not have sufficient time," "I thought I could take care of it myself," and "I thought treatment was unnecessary." Therefore, in general, the Japanese may be wary of medication. There is no evidence of the efficacy or safety of methods for reducing prescribed opioid use in individuals with chronic pain⁴⁰⁾. Reduction of opioid use is clinically challenging and very difficult to achieve. Dose reductions were achieved among chronic opioid therapy patients at high risk for opioid-related adverse outcomes that were at least as large as among lower-risk patients⁴¹⁾. Dose reductions and medication changes must be achieved through careful monitoring because of the risks of opioid side effects among older adults⁴²⁾. However, ACT such as yoga has been found beneficial in improving QoL or pain intensity of opioid users^{43, 44)}. An appealing aspect of ACT is the perception that it is natural and unlikely to cause harm. Therefore, ACT may be of benefit for Japanese people who prefer not to take medication.

These findings expand our understanding of Japanese patients who receive opioid treatment owing to chronic pain, with an emphasis on understanding their coping in daily life. Participants receiving opioid therapy attempted to improve their condition, and coped by balancing pain with daily life activities and accepting their condition. All this was done in an attempt to regain their life, as in a previous study²⁶⁾. However, patients were apprehensive about medical, especially opioid, dependence. While they had attempted treatments to improve their condition, they faced a dilemma regarding medical treatment, were ambivalent about receiving opioid therapy, and resigned themselves to their pain. Healthcare professionals should encourage people living with non-cancer pain to accept their pain and lead a fulfilling life.

High doses and prolonged use of opioid therapy have been known to cause serious problems such as intestinal, sexual, cognitive, and immune dysfunction; abuse and dependence; analgesic tolerance; and pain sensitivity^{20, 45)}. In a recent population-based study⁴⁶⁾, addictive behaviors

were identified in 22.6% of long-term opioid users with chronic pain, compared with 11.5% of non-opioid users with chronic pain and 8.9% of individuals without chronic pain. There was a strong association between long-term opioid use and addictive behaviors. Opioid treatments have to be discontinued, or the dose reduced, if the patient experiences a significant improvement in the painful condition (such as improvement of ADLs and QoL) or a poor treatment outcome. It is important to caution the patient about opioid-related side effects and to halt treatment not only at the appearance of negative signs and deteriorating QoL but also if QoL improves. For this reason, at the outset, patients must undergo a comprehensive examination to determine the suitability of an opioid prescription. Moreover, we should explain to patients beforehand all the side effects and opioid abuse risks and help them understand that this is not a permanent treatment method.

Early clinical outcome data suggest^{47,48)} that while pain and opioid use can be reduced in patients with chronic pain, patients who also receive ACT intervention have a larger decrease in daily opioid dose while reporting less pain interference and lower depression scores. In addition, an innovative model to address aspects of pain management and opioid utilization during preoperative evaluation, acute surgical hospitalization, and postoperative follow-up for chronic opioid users has been reported⁴⁹⁾. This program involves multidisciplinary teams that include acute and chronic pain specialists, psychiatrists, integrative medicine specialists, and physical medicine and rehabilitation services. ACT and multidisciplinary programs such as this have the potential to both improve perioperative pain control and prevent escalation of opioid use among chronic opioid users.

5. Limitations

All participants resided in Hokkaido, Japan; therefore, the findings cannot be generalized to the greater population of people living with chronic non-cancer pain. In addition, our results do not include clinical observations that illustrate how physicians communicated the risk of opioids to their patients and how patients responded to these discussions.

6. Conclusion

Participants were worn out from living with debilitating chronic pain, faced multiple barriers related to living with chronic pain, and faced injustice or extreme chronic pain and catastrophizing. While they

had attempted treatments to improve their condition, they faced a dilemma regarding medical treatment, were ambivalent about receiving opioid therapy, and compromised to accept pain and regain normalcy.

Patients with chronic pain may be willing to attempt novel treatments; therefore, ensuring that patients understand opioid therapy is critical. For example, healthcare professionals can propose weight-loss drug use or change medicines to regulate patients' pain. Specifically, it is key to monitor opioid therapy, including dosage and medication, with elderly adults since side effects may increase with age and worsening conditions.

In sum, these findings expand our understanding regarding the QoL of Japanese patients with chronic pain and how they cope in daily life. Healthcare professionals should encourage people living with non-cancer pain to accept their pain and lead a fulfilling life. First, it is important that healthcare professionals understand, and be receptive to learning about, the social injustices that patients with chronic pain experience. Second, during opioid therapy, it is necessary that healthcare professionals understand the feelings of patients who are ambivalent about receiving this treatment. If the extent of the patient's pain has reduced, healthcare professionals should suggest reducing the opioid dose or changing medication. Third, patients with chronic pain may fear recurrence of pain with a reduced dose. Therefore, if a patient's pain increases after their opioid dose is reduced, healthcare professionals should provide pain relief to continue the treatment plan. Finally, if a patient's pain is refractory to opioids, reduction of the prescribed opioid dose may be the desired and shared goal of both patient and clinician. At the very least, patients with chronic pain must cope by balancing pain and daily activities and resigning themselves to their condition to regain normalcy.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and /or publication of this article.

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非がん性慢性痛患者が日本でオピオイド治療を受けながら 生きる体験：グランデッドセオリー研究

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本研究の目的は、日本で非がん性慢性痛に対するオピオイド療法を受けている患者の生きてきた生活体験を明らかにすることである。

研究対象者は、ペインクリニックで治療を受けていた非がん性慢性痛患者 34 人であり、慢性痛を抱えてオピオイド治療を受けながら生きていく日常の生活体験や思いについて、率直に語ってもらった。データは半構造化インタビューを用いて収集され、グラウンデッド・セオリー・アプローチで分析した。結果、非がん性慢性痛に対してオピオイド治療を受けながら生きてきた体験として、6 カテゴリーが抽出された。オピオイド治療を受けている非がん性慢性痛患者は、彼ら独自

の方法で痛みにより良く対処するために、「状況打開を目指した試み」を行いながら、「慢性的な痛みと暮らしながら妥協していく」ことによって、彼らの通常の生活を再開することへ影響を与え、「生きることへの再起」に向かっていた。一方で、「慢性痛と生きることへの社会の壁」、「不条理で耐え難い痛みによって心の闇を抱える」ことが、痛みに対する対処行動に悪影響をきたし、「医療に対する両価的な気持ち」が、良くも悪くも彼らに影響を与えていた。これらの知見は、オピオイド治療を受ける非がん性慢性痛患者がどのように日常生活に対処しているのか、その理解を医療従事者に広く深めることができる。