

**EXAMINING CONSTRAINTS, FACILITATORS, AND NEGOTIATION IN SKIING
PARTICIPATION: A CROSS-CULTURAL STUDY**

YIQI YANG

Thesis submitted to the University of Ottawa

In partial Fulfillment of the requirements for the

Doctor of Philosophy degree in Human Kinetics

School of Human Kinetics

Faculty of Health Sciences

University of Ottawa

© Yiqi Yang, Ottawa, Canada, 2025

Abstract

Sports and leisure activities constitute a vital aspect of daily life. Although extensive research has developed various models and factors to understand sports participation, encompassing individual, sociological, and psychological perspectives (Grima et al., 2017), the focus has predominantly been on summer sports, resulting in a relative paucity of research on winter sports. A literature review on winter sports participation reveals a notable scarcity of theoretically grounded cross-cultural research (Hudson et al., 2010). Therefore, this dissertation underscores the influence of cultures on sports participation, focusing on the activity of downhill skiing while highlighting cultural differences that provide a foundation for further exploration of cross-cultural behaviour in the winter sports industry. To achieve this purpose, the focus was placed on two markets, specifically the Beijing (China) emerging market and Vancouver (Canada), a traditional and declining market. The research drew on leisure constraints, facilitators, and negotiation theory. This dissertation progressed through three distinct phases of research, each culminating in a research article. The first phase explored the relationship between constraints, facilitators, and skiing participation behaviour among participants in Beijing. The second phase involved a confirmatory analysis of the leisure constraints theory among participants in Vancouver, focusing on the relationships between constraints, facilitators, and skiing participation. In the final phase, negotiation strategies were examined in both cultural groups, generating valuable insights and implications for further empirical testing. Cumulatively, this dissertation makes conceptual and empirical contributions to the literature on downhill skiing by conducting a cross-cultural comparative analysis between an emerging and declining market. It offers valuable insights and actionable strategies for ski resort managers and marketers

to attract more guests from China's emerging ski market while addressing the decline and retaining current skiers in Canada's declining ski market.

Acknowledgements

Over the past five years, I have immersed myself in studying consumer behaviour related to skiing participation at the University of Ottawa. This research journey has been incredibly enlightening and ignited a profound passion for the sport within me. Skiing is distinctive in that it transcends traditional sports participation; it involves various dimensions of tourism, leisure activities, and lifestyle choices. Through my studies, I have realized that skiing is a multifaceted experience encompassing physical activity, social interaction, and a deep connection with nature. As I continue to delve into the intricacies of skiing as both a recreational activity and a cultural phenomenon, I remain committed to exploring how consumer preferences and behaviours shape this exhilarating world. My passion for skiing is fueled by the sport and the opportunity to contribute to its understanding as an integral part of the leisure and tourism landscape.

Firstly, I express my deepest gratitude to my doctoral supervisor, Dr. Eric MacIntosh. Your invaluable mentorship has been a cornerstone of my academic growth. Your extensive expertise and insightful guidance have shaped my research throughout my dissertation journey. The constructive feedback you provided during critical stages helped me navigate complex challenges, allowing me to refine my ideas and approaches.

Marijke, I am incredibly grateful to you for introducing me to the academic world as my master's supervisor. Your mentorship laid a solid foundation for my academic career and resonated throughout my Ph.D. journey as a committee member. Your insightful contributions to my work enhanced its quality and depth, and I am thankful for the knowledge and skills I gained under your guidance.

Benoit, I extend my sincerest thanks for your expertise and constructive feedback, which have been instrumental in shaping my dissertation. Your role as a committee member provided invaluable insights that enriched my understanding of the subject matter.

Xiaoyan, I want to express my heartfelt gratitude for your invaluable assistance with the first study of my dissertation. Your guidance and support were crucial to the study's success and publication. I truly appreciate your time, effort, and expertise in helping me refine my research, conduct thorough analyses, and navigate the publication process. Your contributions were a significant milestone in my academic journey, and I am grateful for your unwavering commitment to my success.

Statement of Author Contributions and Originality

The author of this dissertation was responsible for developing this doctoral research project, which examines the relationship between constraints and facilitators in skiing participation among Chinese and Canadian consumers. As the principal researcher, the author formulated the research questions, designed the study, developed the methodology, conducted data collection and analysis, and authored all three research articles and the introductory concluding and discussion chapters. The author acknowledges the support and guidance her supervisor, Dr. Eric MacIntosh, provided throughout the project. Chapters II, III, and IV are co-authored works published or under review in peer-reviewed journals. Additionally, the author acknowledges the support of Dr. Xiaoyan Xing, the co-author of Chapter II. The following paragraphs will clarify the contributions of both the authors and her doctoral supervisor.

Chapter II investigates the relationship between constraints, facilitators, and skiing participation among participants in Beijing by quantitative research method. The development and writing of Chapter II were entirely undertaken by the author, who conducted all necessary

research, conceptualized the study, and drafted the manuscript. Once the initial draft was completed, the supervisor, Dr. Eric MacIntosh and co-author, Dr. Xiaoyan Xing, provided constructive feedback to prepare the manuscript for submission to the *International Journal of Sports Marketing and Sponsorship* (IJSMS). The resulting paper, "*Examining the Relationship Among Constraints, Facilitators, and Ski Participation in the Host City of the 2022 Winter Olympics*," was published in IJSMS (Yang et al., 2024). Neither the author, supervisor, or co-author are affiliated with IJSMS. After receiving blinded peer-review feedback from IJSMS, the author collaborated with the supervisor and co-author to effectively incorporate the suggested revisions and enhance the manuscript. By the American Psychological Association (7th edition) guidelines for authorship, the author appropriately listed the supervisor, Dr. Eric MacIntosh, as the second author and Dr. Xiaoyan Xing as the third author. The submission was accepted for publication by IJSMS in April 2024.

Chapter III presents the second paper of the dissertation, which examines leisure constraints and facilitators among Canadian participants. This paper, titled "*Unraveling the Canadian Ski Market Decline: Exploring Constraints and Facilitators Affecting Participation Across Different Skier Groups*," is currently under review. The study aimed to investigate the interplay between various factors that encourage or discourage participation in downhill skiing, addressing Crawford and Jackson's (2005) call for research on leisure constraints theory. This research employed a market segmentation approach. The author was responsible for developing the research questions and methodology, collecting data, analyzing, and interpreting, and writing the manuscript. The supervisor acted as a second author, offering insights while interpreting the data analysis results and providing feedback and suggestions to improve the manuscript before submission to a peer-reviewed journal.

Chapter IV, which involved qualitative data collection, was developed and authored by the writer with support from the supervisor. The study explored the differences in constraints, facilitators, and negotiation processes between Chinese (i.e., Beijing residents) and Canadian individuals (i.e., Vancouver residents) in their skiing participation. The author was responsible for creating the research question, designing the methodology, developing the interview guide, conducting data collection and analysis, and drafting the manuscript. The supervisor provided significant support during the data analysis phase and was consulted throughout the manuscript's development. The manuscript is currently being prepared for submission. The author certifies that all ideas, quotations, and other materials from external sources included in this dissertation are fully acknowledged, following the American Psychological Association (7th edition) referencing standards. The author also declares that this is an original dissertation copy and has not been submitted for any other degree at any institution. Finally, the author used advanced language modification tools in preparing this dissertation paper, specifically ChatGPT and Grammarly. These tools were invaluable in enhancing the clarity, coherence, and overall quality of English writing. Grammarly was crucial in proofreading dissertation work and checking for grammatical errors, punctuation mistakes, and stylistic inconsistencies.

Table of Contents

Abstract	ii
Acknowledgements.....	iii
Statement of Author Contributions and Originality.....	iv
Table of Contents	vii
List of Tables	xiv
List of Figures	xiv
Chapter I.....	1
Introduction.....	1
Overview of Literature and Theory	6
The Concept of Leisure Constraints	6
The Concept of Leisure Facilitators.....	11
The Negotiation Proposition	14
The Influence of Culture on Sports Participation	18
Ski Tourism Market Segmentation	21
Research Approach	26
Philosophical Worldviews	26
Research Design.....	27
Methods.....	29
Data Analysis	35

Dissertation Outline	41
Chapter II – Phase 1	41
Chapter III – Phase 2.....	42
Chapter IV – Phase 3	43
Chapter V – Discussion and Conclusion	44
References.....	45
Chapter II	62
Examining the Relationship among Constraints, Facilitators, and Ski Participation in the Host City of the 2022 Winter Olympics.....	62
Abstract.....	63
Introduction.....	64
Literature Review.....	65
Constraints in Skiing Participation	65
Facilitators in Skiing Participation.....	68
Ski Segmentation	70
Hypothetical Model	72
Method	73
Participants and Sampling.....	73
Research Instrument.....	74
Data Analysis Plan.....	77

Approaches to Control the Method Bias.....	79
Results.....	80
Exploratory Factor Analysis (EFA).....	80
Confirmatory Factor Analysis (CFA).....	80
Structural Equation Modeling (SEM).....	81
Description of the Three Segments.....	82
Discussion.....	85
Theoretical Contributions.....	88
Practical Contributions.....	89
Limitations and Future Research Directions.....	90
Conclusion.....	90
References.....	92
Chapter III.....	100
Unraveling the Canadian Ski Market Decline: Exploring Constraints and Facilitators Affecting Participation Across Different Skier Groups.....	100
Abstract.....	101
Introduction.....	102
Literature Review.....	103
Constraints in Skiing Participation.....	103
Facilitators in Skiing Participation.....	106

Methods.....	108
Participants and Procedures	108
Research Instrument.....	110
Data Analyses Plan	113
Results.....	114
Confirmatory Factor Analysis (CFA).....	114
Structural Equation Modeling (SEM).....	115
Kruskal-Wallis Test	116
Demographics Differences.....	118
Discussion.....	122
Theoretical Implications	126
Practical Implications.....	127
Limitations and Future Directions	128
Conclusion	129
References.....	130
Chapter IV.....	137
Negotiation Strategies Regarding Ski Participation: An Exploratory, Cross-Cultural Study	137
Introduction.....	138
Literature Review.....	139
Leisure Constraints: Intrapersonal, Interpersonal and Structural	139

Leisure Negotiation Strategies	140
Behaviour Strategy.....	141
Leisure Facilitators in Skiing Participation.....	143
Method	145
Participants and Procedure.....	146
Interview Guide	147
Deductive Qualitative Analysis	148
Results: Ski Participation in Beijing	148
Theme 1: Cultural	153
Theme 2: Intrapersonal Constraints	154
Theme 3: Structural Constraints	156
Theme 4: Facilitators	160
Theme 5: Negotiation Strategies.....	164
Results: Ski Participation in Vancouver	169
Theme 1: Cultural	173
Theme 2: Intrapersonal Constraints	174
Theme 3: Interpersonal Constraints	176
Theme 4: Structural Constraints	177
Theme 5: Facilitators	178
Theme 6: Negotiation Strategy	181

Discussion	184
Practical Implications.....	191
Limitations and Further Directions	192
Conclusion	192
References.....	194
Chapter V	207
Discussion and Conclusion.....	207
Summary of Findings.....	209
Contribution to Theory	214
Contribution to Literature	218
Contribution to Practice	219
Limitations and Future Research Directions.....	224
Conclusion	227
References.....	229
Appendix A: Ethic Approval	233
Appendix B: Online Survey (Article One)	234
Appendix C: Consent Form (Article One).....	238
Appendix D: Online Survey (Article Two)	239
Appendix E: Consent Form (Article Two)	243
Appendix F: Interview Guide (Article Three)	245

Appendix G: Consent Form (Article Three)..... 246

List of Tables

Table 1: Demographics characteristics of participants	74
Table 2: Descriptive statistics and measurement properties	75
Table 3: Harman's Single-Factor Test	79
Table 4: Description of the three segments.....	83
Table 5: Chi-square test of independence between ski frequency and demographics.....	84
Table 6: Sociodemographic characteristics of participation	109
Table 7: Descriptive statistics and measurement properties	110
Table 8: Kruskal-Wallis test among three groups of skiers	118
Table 9: Chi-square test of independence between ski frequency and demographics.....	120
Table 10: Beijing participants demographics	148
Table 11: Constraints and facilitators of Beijing participants	149
Table 12: Negotiation strategies of Beijing participants.....	153
Table 13: Vancouver participants demographics.....	169
Table 14: Constraints and facilitators of Vancouver participants.....	186
Table 15: Negotiation strategies of Vancouver participants.....	173

List of Figures

Figure 1. The results of the CFA for Beijing participants.	81
Figure 2. The results of the SEM for Beijing participants.....	82
Figure 3. The results of the CFA for Vancouver participants.....	115
Figure 4. The results of the SEM for Vancouver participants.	116
Figure 5. A Conceptual Framework for Beijing Residents' Negotiating Skiing Participation ...	217

Figure 6. A Conceptual Framework for Vancouver Residents' Negotiating Skiing Participation

..... 218

Chapter I

Introduction

The winter sports market, particularly mountain skiing, is a key segment within the broader winter sports tourism industry (Alexandris et al., 2017). Recent estimates indicate that approximately 120 million skiers are active globally, supported by 2,000 ski resorts spread across 80 countries, and this market continues to exhibit steady growth (Vanat, 2022). Western Europe holds the largest share of skiers at 27%, followed by the Asia-Pacific and North American regions, each comprising 19% (Vanat, 2022). In addition to significant ski destinations known for high skier visits, there are numerous smaller locations where skiing has long been an established industry or is currently emerging (Vanat, 2022). Notably, Eastern Europe and China stand out as key emerging markets. While skier visits in many Western markets have stagnated or declined since the turn of the century, traditional ski markets face various challenges, some of which the industry has been slow to address or remain beyond its control (Vanat, 2022). For instance, in 2016, 27% of all Canadians aged 15 and older participated regularly in sport, indicating a 16% decline in adult participation rates in Canada over the past 18 years. One such sport that has witnessed a decline is alpine skiing (Statistics Canada, 2013). However, Canada's alpine participation rates grew during specific periods (e.g., market growth before 1992; see Williams & Fidgeon, 2000), evidence indicates a decline in downhill skiing participation (e.g., 14% in 1992 to 7% in 2015) (Statistics Canada, 2013; Canadian et al., 2014–2015). This outcome is not entirely surprising, given the changing climate conditions and the challenges faced by ski hill operators who depend on natural resource extraction to maintain their winter operations (Bausch & Gartner, 2020; Dawson et al., 2013; Ruddy et al., 2015), and most critically,

the demographic shifts (Vanat, 2022). New generations worldwide are increasingly composed of immigrants with little or no connection to skiing (Vanat, 2022). For many, skiing remains inaccessible due to constraints such as cost, travel logistics, and cultural unfamiliarity (Vanat, 2022).

Previous research has extensively examined three primary categories of leisure constraints: intrapersonal factors (e.g., Hungenberg et al., 2016; Alexandris et al., 2017), interpersonal factors (e.g., Alexandris et al., 2011; Williams & Basford, 1992), and structural factors (e.g., Matzler et al., 2008; Faullant et al., 2008; Konu et al., 2011; Gilbert & Hudson, 2000). Notably, these studies have predominantly focused on traditional and Western countries. Moreover, facilitators are recognized in modern downhill skiing research as key influencers of behavioural outcomes (Alexandris et al., 2011; Alexandris et al., 2007). Alexandris et al. (2011) established a positive correlation between activity attachment and motivation, correlating with future skiing intentions. Kim and Trail (2010) asserted that consumers evaluate both positive and negative aspects in decision-making; therefore, understanding constraints and facilitators is essential for comprehending consumer behaviour. Despite the leisure constraints model being the most frequently cited framework in research, few studies have explored the relationship among motivators, constraints, and sports participation, with notable exceptions including Alexandris & Stodolska (2004) and Alexandris (2007, 2008, 2011), particularly between emerging and declining markets. As a result, finding ways to counteract the decline by gaining a deeper understanding of consumer behaviour has the potential to assist in market revitalization.

The Beijing 2022 Olympic Winter Games exemplified a significant government-led effort to encourage participation in winter sports (Chen et al., 2022). Chinese government initiatives aimed at promoting involvement in winter sports reached their zenith in the years

leading up to the Games (Wang et al., 2020). The event organizers successfully achieved their target of engaging 300 million individuals in winter sports prior to the onset of the Games. However, the following ski season witnessed a marked decrease in ski visits to domestic resorts. Wu (2023) reported that only 19.83 million people visited these resorts, representing a 7.94% decline compared to the previous year. While this drop was primarily attributed to a spike in COVID-19 infections after the Chinese government lifted pandemic restrictions at the end of 2022, it also highlighted the ongoing challenge of promoting skiing in China. In the pandemic's early stages, COVID-19 and the related restrictions likely impacted tourists' outdoor skiing behaviours (Humagain & Singleton, 2023). Specifically, the pandemic may have engendered notable psychological effects on tourists, influencing their thoughts, emotions, and, ultimately, their decision-making regarding ski activities (Humagain & Singleton, 2023). Moreover, destination-specific challenges, such as facility closures, limited food and accommodation options, and restricted social interaction opportunities, may have further dissuaded skiing during the pandemic (Humagain & Singleton, 2023).

This dissertation examines ski participation in Beijing (China) and Vancouver (Canada) as a compelling research context for two reasons. First, driven by the anticipation of the 2022 Beijing Winter Olympic Games, the number of skiers in China surged from 10.3 million in 2015 to 23.45 million in 2019, making it the only rapidly expanding ski market globally. Now ranked among the top three countries globally regarding skier numbers, alongside the United States and Germany, China has emerged as one of the most promising target markets for many ski destinations (Vanat, 2022; Wu, 2020; Peng et al., 2022). Second, the developmental trajectory and pace of China's ski industry differ significantly from those of Western countries, and Chinese consumers' spending power and travel habits are evolving rapidly (Huang, 2017; Peng

et al., 2022). In the introductory phase of the Chinese market, gaining a deeper understanding of consumer behaviour can aid in developing effective marketing strategies, thereby fostering emerging ski market growth. Moreover, research on leisure constraints, facilitators, and negotiation strategies has neglected cultural differences (Dong & Chick, 2012; Guo & Schneider, 2015; Ito et al., 2020). A review of literature across five leading leisure journals revealed that fewer than 5% of publications from 1990 to 2009 addressed leisure activities from non-Western or cross-cultural perspectives (Ito et al., 2014). Although there is growing interest among Chinese scholars in leisure studies, the field is still in its early stages of development. Only three studies have specifically investigated cross-cultural differences between Anglo-Canadians and Mainland Chinese, primarily focusing on outdoor recreational settings. Neglecting cultural contexts may inadvertently restrict sports marketers' ability to optimize leisure experiences for their customers. Additionally, cross-national comparisons can reveal global trends in leisure-time physical activity and inactivity (Ito et al., 2014).

Research has shown that despite various constraints, individuals may continue to participate consistently (Son et al., 2009; Son et al., 2021). This sustained involvement may be attributed to using resources and strategies to manage or overcome constraints, a process referred to as constraint negotiation (Hubbard & Mannell, 2001; Jackson et al., 1993). Crawford et al. (1991) suggested that leisure preferences emerge when internal constraints are absent or addressed through personal resolve and available opportunities. Interpersonal constraints may arise depending on the sport, being more prevalent in activities that involve a partner or co-participant and less relevant in solo activities such as skiing. Structural constraints generally emerge once interpersonal constraints have been managed. Participation is possible when structural constraints are either absent or effectively managed; however, substantial structural

constraints may inhibit participation. Crawford et al. (1991) introduced concepts that advanced our understanding of leisure activity participation; however, their models were conceptually fragmented and failed to address the dynamic process of overcoming participation constraints. The concept of negotiation effectively captures this notion. Despite existing research, there remains a significant gap in studies examining how individuals negotiate their involvement in activities and the constraints they encounter (Mueller et al., 2019; Xie & Ritchie, 2019). Research on constraints and negotiation strategies in outdoor recreational settings, including downhill skiing, is notably limited. Moreover, the non-users category has received little attention in past research, meaning they are a challenging target group for marketers (Hudson & Gilbert, 2000). Non-users, on the other hand, may represent a significant marketing opportunity for many goods, and research should seek to uncover the constraints and facilitators of this segment (Hudson & Gilbert, 2000), especially as they have the potential to be a new market for the sport product or service category.

This dissertation builds on well-established methods for studying ski consumer behaviour. It adds to the concepts of leisure facilitators, leisure constraints, and leisure negotiation strategies amongst two markets (i.e., emerging and declining). This study will employ a comprehensive market segmentation approach (e.g., non-, low-, and high-frequency skiers) to identify constraints and facilitators. Further, this dissertation aims to advance the leisure constraints model proposed by Crawford and Jackson (2005). This research will enhance the understanding of skiing participation by examining (1) the relationships between constraints and facilitators for Chinese consumers (Chapter II), (2) the relationships between constraints and facilitators for Canadian consumers (Chapter III), and (3) the differences in negotiation strategies

between the two culture groups (Chapter IV). These studies contribute to a more comprehensive model and understanding of downhill skiing participation behaviour.

Overview of Literature and Theory

The Concept of Leisure Constraints

The concept of constraints, broadly defined as negative factors that limited individuals' participation in sports or leisure activities and affected their satisfaction and enjoyment of such activities, was well-documented in the literature of Shaw et al. (1991). In Crawford and Godbey's (1987) model, constraints are divided into three categories: intrapersonal, interpersonal, and structural. Intrapersonal constraints refer to individuals' psychological emotions and traits influencing their leisure preferences. Intrapersonal constraints include stress, depression, anxiety, religiosity, attitudes influenced by close and distant social groups, previous exposure to specific leisure activities, perceived self-competence, and subjective assessments of the suitability and accessibility of different leisure activities (Crawford & Godbey, 1987). Interpersonal constraints arise from the interaction between individuals or from the features of their relationship (Crawford & Godbey, 1987). Individuals may have an interpersonal constraint to leisure if they cannot find a suitable partner to participate in a specific activity with (Crawford & Godbey, 1987). Structural constraints encompass various factors such as the stage of the family life cycle, the financial resources of the family, the season and climate, the timing of work schedules, the availability of opportunities (and awareness of such opportunities), and the views of reference groups towards the suitability of specific activities (Crawford & Godbey, 1987). Crawford et al. (1991) contend that although Crawford and Godbey (1987) provided new insights, their model was conceptually disjointed. While these predecessors expanded the understanding of the phenomenon, they did not provide insight into the dynamic process of how

individuals navigate a series of constraints to engage and move beyond them. Thus, Crawford et al. (1991) expanded upon the constraints model by establishing that these constraints follow a sequential order aligning with a significance hierarchy. They propose that intrapersonal constraints shape leisure preferences when they are absent or overcome by a combination of advantages and personal determination. As a result, the individual may face interpersonal constraints depending on the nature of the activity. This is more likely to occur in activities that include at least one partner or co-participant, but it is less significant in solitary leisure activities. Only after overcoming interpersonal constraints can they confront structural constraints. If the structural constraints are significant enough, the result will be nonparticipation. Crawford et al. (1991) stated that intrapersonal constraints emerged as the primary and most influential factor that discouraged physical involvement. The results of several empirical studies in the skiing context have supported this interpretation (e.g., Williams & Basford, 1992; Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; Hudson & Gilbert, 2000).

The relationship between the perception of constraints and sports participation remains an ongoing debate in constraints research (Carroll & Alexandris, 1997). Early studies frequently assumed that encountering constraints, such as those identified by Crawford et al. (1991) and Carroll and Alexandris (1997), would solely lead to non-participation. However, Jackson et al. (1993) suggested that constraints might alter the frequency of participation rather than result in complete non-participation. Empirical research by Kay and Jackson (1991) and Shaw et al. (1991) challenged the assumption that a negative relationship exists between constraints and participation in physical activities. In a British study, frequent and infrequent participants reported higher levels of constraints (Kay & Jackson, 1991; Shaw et al., 1991; Carroll & Alexandris, 1997). Additionally, Shaw et al. (1991) found that most constraints were not

significantly linked to physical activity participation. Alexandris and Carroll (1997) surveyed a unique Greek cohort, concluding that intrapersonal constraints have a detrimental impact on sports participation, while structural and interpersonal constraints do not significantly influence sports engagement. Previous research (e.g., Kay & Jackson, 1991; Shaw et al., 1991; Carroll & Alexandris, 1997) has highlighted the limited exploration of the relationship between constraints and participation, primarily due to the challenge of establishing an appropriate instrument for sports participation, especially within diverse and large samples. Although constraints can be readily operationalized, quantifying sports activity involvement remains challenging (Shaw et al., 1991). Studies have also struggled to identify which specific sports should be examined (Shaw et al., 1991). Furthermore, when comparing participants and non-participants, it is essential to consider the frequency and duration of participation in each sport. These factors are particularly relevant to negotiation strategies, as Shaw et al. (1991) suggested. Additionally, the difficulty of recalling participation and the seasonal nature of many sports further complicates these assessments, making it increasingly critical to distinguish the constraints associated with different sports (Shaw et al., 1991).

Intrapersonal Constraints

Previous research has identified intrapersonal constraints as preventing individuals from participating in downhill skiing (Alexandris et al., 2011; Williams & Basford, 1992; Williams & Fidgeon, 2000). Individuals who do not ski often report minimal interest in ski resorts, opting for alternative destinations (Gilbert & Hudson, 2000; Hudson & Gilbert, 2000). They may perceive skiing as unenjoyable or lacking appeal (Alexandris et al., 2011). Another internal constraint is the feeling of embarrassment in the presence of others and self-consciousness (Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; Hudson & Gilbert, 2000). The aforementioned

studies identified the perception of danger as a primary internal constraint by both non-skiers and skiers. These concerns included moving too fast, losing balance, a negative introduction that could lead to personal injury, fear of heights, and fear of injury. These findings were reported by Williams and Basford (1992), Gilbert and Hudson (2000), Williams and Fidgeon (2000), and Hudson and Gilbert (2000). Additionally, the physical demands, technical nature, and perception of high costs associated with skiing may contribute to intrapersonal constraints during skiing participation (Gilbert & Hudson, 2000; Hudson & Gilbert, 2000; Williams & Basford, 1992). Physical and psychological factors contribute to significant disparities in consumption behaviours between females and males (Matzler et al., 2008; Mullin et al., 2014). In the context of skiing, Hudson (2000) and Williams and Lattey (1994) found that women perceive intrapersonal constraints and risks significantly more than men. Women also perceive skiing as excessively physically demanding and lack confidence in their abilities, which decreases their likelihood of participating in the sport compared to men (Hudson, 2000).

Interpersonal Constraints

The influence of families' cultures on people's inclination to participate in skiing is apparent (Birchwood et al., 2008). Developing a family sports culture is common in many Western countries, where parents with a sports background are more likely to introduce their young children to various sports (Birchwood et al., 2008). This practice increases motivation to engage in sports, increasing enjoyment later in life (Birchwood et al., 2008). Additionally, reference groups were influential in constraining aspects such as the absence of a partner or inadequate skill level to participate with others (Gilbert & Hudson, 2000; Hudson & Gilbert, 2000). Parental responsibility and the attitudes of family members were significant constraints to

participating in skiing, as highlighted by studies conducted by Williams & Basford (1992), Williams & Fidgeon (2000), and Alexandris et al. (2011).

Structural Constraints

Non-skiers encounter significant constraints regarding time consumption (Williams & Basford, 1992; Williams & Lattey, 1994). Furthermore, the lack of time arising from work, family, and social obligations further limits individuals' ability to participate in skiing (Alexandris et al., 2011). Moreover, skiing is a seasonal sport that depends on sufficient snow and favourable weather conditions for participation (Taks & Scheerder, 2006). Individuals primarily perceive characteristics that restrict their physical environment, including a lack of snow, overcrowding on ski slopes, and excessively steep inclines (Faullant et al., 2008; Füller & Matzler, 2008). Furthermore, the factors that significantly contribute to participants' overall satisfaction and loyalty include a diverse range of slopes, positive staff attitude and service, amenities and activities for children, high-quality slopes and restaurants, and ease of access to ski resorts (Faullant et al., 2008; Matzler et al., 2008; Alexandris et al., 2006). Research indicates that participation in sports is more prevalent during the spring and summer seasons than in winter (García et al., 2011). Gender differences are evident in the propensity to engage in physical exercise, with females demonstrating a stronger inclination to participate during the second and third quarters, while males participated less in the first quarter (García et al., 2011). Finally, the geographical location of an area is an important component to consider when examining participation rates in sports. For instance, individuals without skiing experience attending a conference at a prestigious destination may be encouraged to try skiing. Berke et al. (2007) noted that factors such as the beauty and safety of the environment are important considerations when selecting participants. The availability of well-equipped sports facilities in

the physical environment may also influence individuals' decisions to participate in sports (García et al., 2011; Hallmann et al., 2012). Another significant structural constraint that must be considered in contemporary leisure sports participation is the COVID-19 pandemic. The COVID-19 pandemic, with its accompanying restrictions, is expected to significantly influence tourists' choices regarding outdoor recreation (Humagain & Singleton, 2023). The pandemic's psychological impact, affecting tourists' thoughts, feelings, and emotions, could significantly alter their decision-making processes (Humagain & Singleton, 2023). A range of factors will shape these decisions, including safety and hygiene considerations, social-peer pressure and responsibility, destination image, uncertainty, and the behaviour of local communities. These factors, as outlined by Kock et al. (2019) and Humagain & Singleton (2023), will contribute to the complex and evolving landscape of tourist behaviour in outdoor recreation.

The Concept of Leisure Facilitators

Although the term "facilitators" is not commonly used outside of the leisure area, much research has been undertaken on enhanced involvement in sport for many decades (Stodolska et al., 2014). Raymore (2002) identified facilitators in a conceptual paper to explain the factors that foster or stimulate engagement in recreational activities. Raymore (2002) noted that "a facilitator is an intrapersonal, interpersonal, or structural condition that enables leisure participation, while motivation is the process in which that condition energizes or motivates behaviour either facilitating or constraining leisure participation" (pp. 43–44).

Intrapersonal Facilitators

Intrapersonal facilitators refer to "individual characteristics, traits, and beliefs that encourage leisure participation" (Raymore, 2002, p. 45). Motivation is an activating and sustained condition of target-oriented behaviour (Ryan & Deci, 2000; Wang et al., 2020).

Research has demonstrated that motivation plays a significant role in attracting new participants and sustaining the physical activities of current participants (Teixeira et al., 2012; White, 2008; Loucks-Atkinson & Mannell, 2007; Stanis et al., 2009). Identifying human motives in predictive activities is crucial for understanding customer behaviour. Consequently, understanding motivation is essential for comprehending how individuals navigate constraints and enhance physical activity behaviour (White, 2008). Previous research on skiing has identified several motivators that significantly stimulate participants' interests. Some participants reported that skiing is enjoyable and offers opportunities for self-improvement (Hungenberg et al., 2016; Faullant et al., 2008; Füller & Matzler, 2008). Moreover, Hungenberg et al. (2016) identified three segments—tourism-oriented, sport tourism enthusiasts, and sport-oriented—based on an athlete sample from the 2014 GoPro Mountain Games in America. This study indicated that motivation is a significant market segmentation approach for sports tourism behaviour. For instance, Hungenberg et al. (2016) examined various factors—travel exploration, destination attributes, stress relief, competitive desire, physical fitness, skill mastery, and social needs—and found them key factors in stimulating skiers' participation. Among the sport-oriented group, self-enrichment, social needs, and physical fitness were the predominant reasons for participation (Hungenberg et al., 2016). In the travel-oriented categories, exploration and destination attributes were increasingly significant factors (Hungenberg et al., 2016). Individuals interested in skiing ultimately found travel to be a key motivator. Furthermore, participants perceived skiing as an essential aspect of their lives. They maintained loyalty to the sport despite facing similar constraints as non-skiers (e.g., inconvenient location, time cost) (Alexandris et al., 2011). Alexandris et al. (2009) asserted that utilizing motivators can enhance consumer profiles,

facilitating the positioning of suitable services and the implementation of effective communication strategies tailored to their needs.

Interpersonal Facilitators

On the other hand, interpersonal facilitators are “other people or social groups that enable or enhance leisure participation” (Raymore, 2002, p. 43). Interpersonal facilitators incorporated the participation and encouragement of friends, the attitudes of parents, and the opportunities provided by parents. In past research, parents play a crucial role in introducing children to different sports and providing them with the necessary equipment and transportation (Raymore, 2002). Additionally, parents create a positive psychological environment that encourages and supports ongoing participation in sports (Greendorfer, 2002; Stodolska et al., 2014). In the skiing context, Alexandris et al. (2011) and Hungenberg et al. (2016) stated that the attitudes of others and social needs influence skiing participation. For example, my friends have a positive impression of me if they know I ski, others think well of me if they know I am a skier, and being a skier helps me project a good image to others. Their results show that individuals who place more social needs on the opinions of significant others are more likely to express positive future ski behavioural intentions (Alexandris et al., 2011).

Structural Facilitators

Structural facilitators are defined as “social and physical institutions and organizations that operate external to individuals to enable or enhance leisure participation” (Raymore, 2002, p. 47). Matzler et al. (2007) found that beginners have distinct expectations and selection criteria when choosing ski resorts. Peng et al. (2022) also mentioned that in the emerging ski market, suitability for beginners is also a key factor in their destination choices. Peng et al. (2022) identified nine attributes related to the image perception of China's ski resorts: reputation,

transportation, accommodation, service quality, atmosphere, ski conditions, travel cost, emotional experience, and beginner suitability. Notably, beginner suitability and ticketing services have been identified for the first time in the destination image literature on ski destinations, one of this study's most significant findings. This can likely be attributed to China's ski market being the largest beginner market globally, with a high proportion of novice skiers. As a result, tourists place considerable emphasis on whether ski conditions are appropriate for their skill level.

The Negotiation Proposition

According to Jackson et al. (1993), "Participation depends not on the absence of constraints but on negotiation through them. Such negotiation may modify rather than foreclose participation" (p. 4). Negotiation, a cognitive or behavioural strategy adopted to overcome perceived constraints, has also been a consideration (Jackson & Rucks, 1995). According to the researchers, activity in sports would only occur if the individual had successfully negotiated through the sequential order of constraints. When first considering the possible participation in the activity, the individual faces intrapersonal constraints, which are the most influential when deciding on sports participation, and it is these constraints that need to be overcome first before experiencing any interpersonal constraints (Crawford et al., 1991). Successful participation is found when the individual has overcome any structural constraints or has not experienced any of these constraints. According to Hubbard and Mannell (2001), constraints decreased the level of participation, but they also triggered the use of negotiating resources, which counterbalances the negative consequences. That being said, when faced with constraints, it appears that direct negotiating attempts were triggered, which may help reduce the constraints' negative impacts. However, several other factors were likely to influence the intensity and efficiency of negotiating

attempts once activated. This result supports the models established by Jackson et al. (1993), which illustrates the difference between negotiation and facilitatory functions.

Carroll and Alexandris (1997) stated: “What is required is a greater understanding of how perceived constraints, motives and motivation work about each other, and how constraints can be removed, and motivation enhanced” (p. 297). A clear research gap in sports management remains regarding the underlying mechanisms people negotiate. Past research has compared numerous models and the link between constraints and motives and highlighted the critical factor that motives hold (Hubbard & Mannel, 2001). For example, Alexandris et al. (2011) have outlined a negative correlation between constraints and activity attachment and constraints and motivation. It was also determined that a positive relationship was held between activity attachment and motivation in line with an individual’s future behavioural intentions, showing that if an individual experienced many constraints to negotiate, the less likely motivation would occur (Alexandris et al., 2011). Recent work examined the link between individual decision-making models and consequent and antecedent variables (Hubbard & Mannell, 2001; Alexandris et al., 2007, 2011; Son et al., 2008; White, 2008). Evidence was provided to indicate that attitudes, constraints, and motivations interact with an individual’s negotiations and determine the behavioural aspects towards participation, including participation frequency, attachment and loyalty. Moreover, Alexandris et al. (2002) proposed that some constraints are consistent with several social and psychological mediators, which may influence motivational factors and, in turn, impact the level of participation. Consequently, constraints can impact one’s motivations. Although an extensive number of models, theories, and determinants have been created and investigated for sports participation (e.g., individual motivation sociological and psychological), the perspective of the negotiation process has received little consideration, particularly within

winter sports participation (Grima et al., 2017; Jackson et al., 1993; Alexandris et al., 2007; Vassiliadis et al., 2018; Alexandris et al., 2011).

Behaviour Strategies

Jackson et al. (1993) suggested that individuals altered various non-leisure aspects of their lives, such as adjusting their schedules, reducing expenses, or modifying their leisure activities, opportunities, and participation frequency to meet their needs. Moreover, extensive research was conducted on behavioural strategies for negotiating leisure constraints by scholars like Elkins et al. (2007), Lyu and Lee (2016), Dionigi et al. (2013), Ma et al. (2012), Powers et al. (2019), and Zhou et al. (2021). Alexandris et al. (2013) highlighted two key objectives in contemporary research on leisure constraint negotiations. The first research explored behavioural negotiation strategies used by different demographic groups participating in leisure activities, such as students, women, employees, and individuals with special needs. Notable contributions in this area included the work of Elkins et al. (2007), Lyu and Lee (2016), Dionigi et al. (2013), Ma et al. (2012), Powers et al. (2019), and Zhou et al. (2021). Elkins et al. (2007) found that students employ different behavioural strategies depending on gender in recreational sports participation, with modest differences based on place of residence and no significant distinctions based on education level. Another significant research area involved developing and testing decision-making models that explore the relationships between behaviour strategy negotiation, constraints, motivation, attitudes, and their subsequent impact on actual behaviours. This area was well-represented in the work of Alexandris et al. (2002, 2007, 2011, 2013), Hubbard and Mannell (2001), Son et al. (2008, 2009, 2021), and White (2008). For instance, Jackson and Rucks (1995) identified seven behaviour strategies: time management, skill acquisition, interpersonal relationship modification, financial improvement, physical rehabilitation, and

changes in leisure preferences. Hubbard and Mannell (2001) and Son et al. (2008) condensed Jackson and Rucks' behavioural negotiation strategies into four categories: time management, skill acquisition, interpersonal coordination, and financial improvement. Another example from Alexandris et al. (2013) involved classifying recreational swimmers based on their levels of involvement and analyzing how behaviour strategies influenced the development of swimming commitment. The study employed a five-dimensional leisure behaviour strategy scale developed by Alexandris et al. (2007), which included enhancing knowledge, adapting lifestyle, obtaining information, managing time, and seeking companionship. The results indicated that highly engaged swimmers exhibited more positive perceptions across all negotiation strategy aspects than other groups.

Cognitive Strategies

In 1991, Jackson et al. proposed that individuals could enhance their cognitive well-being by intentionally reducing "psychic discomfort" by negotiating constraints. This process may involve individuals devaluing leisure activities they wish to participate in but perceive as unattainable or restricted, thereby reducing cognitive dissonance. Cognitive strategies refer to the emotional responses individuals use to overcome obstacles that impede their participation in specific leisure activities, such as ignoring the constraints, forgetting about them, or reflecting on the importance of the activities. Stanis et al. (2009) emphasized the significance of cognitive negotiation methods, noting their resemblance to stress-coping strategies, including problem-focused and emotion-focused approaches. They also advocated for the inclusion and further development of cognitive strategies in future research on negotiation. However, only a few studies have examined cognitive strategies within outdoor recreation settings (e.g., Jackson & Rucks, 1995; Li & Stodolska, 2007; Stanis et al., 2009; Kono et al., 2021). According to Kono et

al. (2021), previous research has predominantly focused on behavioural strategies that may increase participation. The use of cognitive strategies could not only enhance immediate outcomes, such as leisure participation and enjoyment but positively affect broader outcomes like health and well-being. Further exploration of this topic is warranted (Kono et al., 2021).

The Influence of Culture on Sports Participation

Culture is a complex and sophisticated term that presents difficulties in establishing a single definition, as demonstrated by the various views in academic literature (Reisinger & Lindsay, 2003). Because of its extensive scope, scientists from several fields like sociology, psychology, anthropology, and intercultural communication provide various perspectives on the components of culture (Reisinger & Lindsay, 2003). Definitions of culture vary, ranging from broad views that consider culture as a comprehensive entity to narrower understandings (Reisinger & Lindsay, 2003). Notwithstanding this variety, researchers usually agree that culture functions as a theoretical framework or a broad descriptor for a wide range of phenomena (Reisinger & Lindsay, 2003). Sports marketing research defines culture as the accumulated values, beliefs, language, rituals, and symbols people commonly share and pass down from generation to generation (Shank & Lyberger, 2015). The influence of cultural identity on constraints in winter sports participation is evident (Hudson et al., 2010). Individuals in North America and Western Europe tend to exhibit an independent self-construal, valuing uniqueness, self-assertion, self-expression, and personal goals. In contrast, individuals from Asia, Africa, and Southern Europe tend to have an interdependent self-construal, valuing belonging, conformity, harmony, self-restraint, and the goals of others. Prior studies have shown a significant association between cultural heritage and participation in sports (Chen, 2000; Crofts & Erdmann, 2000). Studies suggest that cultural disparities substantially impact people's motives for leisure

activities, either directly or indirectly. For example, Jackson and Walker (2006) found that Chinese people are more likely to engage in passive leisure activities than Canadians. Freysinger and Chen (1993) observed that relaxation and enjoyment are the main reasons Chinese people engage in leisure activities. In contrast to North Americans, Chinese people generally move towards peaceful activities rather than seeking out challenging and thrilling experiences in outdoor leisure settings (Hudson et al., 2010). Wang and Stringer (2000) suggest that Taoist cultural features may influence the Chinese preference for adaptation, prudence, and harmony with nature. Moreover, Chinese university students must overcome intrapersonal and interpersonal constraints to participate in new recreational activities, while Canadian students encounter more significant structural constraints (Wang & Stringer, 2000). In their study, Deng et al. (2005) discovered that Chinese immigrants in Canada have notably weaker cognitive recognition of leisure attitudes for downhill skiing than Anglo-Canadians. Guo and Schneider (2015) and Ito et al. (2020) suggest that resolving leisure constraints can differ among cultures, notably between Eastern and Western cultures.

Furthermore, there is a notable neglect of cultural diversity in research on constraints in leisure activities and studies on negotiating these constraints (Dong & Chick, 2012; Guo & Schneider, 2015; Ito et al., 2020). Most research on negotiation in the context of leisure participation has focused on individuals from Western cultures. Examples of such studies include Boo et al. (2014), Alexandris et al. (2007), Dionigi et al. (2013), Elkins et al. (2007), Hubbard & Mannell (2001), and Humagain & Singleton (2023). According to an examination of literature from five respected leisure journals, less than 5% of all articles published between 1990 and 2009 focused on studying leisure activities from non-Western or cross-cultural perspectives (Ito et al., 2014). For instance, Kono et al. (2020) did a study that revealed no significant correlation

between negotiating and participation in leisure activities among a cultural group from East Asia, specifically the Japanese, in comparison to Euro-Canadians. The researchers discovered that the association between negotiation and participation was statistically significant among persons with European and Canadian citizenship. One potential explanation for these differential consequences may be that negotiating strategies are better suited for Western cultural groups regarding their recreational activities in natural environments (Ito et al., 2020). Despite the increasing interest of Chinese scholars in leisure studies, this area is still in its nascent stage of development. Researchers like Chen & Perng (2016), Stodolska et al. (2015), Guo & Schneider (2015), Hudson et al. (2010), Deng et al. (2005), and Walker & Wang (2008) have conducted several studies. Previous scholarly works have predominantly focused on immigrants, specifically examining the impact of sports in assisting the acculturation process. For example, Deng et al. (2005), Hudson et al. (2010), and Walker & Wang (2008) have all investigated this subject. Only three studies have specifically investigated the cross-cultural disparities between Anglo-Canadians and Mainland Chinese, emphasizing outdoor recreational settings. Without understanding cultural contexts, individuals engaged in leisure activities may inadvertently impede their customers' ability to benefit from leisure fully. Furthermore, performing cross-national comparisons can aid in the identification of global patterns in leisure-time physical activity and inactivity (Ito et al., 2014). Hubbard and Mannell's (2001) research aligned with this study, which explores the use of negotiation resources and their impact on leisure activity participation. While some studies have indicated that the leisure constraints model is more effective in explaining variations in behavioural intention in leisure activities, the leisure constraints theory remains a widely influential and extensively utilized social-psychological model in research on skiing consumer behaviour. Nevertheless, this study suggests that

employing the concepts of leisure constraints and leisure negotiation theory could yield a better comprehension of how consumers make choices in skiing consumer behaviour research.

Ski Tourism Market Segmentation

Mullin et al. (2014) define sports market segmentation as: “the process of dividing a large, heterogeneous market into more homogeneous groups of people who have similar wants, needs, or demographic profiles to whom a product may be targeted” (p. 221). Ultimately, market segmentation serves as a valuable tool for understanding why consumers purchase particular products and the problems those products can solve for consumers (Mullin et al., 2014). Winter sports marketers today rely heavily on segmentation to identify target groups and gain insights into their characteristics, needs, and priorities (Szromek et al., 2012; Priporas et al., 2015).

Gibson (1998) defines sports tourism as “leisure-based travel that temporarily takes individuals outside their home communities to participate in physical activities, observe physical activities, or venerate attractions associated with physical activities” (p. 49). Building on this definition, Gibson (1998) categorizes sports tourists into three groups: (a) spectators who attend sporting events, (b) visitors to sport-related attractions such as museums and iconic event venues, and (c) active sports tourists who participate in recreational activities. In the field of ski tourism marketing, segmentation is widely acknowledged as an essential tool (e.g., Priporas et al., 2015; Cho et al., 2017; DeSarbo et al., 2017; Williams & Fidgeon, 2000; Hungenberg et al., 2016; Szromek et al., 2012). According to Priporas et al. (2015) and Dolnicar et al. (2012), segmentation enables ski tourism businesses and destinations to identify groups of tourists with similar characteristics and develop tailored marketing strategies. While Kotler et al. (2010) acknowledged no perfect way to segment a market, the most used criteria include demographic, psychographic, product benefits, and product usage segmentation in sports marketing in terms of

Mullin et al. (2014). Previous research has shown that skiing preferences vary according to demographic characteristics such as gender and age (demographics; Lera-López & Rapún-Gárate, 2007; Matzler et al., 2008; Hudson, 2000; Williams & Lattey, 1994; Hudson, 2000; Faullant et al., 2008; Perdue, 1996), lifestyle (psychographics; Alexandris et al., 2009; Füller & Matzler, 2008), motives (product benefits; Hungenberg et al., 2016; Landauer et al., 2012; Won & Hwang, 2009), and frequency of skiing (product usage; Greenberg & McDonald, 1989; Szromek et al., 2012; Tsiotsou, 2006; Faullant et al., 2008).

In terms of demographic segmentations, Matzler et al. (2008) stated that the quality and safety of slopes were key factors for skiers aged 50 and older to a far greater extent than in the young (12-34) and middle-aged (35-49) groups. Faullant et al. (2008) also investigated the consumers' overall satisfaction based on age, separating respondents into those under 25, those between 25 and 50, and those over 50. For the under-25 age group, slopes, parties, prices, and children's deals were the important factors influencing their satisfaction. For the older target group, the price, well-being and accessibility factors mainly affected their overall satisfaction (Faullant et al., 2008). In addition, Perdue (1996) classified consumers into two categories based on their location: non-resident skiers and resident skiers. Perdue's (1996) research shows that local and non-resident skiers had distinct behaviours and attitudes toward skiing participation. According to Perdue (1996), local skiers favoured going on day or weekend vacations, considering skiing a significant component of their recreational pursuits. Perdue (1996) said skiers outside the area assumed that skiing was a leisure sport requiring extensive preparation. Skiers derived satisfaction from immersing themselves in serene and aesthetically pleasing surroundings (Alexandris et al., 2009). Lastly, Williams and Lattey (1994) found that women paid more attention to the emotional and social dimensions of skiing, offering less attention to

material aspects, such as ski lifts and equipment technologies than men (Williams & Lattey, 1994; Hudson, 2000). They were less interested in skiing if there was no opportunity for social interaction with family or friends (i.e., references group; Williams & Lattey, 1994).

Psychographic segmentation assumes that: “consumers may be divided by personality traits; by lifestyle characteristics such as attitudes, interests, and opinions; and by preferences and perceptions” (Mullin et al., 2014, p. 238). Alexandris et al. (2009) segmented recreational skiers based on their motivations and established profiles for each group by examining their involvement levels. Cluster analysis classified these variables into four segments: “novice,” “multiple interest,” “naturalist,” and “enthusiast.” Won and Hwang (2009) employed benefit segmentation to categorize Korean college skiers and snowboarders, identifying four groups based on commonalities in their preferences for four choice factors: “fun and safety,” “ski variety,” “cost-conscious,” and “time conscious.” More recently, Konu et al. (2011) clustered Finnish ski resort tourists based on ski destination preference attributes. Six distinct consumer segments were identified using the factor-cluster method: “passive tourists,” “cross-country skiers,” “want-it-all,” “all-but-downhill skiing,” “sports seekers,” and “relaxation seekers.” Hungenberg and colleagues (2016) classify the participants into self-enrichment, travel exploration, skill mastery, social needs, destination attributes, stress relief, aggression, competition, and physical fitness. Three distinct segments were identified among GoPro Mountain Games athletes: (1) the sport tourism enthusiast segment, (2) the tourism-oriented segment, and (3) the sport-oriented segment (Hungenberg et al., 2016). The Sport Tourism Enthusiast Group, known for their enthusiasm and strong motivation towards all aspects of the event, reported that tourism, sport, and social outcomes positively impacted their decision to attend (Hungenberg et al., 2016).

In the 2022 Winter Olympics, around 80% of skiers in China are beginners, which many ski destinations have identified as a promising target market (Wu, 2019; Vanat, 2020). However, most existing studies view the research subjects as homogeneous groups (Yuanxiang et al., 2022). As highlighted by Matzler et al. (2007), beginners have distinct expectations and criteria when selecting ski resorts. Tsotsou (2006) proposed categorizing ski resort visitors based on the frequency of their visits. She identified two types of tourists: weekly visitors (those who frequent ski resorts regularly) and monthly visitors (those likely to visit once a month). The findings showed that these groups differed in skiing experience, happiness, and income level. Weekly skiers earned more than monthly skiers, suggesting that higher-income skiers visit ski resorts more frequently despite having less skiing experience and lower happiness levels (Tsotsou, 2006). The high cost of ski resorts was the primary reason monthly skiers did not visit as frequently (Tsotsou, 2006). The findings suggest that income and visit frequency can help identify distinct segments, allowing resorts to meet consumer needs better. Regarding the frequency of visits, Faillant et al. (2008) divided respondents into two categories: first-time visitors and regular guests. The findings indicated that ski resorts with higher satisfaction and image ratings also had the highest loyalty scores (Faillant et al., 2008). Additionally, overall satisfaction was more important than image for first-time visitors. However, as the number of repeat visits increased, satisfaction diminished while image importance increased proportionately (Faillant et al., 2008). Faillant et al. (2008) also found that cultural events, parties, and promotional discounts were key factors in increasing overall consumer satisfaction. Furthermore, most nature-oriented skiers prefer long and varied routes (Landauer et al., 2012). They favoured snow-making facilities and many snow days and paid less attention to services. They were also willing to spend more on skiing than other segments (Landauer et al., 2012). Matzler et al.

(2008) measured satisfaction across various aspects of ski areas, such as slopes, restaurants, ski lifts, and employees. Overall, satisfaction evaluations were obtained from 51 ski areas in Austria, Germany, Italy, and Switzerland. The study emphasized the importance of sports facilities and infrastructure availability for participation in skiing. In addition, slope variety was more important for beginners and low-frequency skiers. They found that age and gender had a limited impact on consumer satisfaction, whereas product usage segmentation (one-day versus repeat visitors) and slope difficulty had a more significant influence. These factors were more suitable for predicting consumer satisfaction and segmenting the ski market. In ski resorts, central characteristics such as landscape, altitude, and steepness of the mountainside directly impact slope difficulty, requiring different skiing skills and levels (Matzler et al., 2008). Skiing ability also influences consumers' destination choices. For instance, difficult terrains are more likely to attract experts than easier slopes (Matzler et al., 2008). For expert skiers, slope variety and sports facilities were more critical than for beginners, who preferred easier slopes (Matzler et al., 2008). Expert skiers focused more on the skiing experience than variables such as waiting times at ski lifts or employee interactions (Matzler et al., 2008). Additionally, repeat visitors prioritized slope variety over amenities such as restaurants and bars compared to one-day visitors (Matzler et al., 2008).

A comprehensive review of research on skiing participation indicates that most studies have been conducted within a Western context (e.g., Matzler et al., 2019), leaving a gap in research focusing on winter tourism in emerging markets, particularly China, with a few notable exceptions of Yuanxiang et al. (2022) and Wang et al. (2020). To the best of our knowledge, few studies concentrate on non-skier groups. Additionally, a significant gap exists in understanding the behavioural preferences between Western and Asian visitors (Huang, 2017; Khoo-Lattimore

& Yang, 2020; Yuanxiang et al., 2022). The development trajectory and pace of China's emerging ski market differ entirely from those of Western countries (Yuanxiang et al., 2022). Therefore, whether research findings based on Western visitors can accurately predict and explain the behaviour of visitors in emerging ski markets needs further investigation and may not effectively inform the management and marketing strategies of ski tourism destinations (Yuanxiang et al., 2022). Furthermore, this study aims to gain insights into the experiences and preferences of non-skiers and low-frequency skiers.

Research Approach

According to Creswell (2009), a research approach emphasizes two crucial elements: philosophical assumptions and specific methods or procedures. Research design, or the blueprint or proposal for conducting research, encompasses the convergence of philosophy, inquiry strategies, and specific methodologies (Creswell, 2009).

Philosophical Worldviews

Creswell (2009) recommends that those creating a study plan clearly articulate the broader philosophical concepts they support. This material will explain the researchers' selection of qualitative, quantitative, or mixed methods approaches for their research (Creswell, 2009). When discussing worldviews, research should include a section that specifically addresses the following topics: a philosophical perspective, the fundamental aspects of that worldview, and how the worldview influenced the research approach. According to Creswell (2009), to properly plan a study, researchers must carefully consider their philosophical worldview assumptions, the strategy of inquiry that aligns with this worldview, and the precise research methods or procedures that put this approach into action. Worldviews can be understood as a researcher's overall perspective on the world and their beliefs about the nature of research (Creswell, 2009).

Creswell (2009) discussed four worldviews: post-positivism, constructivism, advocacy/participatory, and pragmatism.

The epistemology for this study is rooted in pragmatism. Pragmatism is not committed to any system of philosophy and reality and draws liberally from quantitative and qualitative methods, particularly suitable for mixed-method research (Creswell, 2009). Researchers possess flexibility in their decision-making. Researchers can select the methods, strategies, and study processes most suitable for their needs and objectives (Creswell, 2009). Besides, pragmatists do not see the world as an absolute unity (Creswell, 2009). Similarly, mixed methods researchers look to many approaches for collecting and analyzing data rather than only using one method (e.g., quantitative or qualitative) (Creswell, 2009). This study will combine survey data and interviews to explore skiing constraints, facilitators, and negotiation strategies among Chinese and Canadian populations, offering a comprehensive approach. This pragmatic methodology allows for a deeper understanding of the factors influencing skiing participation in both groups, emphasizing practical solutions to address challenges and enhance engagement in the sport. A pragmatic perspective guides this study.

Research Design

Mixed methods research is an investigative methodology that integrates qualitative and quantitative approaches. It encompasses philosophical assumptions, utilizing both qualitative and quantitative methods, and the integration of these methodologies in a research investigation (Creswell, 2014). Johnson et al. (2007) described "mixed methodologies as a qualitative and quantitative research approach. This can involve incorporating qualitative and quantitative perspectives, data collection, analysis, and inference techniques to achieve a comprehensive and in-depth understanding and confirmation" (p. 123). Mixed methodology has various design

strategies (Creswell, 2003). There are six major strands of mixed methodology: sequential explanatory design, sequential exploratory design, sequential transformative design, concurrent triangulation strategy, concurrent nested strategy, and concurrent transformative strategy (Creswell, 2003). This dissertation employs the sequential explanatory design.

Sequential Explanatory Design

According to Creswell (2003), “the sequential explanatory strategy is characterized by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data” (p. 218). In this mixed methodology strand, researchers first collect and analyze quantitative data (Studies One and Two), then proceed to collect and analyze qualitative data (Study Three), thereby enhancing their understanding of the quantitative results that require further exploration (Harrison & Reilly, 2011). The main strength of the sequential explanatory design is its straightforwardness (Creswell, 2003). Both the qualitative phase and the quantitative phase focus on one main topic. Additionally, the design simplifies the research process by breaking down procedures into multiple steps, making it easier to explain and present (Creswell, 2003). The qualitative phase allows for a more detailed investigation of some quantitative phase findings (Creswell, 2003). More importantly, mixed methodologies enable researchers to offset quantitative and qualitative research design weaknesses (Johnson et al., 2007). Quantitative data can provide baseline information during the data collection stage and protect researchers from making subjective assumptions using only qualitative methods. The qualitative phase allows researchers to delve deeper into some findings from the quantitative phase (Creswell, 2003). For example, the qualitative phase of our research heavily relies on the factors identified in the quantitative phase. Thus, during the data analysis stage, qualitative data play a crucial role in interpreting, clarifying, describing, and validating quantitative results (Ivankova et al., 2006).

Furthermore, quantitative methods can survey intrapersonal, interpersonal, and structural constraints affecting participation. In contrast, qualitative methods provide a deeper understanding of internal psychological factors, enabling a more detailed exploration of these factors.

Admittedly, mixed methodologies also have some weaknesses. For instance, this research design's main weakness is the time involved in data collection. Researchers must spend considerable time on the design, data, and interpretation stages. Due to sequential explanatory designs having two separate data collection phases, a significant amount of time is required to gather quantitative and qualitative data (Creswell, 2003). Additionally, researchers need a thorough understanding of quantitative and qualitative methods, which can be demanding (Creswell, 2003). After reviewing the literature, we found that most studies in the skiing context investigated intrapersonal constraining factors of participation in leisure activities, such as skiing, using only qualitative methods. These studies often lacked information explaining the relationship between demographic factors and participation frequency. Furthermore, the samples in previous articles were too small to represent more extensive groups of people. While the process may be time-consuming, it can be managed effectively with adequate time management. Consequently, the sequential explanatory research design is the most appropriate methodology for our research.

Methods

According to Creswell (2009), the third primary component of the research method framework pertains to the research methodologies employed, encompassing the data collecting, analysis, and interpretation that researchers put forth for their investigations. The selection of methods depends on whether the objective is to predefine the information to be gathered before

the study or to let it arise from the participants throughout the project (Creswell, 2009). The data evaluated can be either numeric information collected using instruments with scales or textual information that records and reports the participants' voices (Creswell, 2009). Quantitative and qualitative data are collected, processed, and interpreted in certain types of study. In this instance of methodological integration, the researcher concludes by analyzing data from both the quantitative and qualitative databases (Creswell, 2009). This study employed the questionnaire method for phases one and two and utilized semi-structured interviews for phase three. The advantages of using questionnaires include potential reduction in bias, anonymity, collection of structured data, and increased time for respondents (Gratton & Jones, 2004). First, regarding accessibility, online questionnaires allow researchers to collect data from a geographically dispersed sample group at a much lower cost than interviewing a similar sample (Gratton & Jones, 2004). Using questionnaires also allows a larger sample to be investigated. A second strength of this method is that well-designed questionnaires can reduce bias in the results, as researchers do not show body language that might influence participants (Gratton & Jones, 2004). Thirdly, anonymity can be achieved with questionnaires if the researchers' questions are regarding sensitive topics because respondents would not be uncovered respondents' names (Gratton & Jones, 2004). Next, questionnaires tend to provide highly structured quantitative data that is easily comparable (Gratton & Jones, 2004). Moreover, internet questionnaires may save time for researchers and respondents (Gratton & Jones, 2004; Wright, 2005). Online surveys allow a researcher to reach thousands of people with common characteristics in a short amount of time, despite possibly being separated by great geographic distances (Wright, 2005), and questionnaires also increase time for respondents, as they can complete questionnaires at a time convenient to them (Gratton & Jones, 2004). The disadvantages of using questionnaires include

problems with complex questions, no control over who completes the questionnaire, no opportunity to probe, and potentially low response rates (Gratton & Jones, 2004). First, complex questions may pose a problem, as queries must be clear enough for all participants to understand because there is no opportunity to seek clarification from the researchers (Gratton & Jones, 2004). A second weakness is that the researchers lack control over who completes the questionnaires, as they are unaware of the respondent's demographic information before completion (Gratton & Jones, 2004). For example, it is better if the respondents are from different groups (e.g., students, workers, or those without jobs). However, it is hard to identify the respondents' characteristics before they complete the questionnaires (Gratton & Jones, 2004).

Semi-structured interviews require a certain number of predetermined questions and specific topics (Hillebrand & Berg, 2000). Interviewers typically ask respondents some questions in a systematic and consistent order. However, they are also free to ask questions beyond their prepared, structured questions in response to respondents' answers (Hillebrand & Berg, 2000). According to Hillebrand & Berg (2000), "questions used in a semi-structured interview can reflect an awareness that individuals understand the world in varying ways" (p. 81). That is, researchers can investigate more significant and further details by adjusting the language level of predetermined or predetermined questions (Hillebrand & Berg, 2000). During the interview phase, we conducted semi-structured interviews with skiers and non-skiers and investigated the negotiation process as they encountered more psychologically constraining factors (Williams & Basford, 1992; Williams & Lattey, 1994; Williams & Fidgeon, 2000; Gilbert & Hudson, 2000). Furthermore, the questionnaire phase cannot thoroughly investigate some psychologically constraining factors for the non-skiers and the former skiers, so the quantitative phase can only provide specific answers, not the reasons for this situation (Creswell, 2003). Therefore, the

intrapersonal factors and negotiation strategies would be better understood during the interview. The chief goal of this phase is to understand why non-skiers do not go skiing and how skiers apply strategies to overcome constraints. There are several strengths to interviews. First, interviews can occur in various situations (Alshenqeeti, 2014). Second, the interviewer can ensure mutual understanding by simplifying or rephrasing questions the interviewees may not have understood. This approach leads to the generation of more appropriate and accurate answers. Additionally, the researcher can record and review interview data multiple times to ensure the production of an accurate interview report (Berg, 2004). Finally, comparing interviews with other methods, conversations are relatively low-cost (Alshenqeeti, 2014). Like any other research tool, interviews also have drawbacks. First, interviewees' perceptions might be subjective and change over time according to their circumstance (Alshenqeeti, 2014). Furthermore, interviews can be time-consuming due to schedule conflicts, transcription, and analysis (Alshenqeeti, 2014). For example, a one-hour interview may take up to six to seven hours to transcribe, resulting in around fifty pages of transcribed text for analysis (Alshenqeeti, 2014). There are solutions available to address these weaknesses. To collect more reliable data, researchers should adhere to interviewing techniques that can enhance the validity and reliability of the data (Alshenqeeti, 2014). These techniques can include refraining from asking leading questions, taking notes instead of relying solely on tape recorders, conducting a pilot interview, and allowing interviewees to summarize and clarify their points (Alshenqeeti, 2014). Hence, both types of data have strengths and limitations.

Phase 1 and Phase 2: Questionnaire Method

Phase one utilized an online questionnaire to examine the consumption behaviour of downhill skiing in Beijing. The study was approved by the University's Office of Research

Ethics and Integrity (H-10-21-7401) (see Appendix A). To facilitate the research, the study utilized Le Survey, an online survey platform based in Beijing, to monitor the necessary number of participants. The online survey can be found in Appendix B. This involved recruiting 150 individuals for each group: non-skiers, low-frequency, and high-frequency skiers. The sample size was determined based on statistical power requirements for the subsequent analyses. The consent form can be found in Appendix C. The poll employed qualification criteria, especially the necessity for respondents to reside in Beijing, as well as attentiveness checks at several stages to assure the accuracy of the data. The analysis did not include individuals who could not fulfill the required qualification conditions or answer the attention-check questions successfully.

Usage segmentation categorizes consumers according to their purchasing frequency or the frequency with which they use a service or engage in a sport. The frequency of involvement is a widely used segmentation strategy for winter sports (Szromek et al., 2012). In their study, Gilbert and Hudson (2000) classified participants into three distinct groups according to their frequency of skiing every season: less than once, one to two times (beginners), three to 10 times (intermediates), and 11 or more times (advanced). This study focused on individuals who do not use skiing facilities and those who ski infrequently and frequently. In this study, the variable that requires explanation is the frequency of participation. On the other hand, the independent variables are the constraints and facilitators, which are the determinants that influence the dependent variable. Moreover, we employed demographic (i.e., gender, education, income, household status, and age) and behavioural data (i.e., frequency of visits and days of stay) to design appropriate positioning strategies for ski marketing managers to target audiences.

To specifically focus on the intended demographic in Vancouver, Canada, a total of 432 individuals were enlisted through the utilization of the Qualtrics panel survey, which consisted of

29 questions, see Appendix D. The participants were categorized into three groups: non-skiers (individuals who had never engaged in skiing), low-frequency skiers (individuals who had skied for a maximum of 2 days per winter season), and high-frequency skiers (individuals who had skied for more than 3 days per winter season). The participants consisted of persons 18 years of age or older who resided in Vancouver. Before commencing the survey, participants were required to read and sign a consent form showing their voluntary agreement to participate. The consent form can be found in Appendix E. The survey was finished in around 10 minutes.

Phase 3: Semi-structured Interviews

At first, the research data was disseminated on the Qualtrics platform to enlist volunteers from Vancouver, Canada. In addition, we supplied research recruiting information to Beijing Sports University in China to promote the involvement of Chinese individuals. Prospective participants were directed to contact the principal investigator to participate in the trial. Before taking part, respondents had to peruse and endorse a consent form that detailed the study's voluntary, anonymous, and confidential aspects. Participants were given a \$20 incentive for their time and involvement. The requirements for participation were: (1) being a minimum of 18 years old and (2) currently living in either Beijing (China) or Vancouver (Canada). Participants furnished their socio-demographic data, encompassing age, gender, and occupation. The participants were provided information regarding the study's goal and allowed to withdraw at any time. Confidentiality was assured for all names stated throughout the interviews. The recruitment process for both cultural groups began in October 2022 and concluded in February 2024.

A total of 38 semi-structured interviews were carried out by the researchers, with 15 taking place in Beijing and 23 in Vancouver. The consent form can be referred to in Appendix G. The objective was to attain meaning saturation, as Hennink et al. (2017) indicated. The

researcher conducted all interviews, with an average duration of 25 minutes and a range of 20 to 30 minutes. The interviews were conducted using the Zoom platform and recorded in either audio or video format. The language used during the interviews, either English or Chinese, was determined depending on the respondents' preferences. Participants were emailed transcripts to verify accuracy, allowing ten days for modifications or clarifications. As part of the member-check process, participants were instructed to examine their transcripts thoroughly, contemplate their experiences, clarify any uncertainties, and confirm the accuracy of the researchers' interpretations (Camiré, 2016).

Data Analysis

Quantitative Data Analysis

Survey data was analyzed with statistical tools, specifically SPSS (version 25; IBM) and AMOS (version 26; IBM). Sample size requirements can vary significantly based on model complexity and the strength of factor loadings (Bowen & Guo, 2011). Kline (2005) defined a sample of fewer than 100 cases as "small," between 100 and 200 as "medium," and over 200 as "large." Initially, an exploratory factor analysis (EFA) was conducted to establish the factorial structure of the skiing participation scale. Subsequently, a reliability analysis was conducted. A confirmatory factor analysis (CFA) was also performed to determine if the factor structure could be reproduced. The CFA methodology is highly effective for examining the relationships between observed data indicators and factors and the relationships between different factors themselves (Chumney, 2012). The convergent and discriminant validity of the measurement model was also assessed. Furthermore, Structural Equation Modeling (SEM) was applied to investigate the impact of constraints and facilitators on involvement in downhill skiing.

The core hypothesis of SEM is represented as $S = \Sigma(\theta^{\wedge})$, meaning that the covariance matrix generated from the parameter estimates should statistically match the observed covariance matrix from the sample (Bowen & Guo, 2011). The term "goodness of fit" describes the degree of similarity between the two matrices and whether this similarity is sufficient for researchers to support the proposed model (Bowen & Guo, 2011). The dataset was examined using various model fit indices and their respective criteria, including the goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), Tucker-Lewis Index (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) (Bowern & Guo, 2011). The chi-square (χ^2) is the most widely used fit statistic for assessing SEM. It should always be included in reports on SEM analyses (Bowern & Guo, 2011). The larger the χ^2 value, the more likely it is to have a significant p -value. Because large sample sizes are recommended for SEM analyses, meeting sample size requirements makes obtaining a nonsignificant χ^2 value more challenging (Bowern & Guo, 2011). Researchers typically do not rely only on the χ^2 statistic to determine if their models are consistent with the data (Bowern & Guo, 2011). In other words, although the most desirable finding for an SEM analysis is a nonsignificant χ^2 it is acceptable to "fail" this test and present other evidence of a good fit (Bowern & Guo, 2011). The RMSEA measures the closeness of the implied variance-covariance matrix to the observed matrix (Kline, 2005; Bowern & Guo, 2011), meaning it accounts for the model's complexity. In practical terms, an RMSEA value of ≤ 0.05 indicates a close approximate fit, values between 0.05 and 0.08 suggest a reasonable fit, and values ≥ 0.10 signify a poor fit (Browne & Cudeck, 1993; Bowern & Guo, 2011). The model fit criteria, as outlined by Bowern and Guo (2011), include several key indicators: Chi-square (χ^2), where nonsignificant p -values ($p > 0.05$) are desired (Bollen, 1989; Kaplan, 2009; Kline, 2005); RMSEA, with classifications of Close fit (≤ 0.05), Reasonable fit

(0.05–0.08), and Poor fit (≥ 0.10) (Browne & Cudeck, 1993); CFI, which should be ≥ 0.95 (Hu & Bentler, 1999); TLI, also targeted at ≥ 0.95 (Hu & Bentler, 1999); and GFI, where a value of ≥ 0.90 is preferred (Hoyle & Panter, 1995).

Furthermore, a Kruskal-Wallis H test was used to evaluate the disparities in median values of facilitators and restraints among skiers classified based on their skiing frequency. A χ^2 test investigated the correlation between skiing frequency (non-skiers, low-frequency skiers, and high-frequency skiers) and demographic characteristics. After obtaining significant χ^2 results, we conducted post hoc z-tests to analyze the differences between specific pairings of groups. To account for multiple comparisons, we applied a Bonferroni adjustment. The z-tests were utilized to pinpoint specific locations with substantial disparities, thus providing a potent approach for meticulous examination after the initial χ^2 test that suggested a broad correlation.

Qualitative Data Analysis

Deductive qualitative analysis, as proposed by Gilgun (2019), is a specific approach to qualitative research that is well-suited for applying, testing, and improving theories (Fife & Gossner, 2024). Grounded theory aims to create new theories, while deductive qualitative analysis seeks to examine and refine existing theories based on empirical evidence (Fife & Gossner, 2024). Using pre-existing theories, this method allows researchers to analyze interpersonal and intrapersonal occurrences' meanings, processes, and narratives (Fife & Gossner, 2024). Deductive qualitative analysis is particularly suitable for researchers who want to examine, assess, or refine a specific theory concerning a phenomenon of interest (Gilgun, 2005). In our study, we aim to examine the differences in leisure constraints, facilitators, and negotiation strategies between participants from Beijing and Vancouver. We use deductive qualitative analysis to assess and improve current theories on leisure constraints, leisure

facilitators, and negotiation strategies by following Fife and Gossner's (2024) deductive qualitative data analysis procedure. Gilgun (2019) asserts that the coding process in deductive qualitative analysis closely resembles that of grounded theory (Charmaz, 2014; Corbin & Strauss, 2015; Glaser & Strauss, 1967). This includes conducting analysis, which involves actively seeking instances that introduce new dimensions, deviate from, or challenge the theory under examination (Fife & Gossner, 2024). The first phase, known as early analysis, involves initial deductive coding based on sensitizing constructs derived from the guiding theory (Fife & Gossner, 2024). Researchers also employ inductive processes to actively seek expanding evidence (Fife & Gossner, 2024). The second phase, referred to as middle analysis, centers on identifying preliminary themes, conducting analysis, and compiling various forms of evidence, such as supporting, contradicting, refining, and expanding evidence (Fife & Gossner, 2024). These are discussed next.

Early Analysis. During the initial stages of analysis, researchers thoroughly engage with the data, specifically concentrating on the data that are pertinent to the research question(s) that guide the study (Charmaz, 2014; Corbin & Strauss, 2015; Glaser & Strauss, 1967; Fife & Gossner, 2024). Researchers attain this state of immersion by engaging in repeated data analysis, conducting thorough and detailed memoranda, and, when relevant, convening team meetings. Coding during the early analysis phase involves both deductive and inductive reasoning (Fife & Gossner, 2024). We conducted the preliminary iteration of coding using the "coding" function in NVivo 11 software. This method enables codes to be recorded in the margin while emphasizing the specific section of text associated with each code (Byrne, 2022). It is a straightforward approach that avoids repetition or overlapping of data influencing different codes (Byrne, 2022). Through multiple coding cycles and increased familiarity with the data, researchers can

determine which codes are effective for interpreting themes and which to disregard (Byrne, 2022). There is no maximum or minimum limit on the number of codes to interpret. The crucial aspect is that, once the dataset is fully coded and the codes are collected, there must be sufficient depth to analyze patterns within the data and understand the variety of positions held by participants (Byrne, 2022).

Middle Analysis. During the process of middle analysis, the main objective is to evaluate how the data contradicts, refines, or expands upon the existing theory (Fife & Gossner, 2024). As the analysis progresses in deductive qualitative research, there is a shift from generating codes to identifying initial themes, examining negative cases, and understanding supporting, refuting, refining, and extending evidence (Fife & Gossner, 2024). Researchers evaluate their coding and consolidate their findings into prominent initial themes (Fife & Gossner, 2024). This study categorized the data into two sets: Beijing interviews and Vancouver interviews. The Beijing interviews were analyzed first, followed by the Vancouver interviews. Initially, possible sensitizing constructs from a previous leisure constraints theory were used as a starting point for our deductive analysis (Fife & Gossner, 2024). Each item was coded based on its respective category, including leisure constraints, facilitators, and negotiation strategies (both behavioural and cognitive). Simultaneously, we engaged in active inductive analysis, carefully examining the data to identify any additional and newly emerging components (Fife & Gossner, 2024). The research team developed themes and then convened to discuss similarities and differences. We revised our codebook to include relevant codes and themes and analyzed the remainder of our sample for supporting, contradicting, refining, and expanding evidence. Within this codebook, researchers can distinguish and analyze each of the four data types individually to methodically assess whether a revision to the guiding theory is justified (Gilgun, 2019). Additionally, newly

derived constructs formed through inductive reasoning during the coding process are incorporated into the codebook, and evidence is gathered to support their significance and relevance (Fife & Gossner, 2024).

Theorizing. The final element of deductive qualitative analysis is the process of theorizing (Fife & Gossner, 2024). This involves analyzing the data related to each theme, identifying connections between them, and justifying any modifications or extensions to the original theory (Fife & Gossner, 2024). During theorizing, researchers establish the main themes, evaluate both supportive and opposing evidence for each theme, and determine whether the data supports the initial theory or needs revision (Fife & Gossner, 2024). We compared the definitions of each constraint, facilitator, and negotiation strategy developed through our analysis with the original definitions based on leisure constraints, facilitators, and negotiation theory. Through team analysis and discussion, we refined our findings and gained a deeper understanding of the nuances of the revised and new themes we identified.

Trustworthiness and Reflexivity in Deductive Qualitative Analysis. In the preliminary investigation, we established trustworthiness by allowing each team member to independently generate their own interpretations based on the data and then compare these interpretations with those of the other team members (Fife & Gossner, 2024). Each team member was allowed to articulate their perspectives and scrutinize each other's conceptualizations equitably (Fife & Gossner, 2024). To cultivate self-awareness, we enlisted a research team from the project's inception to participate in discussions and develop a thorough understanding of our individual perspectives on common aspects, and how these viewpoints influenced our data analysis (Fife & Gossner, 2024). The study's chief investigator is of Chinese nationality, while the co-author is Canadian. The writing team recognized the potential impact of their individual cultural

backgrounds and experiences on the interpretation of the data. For instance, both the lead investigator and the co-author are infrequent skiers. The research team carefully considered the participants' viewpoints to address potential biases. Transcripts from both participant groups were evaluated separately and without bias to achieve data triangulation. These precautions were put in place to prevent the primary researcher's positional biases from limiting the interpretation of the data.

Saturation was also considered in this study. Saturation is the point in data collecting where comparable ideas and concerns are repeated, rendering additional data collection unnecessary (Hennink et al., 2019). Code saturation and meaning saturation refer to the ideas that are employed to ascertain the point at which enough data has been gathered and examined to comprehend the themes present in the data comprehensively (Guest et al., 2006). Code saturation is when no additional codes are generated from the data (Guest et al., 2006). Meaning saturation is a concept that goes beyond and indicates the point at which the gathered data ultimately elucidates the significance of the themes and sub-themes (Guest et al., 2006). Saturation arises when additional data does not provide new insights or improve understanding of the topics since the current data adequately covers the complexity and breadth of the studied subject (Guest et al., 2006).

Dissertation Outline

This dissertation will be organized into three main articles to achieve the broader purpose of the research project. The following summarizes each subsequent chapter.

Chapter II – Phase 1

The study aims to examine the factors that constrain or facilitate skiing participation in Beijing. This paper, titled *Examining the Relationship among Constraints, facilitators and Ski*

Participation in the Host City of the 2022 Winter Olympics, was published in the *International Journal of Sports Marketing and Sponsorship* (Yang et al., 2024). This study has three categories based on the frequency of skiing participation: non-skiers, low-frequency skiers, and high-frequency skiers. Through this approach, the study provides a more comprehensive comprehension of the Chinese skiing market. It reveals valuable insights that can help ski industry marketers better meet their customers' different demands and expectations. Three components were identified using an exploratory factor analysis: general restrictions, facilitators, and learning constraints. As anticipated, facilitators were found to have a positive correlation with skiing involvement. The component of learning constraints was found to have a considerable detrimental impact on skiing performance, while general constraints did not have a significant effect. Moreover, the three sectors exhibit notable disparities in household status, income, and education level. These findings corroborate prior studies highlighting the significance of facilitators and learning restrictions about skiing participation.

Chapter III – Phase 2

Chapter III is titled *Unraveling the Canadian Ski Market Decline: Exploring Constraints and Facilitators Affecting Participation across Different Skiers' Groups (currently under journal review)*. This study investigated the interaction between variables that promote or inhibit participation in downhill skiing. This research aimed to address the request made by Crawford and Jackson (2005) for studies that examine the leisure constraints theory. This study employed a market segmentation methodology. The study carefully examined participants' different frequencies of downhill skiing to identify additional distinctions between non-skiers, low-frequency skiers, and high-frequency skiers. This research used a survey-based methodology to gain a more thorough understanding of the behaviour of individuals engaging in downhill skiing.

The proposed structural model of this study was derived from the leisure constraints model. Nevertheless, the findings indicated incongruous associations. The present study examined the associations between intrapersonal, interpersonal, and structural restrictions and facilitators within a unified model to analyze skiing behaviour. The findings of this study provide partial support for the mitigating leisure constraints model. Specifically, the study confirmed the negative relationship between intrapersonal factors and ski involvement and the positive relationship between facilitators and ski participation. There is a strong inverse correlation between individual constraints and the act of skiing. The findings of this study offer helpful theoretical insights that shed light on the factors influencing people's decision to engage or abstain from downhill skiing.

Chapter IV – Phase 3

This study aimed to examine the differences in constraints, facilitators, and negotiation processes between Chinese and Canadian individuals regarding their participation in skiing. Initially, we successfully determined the factors that participants believed to facilitate, constraints, and negotiation strategies they used to reach participation in skiing. The qualitative results demonstrated a variety of disparities between two cultural groups. This paper, *Negotiation Strategies Regarding Ski Participation: An Exploratory, Cross-Cultural Study*, is being prepared for submission to a journal. The results of this study indicate that cultural variables substantially impact the factors that constrain, facilitate and influence a person's negotiations to ski (or not). Canadian participants encountered constraints associated with immigrant culture and settling matters in their skiing activities. Furthermore, Canadians experienced family duties as a noteworthy interpersonal constraint. Furthermore, they exhibited a greater inclination for skiing to seek solace than their Chinese counterparts.

Chapter V – Discussion and Conclusion

Chapter V serves as the dissertation's final section, presenting a concise summary of the main discoveries and engaging in a discourse on the overarching themes of the prior three chapters. Chapter V examines explicitly the relationship between the facts presented in Chapters II, III, and IV and the theoretical approach discussed in Chapter I. It also highlights the importance of these cross-culture study outcomes as long-term impacts of leisure sports participation. It explores the wider implications for the ski industry in both China and Canada. In addition, the dissertation explores the methodological issues and implications that arise from this and addresses limitations and further research implications.

References

- Alexandris, K., & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: Results from a study in Greece. *Leisure Studies*, 16(2), 107–125. <https://doi.org/10.1080/026143697375449>
- Alexandris, K., & Stodolska, M. (2004). The influence of perceived constraints on the attitudes toward recreational sport participation. *Loisir et Société / Society and Leisure*, 27(1), 197–217. <https://doi.org/10.1080/07053436.2004.10707647>
- Alexandris, K., Du, J., Funk, D., & Theodorakis, N. D. (2017). Leisure constraints and the psychological continuum model: A study among recreational mountain skiers. *Leisure Studies*, 36(5), 670–683. <https://doi.org/10.1080/02614367.2016.1263871>
- Alexandris, K., Funk, D. C., & Pritchard, M. (2011). The impact of constraints on motivation, activity attachment, and skier intentions to continue. *Journal of Leisure Research*, 43(1), 56–79.
<http://search.proquest.com/docview/925645616/abstract/38D2D4C4512546F4PQ/1>
- Alexandris, K., Kouthouris, C., & Girgolas, G. (2007). Investigating the relationships among motivation, negotiation, and alpine skiing participation. *Journal of Leisure Research*, 39(4), 648–667.
<http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=27425396&site=ehost-live>
- Alexandris, K., Kouthouris, C., & Meligdis, A. (2006). Increasing customers' loyalty in a skiing resort: The contribution of place attachment and service quality. *International Journal of Contemporary Hospitality Management*, 18(5), 414–425.
<https://doi.org/10.1108/09596110610673547>

- Alexandris, K., Kouthouris, C., Funk, D., & Chatzigianni, E. (2008). Examining the relationships between leisure constraints, involvement and attitudinal loyalty among Greek recreational skiers. *European Sport Management Quarterly*, 8(3), 247–264.
<https://doi.org/10.1080/16184740802224175>
- Alexandris, K., Kouthouris, C., Funk, D., & Giovani, C. (2009). Segmenting winter sport tourists by motivation: The case of recreational skiers. *Journal of Hospitality Marketing & Management*, 18(5), 480–499. <https://doi.org/10.1080/19368620902950048>
- Alexandris, K., Tsorbatzoudis, C., & Grouios, G. (2002). Perceived constraints on recreational sport participation: Investigating their relationship with intrinsic motivation, extrinsic motivation and amotivation. *Journal of Leisure Research*, 34(3), 233–252.
<https://search.proquest.com/docview/201133011/abstract/FC83224969BD4D4DPQ/1>
- Alshenqeeti, H. (2014). Interviewing as a data collection method: A critical review. *English Linguistics Research*, 3(1), 39. <https://doi.org/10.5430/elr.v3n1p39>
- Bausch, T., & Gartner, W. C. (2020). Winter tourism in the European Alps: Is a new paradigm needed? *Journal of Outdoor Recreation and Tourism*, 31, 100297.
- Berke, E. M., Koepsell, T. D., Moudon, A. V., Hoskins, R. E., & Larson, E. B. (2007). Association of the built environment with physical activity and obesity in older persons. *American Journal of Public Health*, 97(3), 486–492.
- Birchwood, D., Roberts, K., & Pollock, G. (2008). Explaining differences in sport participation rates among young adults: Evidence from the South Caucasus. *European Physical Education Review*, 14(3), 283–298. <https://doi.org/10.1177/1356336X08095667>

- Boo, S., Carruthers, C. P., & Busser, J. A. (2014). The constraints experienced and negotiation strategies attempted by nonparticipants of a festival event. *Journal of Travel & Tourism Marketing, 31*(2), 269-285 <https://doi.org/10.1080/10548408.2014.873317>
- Bourdieu, P., Passeron, J.-C., & Martin, M. de S. (1996). *Academic discourse: Linguistic misunderstanding and professorial power*. Stanford University Press.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Sage.
- Camiré, M. (2016). Benefits, pressures, and challenges of leadership and captaincy in the national hockey league. *Journal of Clinical Sport Psychology, 10*(2), 118–136.
- Canadian Ski Council. (2014). Retrieved May 14, 2024, from <https://www.skicanada.org/wp-content/uploads/2016/01/2014-15-Facts-and-Stats.pdf>
- Carroll, B., & Alexandris, K. (1997). Perception of constraints and strength of motivation: their relationship to recreational sport participation in greece. *Journal of Leisure Research, 29*(3), 279–299. <https://doi.org/10.1080/00222216.1997.11949797>
- Charmaz, K. (2014). Grounded theory in global perspective: Reviews by international researchers. *Qualitative Inquiry, 20*(9), 1074–1084. <https://doi.org/10.1177/1077800414545235>
- Charmaz, K., & Bryant, A. (2019). *The SAGE Handbook of Current Developments in Grounded Theory*. 1–714.
- Chen, A., & Peng, N. (2016). Examining Chinese tourists' nature-based tourism participation behavior: incorporating environmental concern into a constraint-negotiation model. *Tourism Analysis, 21*(2–3), 189–202. <https://doi.org/10.3727/108354216X14559233984737>

- Chen, J. (2000). Cross-cultural differences in travel information acquisition among tourists from three pacific-rim countries. *Journal of Hospitality & Tourism Research*, 24(2), 239–251.
<https://doi.org/10.1177/109634800002400207>
- Chen, S., Xing, X., & Chalip, L. (2022). Planning and implementation of event leveraging strategy: China’s legacy pledge to motivate 300 million people to be involved in winter sport. *Sport Management Review*, 25(5), 771–790.
<https://doi.org/10.1080/14413523.2021.1987737>
- Cho, M., Bonn, M. A., & Brymer, R. A. (2017). A constraint-based approach to wine tourism market segmentation. *Journal of Hospitality & Tourism Research*, 41(4), 415–444.
<https://doi.org/10.1177/1096348014538049>
- Chumney, F. (2012). *Principal Components Analysis, Exploratory Factor Analysis, and Confirmatory Factor Analysis*. 14.
- Corbin, J. M., & Strauss, A. L. (2015). *Basics of qualitative research : techniques and procedures for developing grounded theory* (Fourth edition.). SAGE.
- Crawford, D. W., & Godbey, G. (1987). Reconceptualizing constraints to family leisure. *Leisure Sciences*, 9(2), 119–127. <https://doi.org/10.1080/01490408709512151>
- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences*, 13(4), 309–320.
<https://doi.org/10.1080/01490409109513147>
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.

- Crotts, J. C., & Erdmann, R. (2000). Does national culture influence consumers' evaluation of travel services? A test of Hofstede's model of cross-cultural differences. *Managing Service Quality*, 10(6), 410-419. <https://doi.org/10.1108/09604520010351167>
- Dawson, J., Scott, D., & Havitz, M. (2013). Skier demand and behavioural adaptation to climate change in the US Northeast. *Leisure (Waterloo)*, 37(2), 127-143. <https://doi.org/10.1080/14927713.2013.805037>
- Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227. https://doi.org/10.1207/S15327965PLI1104_01
- Deng, J., Walker, G. J., & Swinnerton, G. (2005). Leisure attitudes: A comparison between Chinese in Canada and Anglo-Canadians. *Leisure/Loisir*, 29(2), 239-273. <https://doi.org/10.1080/14927713.2005.9651331>
- DeSarbo, W. S., Chen, Q., & Blank, A. S. (2017). A parametric constrained segmentation methodology for application in sport marketing. *Customer Needs and Solutions*, 4(4), 37-55. <https://doi.org/10.1007/s40547-017-0086-7>
- Dionigi, R. A., Horton, S., & Baker, J. (2013). Negotiations of the ageing process: Older adults' stories of sports participation. *Sport, Education and Society*, 18(3), 370-387. <https://doi.org/10.1080/13573322.2011.589832>
- Dolnicar, S., Grün, B., Leisch, F., & Schmidt, K. (2014). Required sample sizes for data-driven market segmentation analyses in tourism. *Journal of Travel Research*, 53(3), 296-306. <https://doi.org/10.1177/0047287513496475>
- Dong, E., & Chick, G. (2012). Leisure constraints in six Chinese cities. *Leisure Sciences*, 34(5), 417-435. <https://doi.org/10.1080/01490400.2012.714702>

- Elkins, D. J., Beggs, B. A., & Choutka, E. (2007). The contribution of constraint negotiation to the leisure satisfaction of college students in campus recreational sports. *Recreational Sports Journal*, 31(2), 107–118.
- Faullant, R., Matzler, K., & Füller, J. (2008). A positioning map of skiing areas using customer satisfaction scores. *Journal of Hospitality & Leisure Marketing*, 16(3), 230–245.
<https://doi.org/10.1080/10507050801946833>
- Fife, S. T., & Gossner, J. D. (2024). Deductive qualitative analysis: evaluating, expanding, and refining theory. *International Journal of Qualitative Methods*, 23.
<https://doi.org/10.1177/16094069241244856>
- Freysinger, V. J., & Chen, T. (1993). Leisure and family in China: The impact of culture. *World Leisure & Recreation*, 35(3), 22–24. <https://doi.org/10.1080/10261133.1993.9673864>
- Füller, J., Mühlbacher, H., Matzler, K., & Jawecki, G. (2009). Consumer empowerment through internet-based co-creation. *Journal of Management Information Systems*, 26(3), 71–102.
<https://doi.org/10.2753/MIS0742-1222260303>
- García, J., Lera-López, F., & Suárez, M. J. (2011). Estimation of a structural model of the determinants of the time spent on physical activity and sport: Evidence for Spain. *Journal of Sports Economics*, 12(5), 515–537. <https://doi.org/10.1177/1527002510387080>
- Gibson, H. J. (1998). Sport tourism: A critical analysis of research. *Sport Management Review*, 1(1), 45–76. [https://doi.org/10.1016/S1441-3523\(98\)70099-3](https://doi.org/10.1016/S1441-3523(98)70099-3)
- Gilbert, D., & Hudson, S. (2000). Tourism demand constraints: A skiing participation. *Annals of Tourism Research*, 27(4), 906–925. [https://doi.org/10.1016/S0160-7383\(99\)00110-3](https://doi.org/10.1016/S0160-7383(99)00110-3)
- Glaser, B. G., Strauss, A. L., & Strutzel, E. (1968). The discovery of grounded theory; strategies for qualitative research. *Nursing Research*, 17(4), 364.

- Golob, T. F. (2003). Structural equation modeling for travel behaviour research. *Transportation Research Part B: Methodological*, 37(1), 1–25. [https://doi.org/10.1016/S0191-2615\(01\)00046-7](https://doi.org/10.1016/S0191-2615(01)00046-7)
- Gratton, C., & Jones, I. (2003). Research methods for sports studies. Taylor & Francis Group. <http://ebookcentral.proquest.com/lib/ottawa/detail.action?docID=182283>
- Greedorfer, S. L. (2002). Socialization processes and sport behavior. In *Advances in sport psychology, 2nd ed* (pp. 377–401). Human Kinetics.
- Greenberg, M., & McDonald, S. S. (1989). Successful needs/benefits segmentation: A user's guide. *The Journal of Consumer Marketing*, 6(3), 29. <https://search.proquest.com/docview/220118142/abstract/719DA5BA45814736PQ/1>
- Grima, S., Grima, A., Thalassinou, E., Seychell, S., & Spiteri, J. V. (2017). Theoretical models for sport participation: Literature review. *International Journal of Economics & Business Administration (IJEBA)*, 5(3), 94–116. https://econpapers.repec.org/article/ersijebaa/v_3av_3ay_3a2017_3ai_3a3_3ap_3a94-116.htm
- Guo, T., & Schneider, I. (2015). Measurement properties and cross-cultural equivalence of negotiation with outdoor recreation constraints: An exploratory study. *Journal of Leisure Research*, 47(1), 125-153. <https://doi.org/https://doi.org/10.1080/00222216.2015.11950354>
- Harrison, R. L., & Reilly, T. M. (2011). Mixed methods design in marketing research. *Qualitative Market Research; Bradford*, 14(1), 7–26. <http://dx.doi.org/10.1108/13522751111099300>

- Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation: How many interviews are enough? *Qualitative Health Research*, 27(4), 591–608. <https://doi.org/10.1177/1049732316665344>
- Hillebrand, J. D., & Berg, B. L. (2000). Qualitative research methods for the social sciences [Review of *Qualitative Research Methods for the Social Sciences*]. *Teaching Sociology*, 28(1), 87–90. American Sociological Association. <https://doi.org/10.2307/1319429>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Huang, W.-J., Ramshaw, G., & Norman, W. C. (2016). Homecoming or tourism? Diaspora tourism experience of second-generation immigrants. *Tourism Geographies*, 18(1), 59–79.
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences*, 23(3), 145–163. <https://doi.org/10.1080/014904001316896846>
- Hudson, S. (2000). The segmentation of potential tourists: Constraint differences between men and women. *Journal of Travel Research*, 38(4), 363–368. <https://doi.org/10.1177/004728750003800404>
- Hudson, S., & Gilbert, D. (2000). Tourism constraints: The neglected dimension in consumer behaviour research. *Journal of Travel & Tourism Marketing*, 8(4), 69–78. https://doi.org/10.1300/J073v08n04_05

Hudson, S., Hinch, T., Walker, G., & Simpson, B. (2010). Constraints to sport tourism: A cross-cultural analysis. *Journal of Sport & Tourism, 15*(1), 71–88.

<https://doi.org/10.1080/14775081003770991>

Humagain, P., & Singleton, P. A. (2023). Exploring tourists' motivations, constraints, and negotiations regarding outdoor recreation trips during COVID-19 through a focus group study. *Journal of Outdoor Recreation and Tourism, 41*, 100626.

<https://doi.org/10.1016/j.jort.2023.100626>

Hungenberg, E., Gray, D., Gould, J., & Stotlar, D. (2016). An examination of motives underlying active sport tourist behavior: A market segmentation approach. *Journal of Sport & Tourism, 20*(2), 81–101. <https://doi.org/10.1080/14775085.2016.1189845>

Ito, E., Kono, S., & Walker, G. J. (2020). Development of cross-culturally informed leisure-time physical activity constraint and constraint negotiation typologies: The Case of Japanese and Euro-Canadian Adults. *Leisure Sciences, 42*(5–6), 411–429.

<https://doi.org/10.1080/01490400.2018.1446064>

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: from theory to practice. *Field Methods, 18*(1), 3–20.

<https://doi.org/10.1177/1525822X05282260>

Jackson, E. L., & Rucks, V. C. (1995). Negotiation of leisure constraints by junior-high and high-school students: An exploratory Study. *Journal of Leisure Research, 27*(1), 85–105.

<https://doi.org/10.1080/00222216.1995.11969978>

Jackson, E. L., Crawford, D. W., & Godbey, G. (1993). Negotiation of leisure constraints.

Leisure Sciences, 15(1), 1–11. <https://doi.org/10.1080/01490409309513182>

- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112–133.
<https://doi.org/10.1177/1558689806298224>
- Kaplan, D. (2009). *Structural equation modeling: Foundations and extensions* (2nd ed.). Sage Publications, Inc.
- Kay, T., & Jackson, G. (1991). Leisure despite constraint: The impact of leisure constraints on leisure participation. *Journal of Leisure Research; Arlington, Va., Etc.*, 23(4).
<https://search.proquest.com/docview/1308689946/citation/74D9F2CE072541E8PQ/1>
- Kim, D., Pan, Y., & Park, H. (1998). High-versus low-context culture: A comparison of Chinese, Korean, and American cultures. *Psychology & Marketing*, 15(6), 507–521.
[https://doi.org/10.1002/\(SICI\)1520-6793\(199809\)15:6<507::AID-MAR4>3.0.CO;2-A](https://doi.org/10.1002/(SICI)1520-6793(199809)15:6<507::AID-MAR4>3.0.CO;2-A)
- Kim, Y. K., & Trail, G. (2010). Constraints and motivators: A new model to explain sport consumer behaviour. *Journal of Sport Management*, 24(2), 190–210.
<https://doi.org/10.1123/jsm.24.2.190>
- Kock, N. (2019). From composites to factors: Bridging the gap between PLS and covariance-based structural equation modelling. *Information Systems Journal*, 29(3), 674–706.
<https://doi.org/10.1111/isj.12228>
- Kono, S., Ito, E., & Loucks-Atkinson, A. (2021). The measurement model of leisure constraint negotiation in leisure-time physical activity context: Reflective or formative? *Journal of Leisure Research*, 52(1), 120–127. <https://doi.org/https://doi.org/10.1080/00222216.2020.1745720>
- Kono, S., Ito, E., Walker, G. J., & Gui, J. (2020). Predictive power of leisure constraint-negotiation models within the leisure-time physical activity context: A partial least

- squares structural equation modeling approach. *Journal of Leisure Research*, *51*(3), 325–347. <https://doi.org/https://doi.org/10.1080/00222216.2019.1687266>
- Landauer, M., Pröbstl, U., & Haider, W. (2012). Managing cross-country skiing destinations under the conditions of climate change – Scenarios for destinations in Austria and Finland. *Tourism Management*, *33*(4), 741–751.
<https://doi.org/10.1016/j.tourman.2011.08.007>
- Lera-López, F., & Rapún-Gárate, M. (2007). The demand for sport: Sport consumption and participation models. *Journal of Sport Management*, *21*(1), 103–122.
<https://doi.org/10.1123/jsm.21.1.103>
- Li, M. Z., & Stodolska, M. (2007). Working for a dream and living for the future: Leisure constraints and negotiation strategies among Chinese international graduate students. *Leisure (Waterloo)*, *31*(1), 105–132. <https://doi.org/10.1080/14927713.2007.9651375>
- Loucks-Atkinson, A., & Mannell, R. C. (2007). Role of self-efficacy in the constraints negotiation process: The case of individuals with fibromyalgia syndrome. *Leisure Sciences*, *29*(1), 19–36. <https://doi.org/10.1080/01490400600983313>
- Lyu, S. O., & Lee, H. (2013). Market segmentation of golf event spectators using leisure benefits. *Journal of Travel & Tourism Marketing*, *30*(3), 186–200.
<https://doi.org/10.1080/10548408.2013.774913>
- Lyu, S. O., & Lee, H. (2016). Latent demand for recreation participation and leisure constraints negotiation process: Evidence from Korean people with disabilities. *Journal of Leisure Research*, *48*(5), 431–449. <https://doi.org/https://doi.org/10.18666/JLR-2016-V48-I5-6511>

- Ma, S. M., Tan, Y., & Ma, S. C. (2012). Testing a structural model of psychological well-being, leisure negotiation, and leisure participation with Taiwanese college students. *Leisure Sciences*, *34*(1), 55–71. <https://doi.org/10.1080/01490400.2012.633855>
- Matzler, K., Füller, J., Renzl, B., Herting, S., & Späth, S. (2008). Customer satisfaction with alpine ski areas: The moderating effects of personal, situational, and product factors. *Journal of Travel Research*, *46*(4), 403–413. <https://doi.org/10.1177/0047287507312401>
- Mueller, J. T., Landon, A. C., & Graefe, A. R. (2019). Modelling the role of social identity in constraint negotiation for ultra-endurance gravel cycling. *Journal of Leisure Research*, *50*(2), 81–106. <https://doi.org/10.1080/00222216.2018.1561167>
- Mullin, B. J., Hardy, S., & Sutton, W. A. (2014). *Sport marketing* (Fourth edition.). Human Kinetics.
- Peng, Y., Yin, P., & Matzler, K. (2022). Analysis of destination images in the emerging ski market: The case study in the host city of the 2022 Beijing Winter Olympic Games. *Sustainability*, *14*(1), 555. <https://doi.org/10.3390/su14010555>
- Perdue, R. (1996). Target market selection and marketing strategy: The Colorado downhill skiing industry. *Journal of Travel Research*, *34*(4), 39–46. <https://doi.org/10.1177/004728759603400406>
- Powers, A., Simons, J., & Velotta, C. (2019). The role of family and peers in adolescent leisure activity participation. *Journal of Leisure Research*, *51*(2), 210-228. <https://doi.org/10.1080/00222216.2019.1567663>
- Priporas, C.-V., Vassiliadis, C. A., Bellou, V., & Andronikidis, A. (2015). Exploring the constraint profile of winter sports resort tourist segments. *Journal of Travel Research*, *54*(5), 659–671. <https://doi.org/10.1177/0047287514528285>

Raymore, L. A. (2002). Facilitators to Leisure. *Journal of Leisure Research*, 34(1), 37–51.

<https://doi.org/10.1080/00222216.2002.11949959>

Reisinger, Y., & Turner, L. (2003). *Cross-Cultural Behaviour in Tourism: Concepts and Analysis*. Taylor & Francis Group.

<http://ebookcentral.proquest.com/lib/ottawa/detail.action?docID=294570>

Rutty, M., Scott, D., Johnson, P., Jover, E., Pons, M., & Steiger, R. (2015). Behavioural adaptation of skiers to climatic variability and change in Ontario, Canada. *Journal of Outdoor Recreation and Tourism*, 11, 13–21.

Shank, M. D., & Lyberger, M. R. (2015). *Sports marketing : a strategic perspective* (5th edition.). Routledge.

Shaw, S. M., Bonen, A., & McCabe, J. F. (1991). Do more constraints mean less leisure? examining the relationship between constraints and participation. *Journal of Leisure Research; Arlington, Va., Etc.*, 23(4).

<https://search.proquest.com/docview/1308689933/citation/597B4918A234A77PQ/1>

Son, J. S., Chen, G., Liechty, T., Janke, M. C., West, S. T., Wong, J. D., & Naar, J. J. (2021). The role of facilitators in the constraint negotiation of leisure-time physical activity. *Leisure Sciences*, 1–20. <https://doi.org/10.1080/01490400.2021.1919253>

Son, J. S., Kerstetter, D. L., & Mowen, A. J. (2009). Illuminating identity and health in the constraint negotiation of leisure-time physical activity in mid to late life. *Journal of Park & Recreation Administration*, 27(3), 96-115.

Son, J. S., Mowen, A. J., & Kerstetter, D. L. (2008). Testing alternative leisure constraint negotiation models: an extension of hubbard and mannell's study. *Leisure Sciences*, 30(3), 198–216. <https://doi.org/10.1080/01490400802017308>

Stanis, S. a. W., Schneider, I. E., & Russell, K. C. (2009). Leisure time physical activity of park visitors: retesting constraint models in adoption and maintenance stages. *Leisure Sciences*, 31(3), 287–304. <https://doi.org/10.1080/01490400902837886>

Statistics Canada. (2013). Sports participation 2010, Canada. Retrieved from

http://publications.gc.ca/collections/collection_2013/pc-ch/CH24-1-2012-eng.pdf

Stodolska, M. (2015). Recreation for all: Providing leisure and recreation services in multi-ethnic communities. *World Leisure Journal*, 57(2), 89–103.

<https://doi.org/10.1080/16078055.2015.1040621>

Stodolska, M., Sharaievska, I., Tainsky, S., & Ryan, A. (2014). Minority youth participation in an organized sport program: needs, motivations, and facilitators. *Journal of Leisure Research*, 46(5), 612–634. <https://doi.org/10.1080/00222216.2014.11950345>

Szromek, A. R., Zemla, M., & Hadzik, A. (2012). Multidimensional segmentation of Polish ski resorts visitors. *Journal of Tourism Challenges and Trends; Bucharest*, 5(1), 41–55.

Taks, M., & Scheerder, J. (2006). Youth sports participation styles and market segmentation profiles: Evidence and applications. *European Sport Management Quarterly*, 6(2), 85–

121. <https://doi.org/10.1080/16184740600954080>

Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: A systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, 9(1), Article 1.

<https://doi.org/10.1186/1479-5868-9-78>

Tsiotsou, R. (2006). Using visit frequency to segment ski resorts customers. *Journal of Vacation Marketing*, 12(1), 15–26. <https://doi.org/10.1177/1356766706059029>

- Vanat, L. (2022). 2022 *International report on snow & mountain tourism*. <https://de.cdn-website.com/64e34689550d402aa147af5bbc27524d/files/uploaded/RM-world-report-2022.pdf>
- Vassiliadis, C. A., Bellou, V., Priporas, C.-V., & Andronikidis, A. (2018). Exploring the negotiation thesis application among ski resort tourists: A segmentation approach. *Journal of Hospitality & Tourism Research*, 42(5), 716–739. <https://doi.org/10.1177/1096348015597030>
- Walker, G. J., & Wang, X. (2008). The meaning of leisure for Chinese/Canadians. *Leisure Sciences*, 31(1), 1–18.
- Wang, H., & Zhang, Q. (2010). The influence of cultural factors on sports consumption: A case study of Chinese sports consumers. *Journal of Contemporary Sports Studies*, 1(2), 75–90. <https://www.sport-studies.com/jcss/010201>
- Wang, J., & Stringer, L. A. (2000). The impact of taoism on Chinese leisure. *World Leisure Journal*, 42(3), 33–41. <https://doi.org/10.1080/04419057.2000.9674194>
- Wang, X., Zhang, J. J., Song, G., & Wan, X. (2020). Push and pull factors influencing the winter sport tourists in China: The case of leisure skiers. *SAGE Open*, 10(2), 2158244020938739. <https://doi.org/10.1177/2158244020938739>
- White, D. D. (2008). A structural model of leisure constraints negotiation in outdoor recreation. *Leisure Sciences*, 30(4), 342–359. <https://doi.org/10.1080/01490400802165131>
- Wilhelm Stanis, S. A., Schneider, I. E., & Russell, K. C. (2009). leisure time physical activity of park visitors: Retesting constraint models in adoption and maintenance stages. *Leisure Sciences*, 31(3), 287–304. <https://doi.org/10.1080/01490400902837886>

- Williams, P. W., & Basford, R. (1992). Segmenting downhill skiing's latent demand markets. *The American Behavioral Scientist; Princeton, N.J.*, 36(2).
<https://search.proquest.com/docview/1306756040/citation/65EFC4C00F1A48C6PQ/1>
- Williams, P. W., & Lattey, C. (1994). Skiing constraints for women. *Journal of Travel Research*, 33(2), 21–25. <https://doi.org/10.1177/004728759403300204>
- Williams, P., & Fidgeon, P. R. (2000). Addressing participation constraint: A case study of potential skiers. *Tourism Management*, 21(4), 379–393. [https://doi.org/10.1016/S0261-5177\(99\)00083-7](https://doi.org/10.1016/S0261-5177(99)00083-7)
- Won, D., & Hwang, S. (2009). Factors influencing the college skiers and snowboarders' choice of a ski destination in Korea: A conjoint study. *Managing Leisure*, 14(1), 17–27.
<https://doi.org/10.1080/13606710802551197>
- Wright, K. B. (2005). Researching internet-based populations: advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication : JCMC.*, 10(3), 00–00.
<https://doi.org/10.1111/j.1083-6101.2005.tb00259.x>
- Wu, B. (2023). *China Ski Industry White Book*.
- Xie, L., & Ritchie, B. W. (2019). The motivation, constraint, behavior relationship: A holistic approach for understanding international student leisure travelers. *Journal of Vacation Marketing*, 25(1), 111–129. <https://doi.org/10.1177/1356766717750421>
- Yang, Y., Macintosh, E., & Xing, X. (2024). Examining the relationship among constraints, facilitators and ski participation in the host city of the 2022 Winter Olympics. *International Journal of Sports Marketing and Sponsorship*, 25(4), 802–821.
<https://doi.org/10.1108/IJSMS-10-2023-0218>

Zhou, W., Qiu, Y., Tian, H., & Xu, J. (2021). Women runners in China: constraints negotiation process of serious leisure. *International Journal of Environmental Research and Public Health*, 19(1), 214. <https://doi.org/10.3390/ijerph19010214>

Chapter II

Examining the Relationship among Constraints, Facilitators, and Ski Participation in the Host City of the 2022 Winter Olympics

Yang, Y., MacIntosh, E., & Xing, X. (2024). Examining the relationship among constraints, facilitators and ski participation in the host city of the 2022 Winter Olympics. *International Journal of Sports Marketing & Sponsorship*, 25(4), 802–821.
<https://doi.org/10.1108/IJSMS-10-2023-0218>

Abstract

Purpose: The study investigates the constraints and facilitators influencing skiing participation in Beijing. This research includes three segments based on the frequency of skiing participation (i.e., non-, low-frequency, and high-frequency skiers). By doing so, the study offers an enhanced understanding of the Chinese skiing market. It unveils insights that assist industry professionals in effectively addressing their customers' diverse needs and expectations.

Design/methodology/approach: An online survey was developed based on prior research and consisted of four sections: (1) skiing participation, (2) constraints, (3) facilitators, and (4) demographics. Items in the constraint and facilitator scale were measured using a 7-point Likert scale. A total of 409 participants completed the survey. The participants included 137 non-skiers, 134 low-frequency skiers, and 138 high-frequency skiers.

Findings: Through exploratory factor analysis, three constructs emerged: general constraints, facilitators, and learning constraints. As expected, facilitators were a positive predictor of skiing participation. Importantly, the emergent construct of learning constraints was a negative predictor of skiing and yet, the construct of general constraints was insignificant. Furthermore, the three segments differ significantly in household status, income, and education level.

Originality/value: These results support previous research, noting the relevance of the dimensions of facilitators and learning constraints in skiing participation. The findings point to the need for ski resorts in Beijing to offer instructional sessions for beginners so they may become familiar with skiing fundamentals and enhance their confidence, particularly among non-skiers and low-frequency skiers.

Keywords Ski Participation, Beijing Ski Market, Winter Sports Market, Ski Market Segmentation

Introduction

The Beijing 2022 Olympic Winter Games stand out as a prominent example of government-led initiatives to foster participation in winter sports (Chen *et al.*, 2022). It is also noteworthy that the efforts by Chinese governmental agencies to promote engagement in winter sports peaked in the years leading up to the Games (Wang *et al.*, 2020). As such, the event organizer's commitment to engage 300 million people in winter sports activities was achieved before the Games took place. However, there was a notable decline in the number of skier visits to domestic resorts during the first ski season following the Games. Wu (2023) said only 19.83 million people visited the resorts, marking a 7.94% decrease compared to the previous year. Although the decline in skier visits was largely attributed to the surge in coronavirus infections following the cessation of COVID-19 control policies by the Chinese government at the end of 2022, it also highlighted the broader hurdle of fostering skiing engagement in China. Generally, the Chinese people were unfamiliar with the sport, with many individuals not equipped with the necessary gear and attire for participation (Wang *et al.*, 2020).

The academic literature has highlighted several essential determinants that influence skiing participation, including demographic variables (Williams & Fidgeon, 2000), sociocultural aspects (e.g., cultural norms, language, religious beliefs, education), (Füller & Matzler, 2008), intrapersonal factors (Hungenberg *et al.*, 2016; Alexandris *et al.*, 2017), interpersonal factors (Alexandris *et al.*, 2011; Williams & Basford, 1992), and structural factors (Matzler *et al.*, 2008; Faullant *et al.*, 2008; Konu *et al.*, 2011; Gilbert & Hudson, 2000). While some research compares the behaviour of sports participation across nations, there's a lack of substantial research on the skiing side of consumer behaviour and the effects of constraints and facilitators in China in particular.

Research has considered how people decide to participate in sports, including the negotiation between constraints, motivation, and attitudes (e.g., Alexandris *et al.*, 2006, 2011, 2013). Previous research employing constraint theory has illustrated the inconsistent association between constraint variables and sports participation (Alexandris *et al.*, 2011; Alexandris & Carroll, 1997; Keshkar *et al.*, 2012). Hence, the link between constraints, facilitators, and the resulting behaviour in downhill skiing remains ambiguous. This lack of clarity is partly due to the absence of a foundational framework to steer the research on constraints and facilitators within the field of sport management (Kim & Trail, 2010). Additionally, sports participation research must also consider the non-user category to help determine what may influence their decision to take up a sport.

To address these gaps, this study examines the effects of skiing constraints and facilitators on participation within the emergent Chinese market to glean a more comprehensive understanding of consumer interest in winter sports. To gain a further appreciation of this nascent skiing market, we compare constraints, facilitators, and demographics of three distinctive segments (e.g., non-, low-, and high-frequency skiers).

Literature Review

Constraints in Skiing Participation

Constraints are the factors that “inhibit participation and enjoyment in leisure” (Jackson, 1993, p. 273). The concept of constraints, originally put forward by Crawford and Godbey in 1987, categorizes them into intrapersonal, interpersonal, and structural types (see Alexandris *et al.*, 2017). Intrapersonal constraints are related to individual psychological states and traits and, according to Crawford *et al.* (1991), are the key predictors of participation. Prior studies have suggested that internal psychological factors such as a lack of interest, preference for alternative

activities, and the perception that skiing is neither enjoyable nor glamorous (serve as primary impediments that prevent non-skiers from participating in downhill skiing (Gilbert & Hudson, 2000; Alexandris et al., 2011). The perception of danger or perceived risk of skiing has emerged as the most prominent internal constraint that affects both non-skiers and skiers alike (Williams & Basford, 1992; Gilbert & Hudson, 2000; Williams & Fidgeon, 2000). Another important intrapersonal factor is learning (prior knowledge), a complex mental process (that involves the integration of all mental functions to solve the problem of acquiring products or services and resolving a situation (Batkoska & Koseska, 2012). It allows consumers to use their stored information and memory to create new knowledge, which they can apply to their present and future behaviour (Batkoska & Koseska, 2012). Won et al. (2021) utilized an expanded version of the model of goal-directed behaviour (i.e., a consumer decision-making framework that builds upon the theory of reasoned action and planned behaviour) to study participants' sustained intent to engage in sports. Their research underscored the significant role of prior knowledge in shaping attitudes and intentions to participate. In research on adolescent engagement in new sports, Bae et al. (2020) discovered a significant correlation between prior knowledge and attitude and behavioural intention. Similarly, Park et al. (2004) found that for older adults, pre-existing knowledge directly impacted their attitude toward exercise and indirectly affected their intention to exercise. Yao et al. (2022) indicated that the sports and learning factor encompasses the desire for both physical and mental well-being, understanding the lifestyle associated with the sport, and acquiring knowledge and skills related to that sport. In the skiing context, the learning constraint was an important internal restriction. Despite some past skiing research indicating a lack of knowledge of how to (learn) skiing was the important factor in constraint non-skiers and low-frequency skiers, there have been relatively few attempts so far to understand learning

constraints in skiing consumer behaviour research (Williams & Fidgeon, 2000). Overcoming the learning constraints may be critical for skiing participation, particularly in the introduction phase.

Interpersonal constraints, on the other hand, consider social interactions. A person might face interpersonal constraints in leisure activities involving others if they struggle to find an appropriate companion for these activities (see Crawford & Godbey, 1987). A person's reference groups also impact participation (e.g., lack of a partner, insufficient ability level to join others) (Gilbert & Hudson, 2000). More specifically, parental duty and the mindset of family members were significant obstacles to skiing participation (Williams & Basford, 1992; Williams & Fidgeon, 2000; Alexandris et al., 2011).

Structural constraints are external factors independent of an individual's personal characteristics, as Crawford and Godbey's foundational 1987 study established. There is a substantial social class gap in sports participation according to past research (e.g., income, education, age, gender, occupation) (Williams & Fidgeon, 2000; Scheerder et al., 2002). For most people, skiing is still considered a luxury and expensive activity that necessitates a significant financial investment for participants (Taks & Scheerder, 2006). Skiers are also highly limited by cost constraints (e.g., cost of equipment, lift tickets, transportation, and lodging fees), which can influence participants' overall satisfaction (Faullant et al., 2008).

Earlier studies predominantly suggested that encountering such constraints led to complete non-participation (Alexandris & Carroll, 1997). In contrast, findings by Hudson and Gilbert (2000) indicated that both regular and occasional skiers reported experiencing high levels of constraints. Jackson et al. (1993) proposed that these constraints might not necessarily lead to complete non-participation but rather could result in varying levels of participation frequency. Furthermore, earlier research identified a weak correlation between the perception of constraints

and the resulting behaviour patterns (e.g., Alexandris et al., 2011; Alexandris & Carroll, 1997). While Alexandris and Carroll (1997) demonstrated that intrapersonal constraints negatively influence sports participation, it appears that structural and interpersonal constraints do not have a significant effect. Consequently, the complexity of measuring different types of sports participation, especially in a diverse and extensive population, has been a notable challenge in comprehensively exploring the connection between constraints and sports participation. Although prior research has highlighted the critical role of constraints in affecting intention and attitudes of participation in downhill skiing, as noted, the specific impact of these constraints on the frequency of skiing participation in Beijing, a new ski market, remains unclear.

Facilitators in Skiing Participation

Introduced by Raymore (2002), facilitators are “factors that are assumed by researchers and perceived or experienced by individuals to enable or promote the formation of leisure preferences and to encourage or enhance participation” (p. 39). In essence, a facilitator serves as a condition that fosters engagement and active participation in sports and/or recreational pursuits. These facilitators are categorized into intrapersonal, interpersonal, or situational categories (Raymore, 2002). At a broad level, facilitators include factors that draw individuals to such behaviours, like promotional activities, media influence, market demand variables, and specific feature preferences (Kim & Trail, 2010). Motivation functions at the intrapersonal level. It has been defined as “an internal force that directs behaviour toward the fulfillment of needs” (Shank & Lyberger, 2015, p. 146). Motivation involves the perception of demand throughout the consumer decision process, which stimulates the development of a willingness to purchase or actualize buying behaviour (Iso-Ahola et al., 1999). While motivation is often centred on internal desires, other facilitators are used to purport external factors that enable or enhance the appeal of

sports consumption (Kim & Trail, 2010; Silva & Correia, 2008). In the skiing context, previous research has established several intrapersonal facilitators that play an important role in stimulating participants' interest and participation in skiing. For instance, motivations such as enjoyment and opportunities for self-improvement can enable further participation (Hungenberg et al., 2016; Faullant et al., 2008; Füller & Matzler, 2008). Studies have found that travel exploration, destination attributes, stress relief, competitive desire, physical fitness, and skill mastery are all intrapersonal facilitators that stimulate skier participation (Hungenberg et al., 2016).

Although past research has demonstrated the significant role of motivations as facilitators in influencing skiing participation, it rarely accounts for other possible facilitators that may facilitate skiing participation. Raymore (2002) described interpersonal facilitators as encompassing both individuals and groups that promote and facilitate engagement in leisure activities, which may include peer influence and parental involvement. In skiing, family is also considered an important interpersonal facilitator of sports participation (Alexandris et al., 2011). Structural facilitators refer to institutions, organizations, societal norms, and belief systems that shape preferences for leisure activities and participation in sports (Raymore, 2002). An emerging body of research has indicated that culture is imperative when considering participation in sports, which has a profound and lasting influence on an individual (Birchwood et al., 2008; Van Tuyckom & Scheerder, 2010). To enhance skiing participation among Chinese, grasping the broad range of factors influencing consumer behaviour is imperative. This study aims to achieve this by delving into the motivations driving skiing participation and the important facilitators contributing to participation. Thus, our research includes an examination of these facilitators within the context of skiing participation in Beijing.

Ski Segmentation

Marketing segmentation is the primary method for identifying target demographics and comprehending their attributes, requirements, and preferences. Dolnicar et al. (2012) highlight that marketing segmentation assists tourism businesses and destinations in pinpointing tourist groups with shared characteristics, facilitating the development of tailored marketing strategies. However, as Kotler et al. (2010) noted, there is no flawless method for market segmentation. Nonetheless, the most commonly employed criteria in sports marketing include demographics, psychographics, product benefits, and product usage segments in terms of Shank & Lyberger (2015). Research on the skiing market has demonstrated that skiing preferences are impacted by various demographic characteristics such as gender and age (Matzler et al., 2008; Faullant et al., 2008; Tangeland et al., 2013), psychographics (e.g., lifestyle; Cho et al., 2017; Bichler & Pikkemaat, 2021; MacIntosh et al., 2013; Xiao et al., 2022), product benefits (Hungenberg et al., 2016; Konu et al., 2011; Yao et al., 2021), and product usage (frequency of skiing; Szromek et al., 2012; Faullant et al., 2008), all of which can be served as bases for segmentation.

In terms of demographic segmentation in past skiing research, age, the quality, and safety of slopes were key factors for skiers aged 50 and older to a far greater extent than in the young (12-34) and middle-aged (35-49) groups (Matzler et al., 2008). For people under 25, the price was the important factor, whereas for the older target group, the price, well-being, and accessibility factors mostly affected their overall satisfaction (Faullant et al., 2008). Chinese skiers aged 41 to 65 prioritized slope conditions, snow quality, and wait times when selecting a ski resort. In contrast, those aged 19 to 40 were more interested in the slope scenery, while those under 18 had the highest expectations for training programs, course features, and safety measures (see Wang et al., 2020).

Regarding psychographic segmentation, Xiao et al. (2022) examined the perceived value of ski tourists with three distinct customer segments: those seeking comfort, price-sensitive individuals, and those prioritizing safety. It was found that comfort-seeking skiers typically possess more extensive skiing experience, with many having purchased ski equipment and tending to stay longer. As a result, these individuals prioritized the quality of facilities and services in their skiing experience, unlike price-sensitive and safety-oriented skiers. Furthermore, this type of skier generally has a higher income level. Additionally, women comprised a higher proportion of safety-oriented segments, indicating that females place a greater emphasis on safety than males. Price-sensitive skiers exhibit a moderate income level, while safety-oriented skiers possess the lowest income levels among the three groups (Xiao et al., 2022).

Usage segmentation profiles of consumers are based on how much they purchase or how frequently they use a service or participate in a sport. For winter sports, one of the most commonly used segmentation methods is the frequency of participation (Szromek et al., 2012). Tjørve et al. (2018) stressed the significance of understanding the differences between first-time and repeat visitors in effectively marketing Norwegian ski resorts. Their study reveals that repeat visitors tend to be loyal to resorts and value specific aspects of the skiing experience, such as well-maintained slopes and short lift lines. On the other hand, first-time visitors prioritize price and the overall skiing experience and rely more on recommendations from acquaintances. Gilbert and Hudson (2000) categorized participants into three groups based on their skiing experience per season: less than one time, one to two times (beginners), three to 10 times (intermediates), and 11 or more times (advanced). Similarly, Wang et al. (2020) classified Chinese participants into three groups based on their skiing frequency: less than five times (low-frequency skiers), six to 10 times (medium-frequency skiers), and more than 11 times (high-

frequency skiers). Wang et al. (2020) found that high-frequency skiers in China, who participated in skiing more than 10 times per year, placed greater emphasis on factors such as slope conditions, wait times, resort accessibility, safety measures, and course features compared to other groups. Despite the study's valuable insights, it did not differentiate between non-skiers and skiers. Non-users, however, may represent a significant marketing opportunity for many goods, and research should aim to uncover the constraints and facilitators of this segment (Hudson & Gilbert, 2000).

Hypothetical Model

Theoretical findings from the extant literature suggest that skiing participation behaviour is negatively influenced by constraints and positively influenced by facilitators. However, there is a dearth of research within an emergent market context like Beijing. Moreover, non-skiers have received little attention in past research. Based on the conceptual background provided in the literature review, there is a reason to believe in the existence of a relationship between these variables. Hence, in this study we posit the following hypotheses:

Hypothesis (H1). There is a positive relationship between facilitators and skiing participation among residents in Beijing.

Hypothesis (H2). There is a negative relationship between constraints and skiing participation among residents in Beijing.

Hypothesis (H3). Prior skiing knowledge (learning constraints) negatively influences skiing participation among residents in Beijing.

Method

Participants and Sampling

In order to investigate the downhill skiing consumption behaviour in Beijing, this study applied an online questionnaire method. Ethics was obtained from the University's Office of Research Ethics and Integrity. To aid in the study, Le Survey (i.e., an online survey platform in Beijing) was used to monitor the required number (150 in each of three groups: non-skiers, low-frequency skiers, and high-frequency skiers based on statistical power for analyses) until the number of participants was reached. Qualification criteria (specifically, the requirement for respondents to live in Beijing) and attention checks at different points in the survey were employed to ensure data accuracy. Participants who failed to meet the qualification standards or did not pass the attention-check questions were excluded from the analysis. This study applies Wang et al. (2020) and Szromek et al. (2012) suggestions, using non-users followed by low-frequency and high-frequency skiers.

The questionnaires were distributed in Beijing (the host city of the 2022 Olympic Winter Games). The population for the current study were residents over 18 years of age and residing in Beijing. The survey took about 10 minutes to complete. No incentive was provided. The data collection began on November 1st, 2021, and concluded on February 1st, 2022, just a few days before the Beijing 2022 Winter Olympics opening ceremony on February 4th, 2022. A total of 409 participants completed the survey. More specifically and based on our segmentation (i.e., 137 non-skiers completed the survey (33.5%, who did not go skiing in the previous winter season), 134 low-frequency skiers (32.8%) (i.e., skied before up to 2 days in the previous winter season), and 138 high-frequency skiers (33.7%) (i.e., skied 3 or more days in the previous winter season). Demographic information can be found in Table 1.

Table 1

Demographics Characteristics of Participants

	%	n = 409
Gender		
Woman	30.3	124
Man	69.7	285
Age		
18-34	80.4	329
35 and older	19.6	80
Occupation		
Full time employed	82.9	339
Part time, not employed, and other	17.1	70
Annual Household income after Tax		
Less than 149,999 RMB	41.3	169
150,000 RMB or more	58.7	240
Household status		
Single without children	31.5	129
Married without children	22.5	92
Married with children	46	188
Education level		
College / Trade school degree or less	24	98
Undergraduate and Graduate degree	76	311

Source: Created by author

Research Instrument

In the context of this study, the skiing participation is the dependent variable (i.e., the variable to be explained), with the constraining and facilitating factors as the independent variables (i.e., the determinants). Given no established scale specifically measuring constraints and facilitators in skiing participation in China, items included in this study were carefully selected from past relevant studies. The questionnaire was comprised of four sections (totaling 29 items): (1) Ski profile (4 items); (2) Constraints (12 items); (3) Facilitators (7 items); (4) Demographic information (6 items, e.g., gender, age, occupation, income, household status, and education level). Constraints and facilitators were measured with a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The original questionnaire was written in

English and was translated into Chinese by one Chinese doctoral student and one Chinese professor with a high level of English proficiency. The back-translated version was reviewed and modified by the authorship team. A pilot study was first conducted with native language people in Beijing, minor adjustments were made to clarify some of the wording. Descriptive statistics for the constraint and facilitator items can be found in Table 2.

Table 2

Descriptive Statistics and Measurement Properties

Variables/items	α/λ	Mean	SD	CR	AVE
Learning Constraints	$\alpha = .85$			-6.09	.549
(1) Skiing is too difficult to learn	.79	3.60	1.88		
(2) I (still) do not know how to participate in skiing	.78	3.85	1.74		
(3) Skiing makes me feel embarrassed	.75	3.17	1.76		
General Constraints	$\alpha = .88$			1.937	.632
(1) Skiing is too dangerous (removed)	-.59	2.45	1.46		
(2) I do not feel confident	.572	4.41	1.70		
(3) Downhill skiing environment is unsafe	.83	3.86	1.65		
(4) Skiing is too physically demanding	.83	4.23	1.60		
(5) Skiing leads to injuries	.81	3.48	1.57		
(6) My family does not like skiing	.70	3.77	1.59		
(7) Skiing is too expensive	.52	3.01	1.60		
(8) Skiing is not part of my culture (removed)	.34	3.12	1.61		
(9) Financially I cannot afford to participate in skiing	.59	3.28	1.62		
Facilitators	$\alpha = 0.91$			4.578	.399
(1) Downhill skiing helps me to release tension	.80	5.30	1.40		
(2) Downhill skiing is more worthwhile than spending time on other leisure activities	.78	5.14	1.39		
(3) Downhill skiing is exciting	.77	5.67	1.31		
(4) Downhill skiing increases my feeling of self-worth	.81	5.21	1.36		
(5) Downhill skiing is fun for me	.82	5.53	1.36		
(6) I want to spend time with family	.66	5.27	1.43		
(7) Downhill skiing is part of my culture	.68	4.94	1.43		

Note (s): λ = standardized factor loadings; CR = composite reliability; AVE = average variance extracted. Rate how much you agree with each statement: Scale from 1 = strongly disagree to 7 = strongly agree

Source: Created by author

Level of Ski Participation

Three questions were used to gauge the respondents' level of ski participation. First, the respondents were asked to self-identify as a non-skier (i.e., those who never skied), a former skier (i.e., who had skied before but stopped skiing), or a current skier. Second, those who had participated in skiing were asked to self-identify their skill level, ranging from beginner to intermediate to excellent. Third, they were asked to report the frequency of skiing in the previous winter season, ranging from less than one day, one to two days, three to 10 days, and 11 days or more. The three questions were similar to those in previous studies measuring skiing participation (e.g., Gilbert & Hudson, 2000).

Constraints Scale

The constraint scale in this study incorporated elements from prior research on downhill skiing. It examined various dimensions of constraints, drawing from established scholarly work. Learning-related constraints, such as feelings of embarrassment, difficulty in learning, and lack of skiing knowledge (cited in Williams & Fidgeon, 2000; Alexandris et al., 2011) were included in the current study. Other general constraints scale was derived from past skiing research, including lack of confidence, physical demands, risk of injuries, and perceived danger (cited in Williams & Basford, 1992; Williams & Fidgeon, 2000). Interpersonal constraints focused on family and cultural factors, investigating attitudes such as family disinterest in skiing and cultural disconnect with the sport (cited in Alexandris et al., 2011; Gilbert & Hudson, 2000; Hudson & Gilbert, 2000). Structural constraints encompassed financial concerns, highlighting the high cost of skiing and financial constraints to participation (cited in Williams & Fidgeon, 2000), as well as environmental factors, including concerns about the safety of downhill skiing environments

(e.g., Matzler et al., 2008). Each of these aspects was included in the survey to comprehensively understand the constraints to downhill skiing participation.

Facilitators Scale

The facilitator's scale in this study also integrated items from previous research to measure facilitators in downhill skiing. It included motivational factors such as downhill skiing to alleviate tension (referenced in Hungenberg et al., 2016), its perceived value over other activities (cited in Alexandris et al., 2011), and the excitement it offers. Additionally, the scale measured how downhill skiing enhances self-worth and provides a fun feeling (cited in Alexandris et al., 2011). The external facilitators are cited from Füller & Matzler (2008), including I want to spend time with family. The cultural relevance of skiing was also a considered external facilitator (Hungenberg et al., 2016; Alexandris et al., 2011). These aspects were carefully chosen to comprehensively evaluate the encouraging factors that draw individuals towards downhill skiing.

Data Analysis Plan

The data from the 409 participants were analyzed using SPSS (version 25; IBM, Armonk, NY) and AMOS (version 26; IBM) statistics software. First, an exploratory factor analysis (EFA) was tested to build the factorial structure of the skiing participation scale. This was followed by reliability analysis for all three dimensions: general constraints, learning constraints, and facilitators.

Next, a confirmatory factor analysis (CFA) was conducted to investigate whether the factor structure can be replicated. CFA is great for testing hypotheses about how indicators (observed data) relate to factors and how factors relate to each other (Chumney, 2012). A CFA examined the measurement model's convergence and discriminant validity.

Third, the Structural Equation Modeling (SEM) was applied to examine the effects of the constraints and facilitators on participation in downhill skiing participation. Several model fit indices and their criteria were used to examine the dataset: goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), Tucker-Lewis Index (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA).

A Kruskal-Wallis H test was also performed to assess median differences in facilitators and constraints among skiers categorized by their skiing frequency. This test, a nonparametric alternative to one-way ANOVA, is suitable for comparing two or more groups without needing the data to meet ANOVA's assumptions of normal distribution and equal variances (MacFarland & Yates, 2016). For post hoc analysis, Dunn's procedure with a Bonferroni correction was utilized to manage multiple comparisons, setting statistical significance at $p < .001$. This approach allows for effective evaluation of group differences when data distribution challenges prevent the use of parametric tests.

Finally, a Chi-square test was conducted to explore the relationship between skiing frequency (non-skiers, low-frequency skiers, and high-frequency skiers) and demographic factors, comparing actual to expected frequencies to identify any associations (McHugh, 2013). This test is ideal for categorical data, not requiring equal variances across groups. Following significant Chi-square results, post hoc z-tests were used to examine differences between specific group pairs, with a Bonferroni adjustment for multiple comparisons. These z-tests helped identify where significant differences occurred, serving as an effective method for detailed analysis after the initial Chi-square test indicated a general association.

Approaches to Control the Method Bias

Podsakoff et al. (2012) suggested that method biases can significantly affect the reliability and validity of survey items and the relationships between underlying dimensions. Researchers have highlighted two main approaches to mitigate method biases (Podsakoff et al., 2012; Williams et al., 2010). One approach focuses on careful research design to prevent biases during data collection, while the other approach involves employing statistical techniques to address method biases post-data collection (Tehseen et al., 2017). We incorporated a combination of Likert scale and open-ended questions for both constraints and facilitators items. We also carefully refined scale items, ensuring they were free from double-barreled statements and complex syntax prior to survey distribution, as Tehseen et al. (2017) recommended. All measurement scales in our study were adopted from the aforementioned study. Before processing the data analysis, Harman's Single-Factor Test was applied to investigate the Common Method Variance (CMV). A Harman one-factor analysis is a post-data collection procedure conducted to examine if a single factor explains the variance in the data (Chang et al., 2010). The results showed 19 separate factors explaining 64.63% of the overall variance. The analysis revealed three components (i.e., learning constraints, general constraints, and facilitators) with eigenvalues greater than one, explaining 46.09%, 12.35%, and 6.20% of the total variance, respectively (Table 2 and Table 3). Hence, these findings indicate that CMV is not a concern in this study.

Table 3

Harman's Single-Factor Test

Extraction Method: Principal Component Analysis

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.76	46.09	46.09	8.76	46.09	46.09
2	2.35	12.35	58.44	2.35	12.35	58.44

3	1.18	6.20	64.63	1.18	6.20	64.63
4	0.89	4.66	69.29			
5	0.78	4.08	73.38			
6	0.60	3.14	76.51			
7	0.56	2.94	79.46			
8	0.53	2.77	82.22			
9	0.51	2.66	84.88			
10	0.45	2.36	87.24			
11	0.39	2.03	89.27			
12	0.35	1.84	91.11			
13	0.31	1.61	92.72			
14	0.30	1.55	94.28			
15	0.27	1.44	95.71			
16	0.25	1.31	97.02			
17	0.21	1.12	98.14			
18	0.19	0.99	99.13			
19	0.17	0.87	100.00			

Source: Created by author

Results

Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA) with Principal Component Analysis (PCA) was run on the 19 items measuring constraints and facilitators. Two items (e.g., Skiing is too dangerous, and skiing is not part of my culture) were excluded because these factors did not belong to one dimension alone and had factor loadings below the 0.5 cut-off point. The overall Kaiser-Meyer-Olkin (KMO) measure was 0.93. Bartlett's test of sphericity was statistically significant ($p < .001$), indicating that the data was suitable for an EFA. Cronbach's alpha scores of the three factors were: general constraints $\alpha = .88$ (including seven items); facilitators $\alpha = .91$ (including seven items); and learning constraints $\alpha = .85$ (including three items).

Confirmatory Factor Analysis (CFA)

The factor loadings ranged from .02 to .77, and AVE values ranged from .40 to .63, showing acceptable convergent validity (see Table 2). The correlation coefficients among the

constructs were smaller than their respective squared root of AVEs, supporting the discriminant validity of the latent constructs. The result of the first model by CFA showed good fit indices ($\chi^2/pdf = 4.01$, CFI = .92; TLI = .900; RMSEA = .086) (see Figure 1).

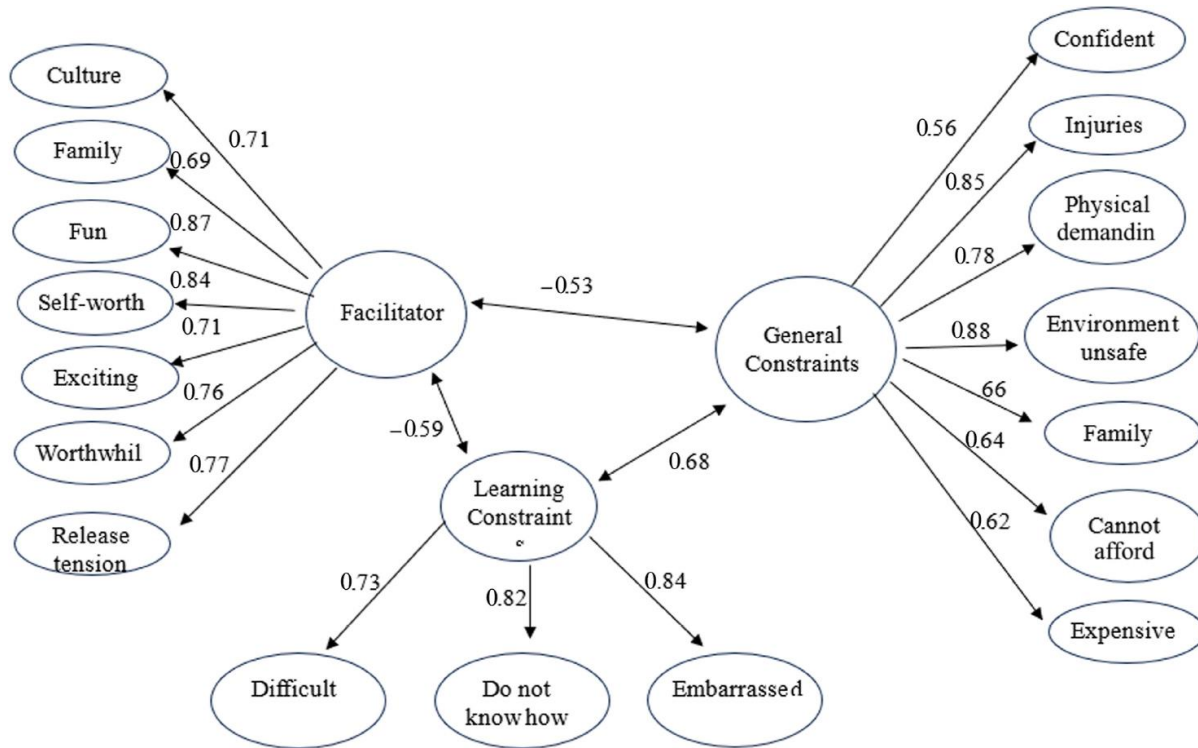


Figure 1 The first model's CFA result showed reasonable model fit indices ($\chi^2/pdf = 4.01$, CFI = .91; Tucker-Lewis index [TLI] = .900; RMSEA = .08; SRMR = .08).

Structural Equation Modeling (SEM)

We conducted SEM to investigate the relationships among learning constraints, facilitators, general constraints, and skiing participation (see Figure 2). The result of the model showed acceptable fit indices ($\chi^2/df = 3.77$, CFI = .90; TLI = .87; RMSEA = .08). The standardized path coefficients indicated that there was a significant positive relationship between facilitators and skiing participation ($\beta = 4.58$, SE = .037, $p < .001$). The direct effect of learning constraints on skiing participation was negative and significant ($\beta = -6.09$, SE = .038, $p < .001$).

A positive yet insignificant relationship exists between general constraints and skiing participation ($\beta = 1.94$, $SE = .031$, $p = .053$).

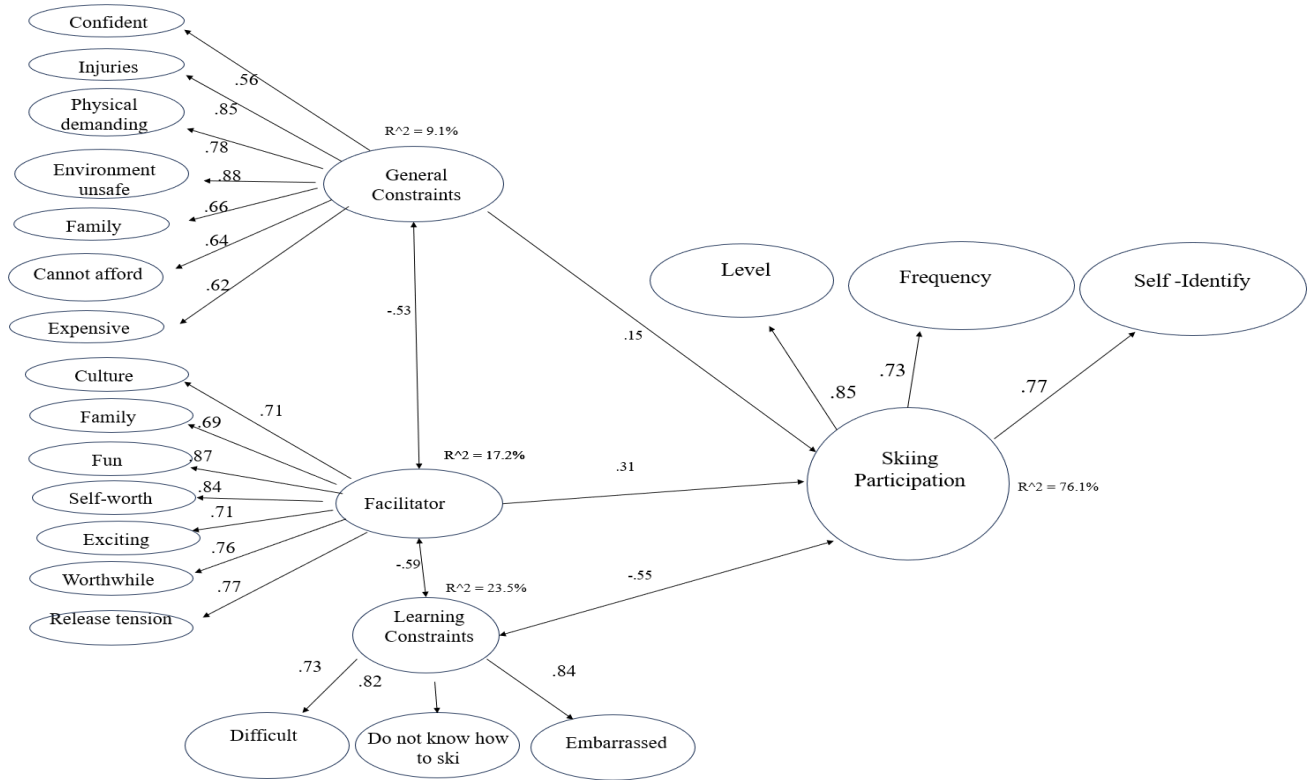


Figure 2 A path model with facilitators, constraints, and skiing participation was used. The model's results showed reasonable model fit indices ($\chi^2/pdf = 3.77$, $CFI = .89$; Tucker-Lewis index [TLI] = .87; RMSEA = .08).

Description of the Three Segments

General constraints median scores were statistically significantly different between the different frequencies of skiing participation groups, $\chi^2(2) = 31.72$, $p < .001$. Subsequently, pairwise comparisons were conducted with a Bonferroni correction applied for multiple comparisons and statistical significance set at the $p < .001$ level. This post hoc analysis revealed

statistically significant differences in general constraints median scores between the high-frequency skiers (Mdn = 3.43) and non-skiers (Mdn = 4.29) ($p = .000$) and low-frequency skiers (Mdn = 3.57) and non-skiers ($p = .001$), but not between the low-frequency skiers and high-frequency skiers. Facilitators' scores were statistically significantly different between the different frequencies of skiing participation groups, $\chi^2(2) = 71.04$, $p < .001$. This post hoc analysis revealed statistically significant differences in facilitators scores between the high-frequency skiers (Mdn = 6) and non-skiers (Mdn = 4.86) ($p = .000$) and low-frequency skiers (Mdn = 5.43) and non-skiers ($p = .000$), and low-frequency skiers and high-frequency skiers ($p = .000$). Learning constraints scores were statistically significantly different between the different frequency of skiing participation groups, $\chi^2(2) = 97.838$, $p < .001$. This post hoc analysis revealed statistically significant differences in learning constraints median scores between the high-frequency skiers (Mdn = 2.5) and non-skiers (Mdn = 4.67) ($p = .000$) and low-frequency skiers (Mdn = 3.33) and non-skiers ($p = .000$), and low-frequency skiers and high-frequency skiers ($p = .003$) (see Table 4).

Table 4

Description of the Three Segments

Ski Participation		Learning Constraints	Facilitators	General Constraints
	$\chi^2(2)$	97.838	71.044	31.722
	Sig	$P < .001$	$P < .001$	$P < .001$
Non-skiers	N	137	137	137
	Std. Deviation	1.51	1.27	1.38
	Median	4.67	4.86	4.29
	Mean	4.58	4.71	4.24
Low-frequency skiers	N	134	134	134
	Std. Deviation	1.26	0.95	0.99
	Median	3.33	5.43	3.57
	Mean	3.30	5.34	3.59
High-frequency skiers	N	138	138	138
	Std. Deviation	1.28	0.76	1.10
	Median	2.50	6.00	3.43
	Mean	2.74	5.84	3.33

Note (s): χ^2 = Indicates that we are comparing to a χ^2 -distribution; (2) = Indicates the degrees of freedom, which is $k - 1$ (where k = number of groups); $\chi^2(2)$ = Indicates the obtained value of the H-statistic (obtained H-value); Sig = Indicates the probability of obtaining the observed H-value given the null hypothesis is true.

Source: Created by author

We further examined the differences in demographics across the three segments. A significant association was found between the three segments and household status (i.e., single without a child, married without a child, and married with a child), $p < .001$. There was a statistically significant association between household status (i.e., single without a child, married without a child, and married with a child) and frequency of skiing participation, $\chi^2(4) = 20.66$, $p < .001$. We proceeded with pairwise comparisons using the z-test of two proportions with a Bonferroni correction. It was found that the non-skiers had a higher proportion of single without children (47.3%). The low-frequency skiers had a higher proportion of married without children (44.6%) than the non-skiers ($p < .05$). Notably, the high-frequency skiers had a higher proportion of married with child (39.4%) ($p < .05$) than non-skiers. There was a statistically significant association between household annual income and frequency of skiing participation, $\chi^2(2) = 21.96$, $p < .001$. The high-frequency skiers had a higher proportion of incomes ($p < .05$). There was a statistically significant association between education level and frequency of skiing participation, $\chi^2(2) = 9.08$, $p < .05$. The high-frequency skiers had a higher proportion of undergraduate and graduate degrees (37%) ($p < .05$) than non-skiers (See Table 5).

Table 5

Chi-square Test of Independence between Ski Frequency and Demographics

Measures (in %)	Non-skiers	Low-frequency skiers	High-frequency skiers	Total (%)	Df/X2	Sig
Demographics						
Age					2/5.43	.07
18-34	36.2a	31.6a	32.2a	100		
Older than 35	22.5b	37.5a	40a	100		
Education Level					2/9.082	.01

College/Trade school or less	44.9a	31.6a, b	23.5b	100		
Undergraduate and graduate degree	29.9a	33.1a, b	37b	100		
Gender					2/.149	.93
Male	34a	32.3a	33.7a	100		
Female	32.3a	33.9a	33.9a	100		
Occupation					2/1.06	.59
Full time employed	32.7a	32.4a	34.8a	100		
Part time, not employed, and other	37.1a	34.3a	28.6a	100		
Household Status					4/20.66	.00
Single without child	47.3a	24.8b	27.9b	100		
Married without child	25a	44.6b	30.4a,b	100		
Married with child	28.2a	32.4 a,b	39.4b	100		
Annual Household Income					2/21.96	.00
Less than 149,999 RMB	43.2a	35.5a	21.3b	100		
150,000 or more RMB	26.7a	30.8a	42.5b	100		

Notes: Df = degree of freedom; X² = Pearson Chi-square. If some of the letters are the same and some are different (e.g., for four groups: "a", "b", "b", "c"), there are no statistically significant differences in proportions between the groups with the same letters.

Source: Created by author

Discussion

The current empirical study aimed to investigate the general constraints, learning constraints, and facilitators that affected downhill skiing participation among residents in Beijing. The current study employed diverse levels of skiing frequency and experience among participants, including non-skiers, low-frequency skiers, and high-frequency skiers, corresponding to past study suggestions (e.g., Szromek et al., 2012; Tjørve et al., 2018; Wang et al., 2000). The study found a positive and significant relationship between facilitators and skiing participation (confirmed in H1) and negative relationships between learning constraints and skiing participation (confirmed in H3). The negative relationship between constraints and frequency of participation in skiing was rejected (H2). This suggests that in this new and emergent context, the primary goal of increasing frequent participation should prioritize enhancing facilitators and eliminating the learning constraints.

This study found that those who ski frequently tend to be predominantly married with children, compared to non-skiers. This observation aligns with Faullant et al.'s (2008) and Alexandris et al. (2011) findings. However, it also contrasts results from other studies by Hudson and Gilbert (2000) and Alexandris and Carroll (1997). Specifically, Alexandris & Carroll (1997) noted that married individuals with children face significantly more time-related constraints than their single, childless counterparts, leading to decreased skiing participation. They also suggested that such a decline in participation could be linked to life-cycle shifts, such as the age of those children, affecting decision-making processes. It is worth noting that the current study did not gather data regarding the ages of participants' children, marking an area warranting deeper exploration in future research. The study also provided evidence that frequent skiers had higher education levels and annual household income than low-frequent skiers and non-skiers, corroborating findings of past studies (e.g., Scheerder et al., 2002). Consequently, individuals' educational level and income can be useful in predicting participants and non-participants in skiing.

In addition, the current study did not find a meaningful relationship between general constraints and the frequency of skiing participation. One possible explanation is that the present study did not differentiate between various constraints, such as intrapersonal, interpersonal, and structural constraints. Alexandris et al. (2011) explain that distinct types of constraints may affect various aspects of ski resort attachment differently. For instance, intrapersonal constraints are likely to predominantly impact attachment's functional and emotional dimensions, whereas interpersonal constraints may have a greater influence on the symbolic dimension. Further, the lack of structural constraint measures due to the data collection challenge posed by the COVID-19 pandemic may have also contributed to this non-significant finding. Research has

demonstrated that skiing is too expensive, a key structural constraint (e.g., Jackson, 1993; Jackson & Henderson, 1995; Alexandris & Carroll, 1997; Gilbert & Hudson, 2000; Williams & Fidgeon, 2000). In our study, participants noted that the cost to ski was also prohibitive and acted akin to a structural constraint. Further structural constraints were evident, including the perception that the skiing environment is unsafe. As the data collection occurred immediately before the Beijing 2022 Games, the forceful promotion of skiing participation in the media may make these structural constraints less relevant to skiing participation, resulting in insignificance in our SEM model. This suggests that event leveraging for sports participation built around event hosting (Chalip et al., 2017) can reduce the influence of perceived structural constraints on sports participation. Additionally, the inconsistent relationship between constraints and skiing participation could be attributed to the fact that facing constraints often prompts direct negotiation strategies, potentially lessening their negative impact. Hubbard and Mannell (2001) noted that facing constraints seems to trigger two contrasting dynamics - a direct inhibitory effect caused by the constraints themselves and an enabling effect arising from the negotiation efforts initiated in the response. These latter efforts seem to lessen or counterbalance the adverse impact of the constraints.

Although this study rejects the negative relationship between general constraints and skiing participation, the study uncovered a strong negative correlation between learning constraints and the frequency of participating in skiing, confirming the hypothesis (H3). Factors such as skiing being too difficult to learn, I (still) do not know how to participate in skiing, and skiing makes me feel embarrassed were the main reasons that hindered non-skiers from taking the slope. This finding was supported by Yao et al. (2021), Williams & Fidgeon (2000), and Won et al. (2021). It should also be noted that the learning constraints target mainly intrapersonal

constraints (perceived self-skill). This seems to be a particularly important consideration for a new market where winter sport is not a part of the traditional norm for sport participation.

This study revealed a positive correlation between facilitators and skiing participation, further validating Hypothesis 1. It was found that skiing is exciting ($M = 5.67$), skiing is fun ($M = 5.53$), and skiing helps to release tension ($M = 5.30$) were the main factors that stimulate skiing participation. Although some research (e.g., Hubbard & Mannell, 2001) has reported that motivation indirectly influences sports participation, there have been limited attempts to link facilitators with the frequency of skiing empirically. The results of this study did not fully support Hubbard and Mannell's findings. Facilitators were shown to have directly affected skiing participation.

Theoretical Contributions

To the best of our understanding, this research is among the select few that incorporate segments of non-skiers within the Beijing skiing context. Examination of a non-user group, often neglected in consumer behaviour research, enables for an understanding of facilitators and constraints that could inform marketing strategies for increasing participation in this sport. Considering the ski participation market in Beijing is new and emergent and predominantly composed of non-participants initially (Li et al., 2020; Wang et al., 2020), this study offers insights into this specific segment which presents significant potential for growing the sport.

From a theoretical perspective, the model proposed in this study offers researchers a conceptual framework to explore the interplay between learning constraints and facilitators that affect individuals' decisions to engage in skiing. This research is one of the limited studies to comprehensively address skiing participation in Beijing by integrating constraints and facilitators within a single model. Particularly in a developing market like Beijing, addressing learning

constraints holds significant importance, shedding light on crucial factors to consider regarding behavioural outcomes.

Practical Contributions

The study uncovered that the primary deterrent to skiing participation was the presence of various learning constraints. The lack of personal skiing experience and knowledge among non-skiers presents a significant challenge for marketers seeking to expand their customer base. These findings suggest that personalized facilitation strategies and individualized learning approaches may play a critical role in encouraging participation in skiing. As hypothesized in H3, prior knowledge (learning constraints) associated with skiing was significantly associated with participation. Crafting and disseminating compelling and educational content on social media may enhance skiing knowledge among non-skiers and low-frequency skiers in non-traditional markets like Beijing. This could involve the distribution of tips on skiing, details about ski resorts, tutorial videos for beginners, and other forms of knowledge regarding the sport. For skiing, resorts should provide learning opportunities for new skiers to develop their knowledge and skills, such as training seminars that would account for a range of proficiency levels. This may help lower risk perception. A personalized approach to teaching that considers each beginner's unique facilitators and constraints may help marketers better promote participation in skiing. The need to acquire the skills necessary to ski presents a significant challenge to the growth of the skiing market, particularly among non-skiers and low-frequency skiers. Thus, the government's efforts to promote winter sports participation and the emergence of a skiing market have highlighted the need to address this learning constraint to sustain the growth of the skiing industry. Providing family packages in ski resorts may also be an effective strategy to attract a wider audience by addressing families' specific desires and requirements.

This tactic could result in a rise in visitors, enhanced levels of satisfaction, and favourable recommendations through word-of-mouth, all of which are believed to be essential for the prosperity of the sport of skiing. Ultimately, resorts must invest in both skiers and non-skiers.

Limitations and Future Research Directions

Some limitations need to be acknowledged. Moreover, this study did not measure many structural items, such as slope quality, snow quality, and weather conditions. One challenge in measuring these items is rapid fluctuation in conditions. Due to the COVID-19 pandemic during the data collection in Beijing, all participants may reduce the frequency of participating in skiing. Not only might recalling participation be challenging, but the issue is that structural constraints may change a lot. Further research is recommended to investigate the structural factors that may predict skiing behaviour. Furthermore, the intentions of skiing participation warrant more in-depth analysis in future studies. The prediction of behaviour by participation frequency is inconsistent, presenting challenges for the practical application of this research in scenarios typically faced by practitioners. The exploration of a more comprehensive model that accounts for skiing participation rates and a commitment to skiing itself for winter sport and leisure preference may provide significant theoretical and practical implications. Vallerand and Losier (1999) posited that behavioural outcomes are linked with the choice of behaviour, complexity, intensity, behavioural intentions, task persistence, and the resulting performance. This study focused solely on the intensity (frequency) as the dependent variable, showcasing evidence of its direct link to learning constraints and facilitators.

Conclusion

By conducting an in-depth analysis of the factors that aid or hinder participation in downhill skiing among these distinct segments, the study provided a nuanced understanding of

the Chinese skiing market and uncovered valuable insights that can help industry professionals effectively cater to their customers' diverse needs and expectations. The implications of this study are far-reaching for the development of the skiing industry in Beijing. By identifying the key drivers and constraints to participation in downhill skiing, industry players can take proactive measures to create a conducive environment for growth and meet the evolving needs of their customers. The results of this study can inform critical decisions such as marketing strategies, product development, and other aspects of the industry, ultimately contributing to the long-term success and sustainability of the Chinese skiing market.

References

- Alexandris, K., & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: Results from a study in Greece. *Leisure Studies*, 16(2), 107–125. <https://doi.org/10.1080/026143697375449>
- Alexandris, K., Du, J., Funk, D., & Theodorakis, N. D. (2017). Leisure constraints and the psychological continuum model: A study among recreational mountain skiers. *Leisure Studies*, 36(5), 670–683. <https://doi.org/10.1080/02614367.2016.1263871>
- Alexandris, K., Funk, D. C., & Pritchard, M. (2011). The impact of constraints on motivation, activity attachment, and skier intentions to continue. *Journal of Leisure Research; Urbana*, 43(1), 56–79.
<http://search.proquest.com/docview/925645616/abstract/38D2D4C4512546F4PQ/1>
- Alexandris, K., Kouthouris, C., & Meligdis, A. (2006). Increasing customers' loyalty in a skiing resort: The contribution of place attachment and service quality. *International Journal of Contemporary Hospitality Management*, 18(5), 414–425.
<https://doi.org/10.1108/09596110610673547>
- Alexandris, K., Kouthouris, C., Funk, D., & Tziouma, O. (2013). The use of negotiation strategies among recreational participants with different involvement levels: The case of recreational swimmers. *Leisure Studies*, 32(3), 299–317.
<https://doi.org/10.1080/02614367.2012.660189>
- Bae, J., Lu-Anderson, D., Fujimoto, J., & Richelieu, A. (2015). East Asian college consumer decision-making styles for sport products. *Sport, Business and Management; Bingley*, 5(3), 259–275. <http://dx.doi.org.proxy.bib.uottawa.ca/10.1108/SBM-11-2012-0051>

Batkoska, L., & Koseska, E. (2012). The impact of cognitive learning on consumer behaviour.

Procedia - Social and Behavioural Sciences, 44, 70–77.

<https://doi.org/10.1016/j.sbspro.2012.05.006>

Bichler, B. F., & Pikkemaat, B. (2021). Winter sports tourism to urban destinations: Identifying potential and comparing motivational differences across skier groups. *Journal of Outdoor Recreation and Tourism*, 36, 100420. <https://doi.org/10.1016/j.jort.2021.100420>

Recreation and Tourism, 36, 100420. <https://doi.org/10.1016/j.jort.2021.100420>

Birchwood, D., Roberts, K., & Pollock, G. (2008). Explaining differences in sport participation rates among young adults: Evidence from the South Caucasus. *European Physical Education Review*, 14(3), 283–298. <https://doi.org/10.1177/1356336X08095667>

Education Review, 14(3), 283–298. <https://doi.org/10.1177/1356336X08095667>

Chalip, L., Green, B. C., Taks, M., & Misener, L. (2017). Creating sport participation from sport events: making it happen. *International Journal of Sport Policy and Politics*, 9(2), 257–

276. <https://doi.org/10.1080/19406940.2016.1257496>

Chang, S. J., Van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, 41(2), 178–184.

Chumney, F. (2012). Principal components analysis, exploratory factor analysis, and confirmatory factor analysis. University of West Georgia. Retrieved from

https://www.westga.edu/academics/research/vrc/assets/docs/PCA-EFA-CFA_EssayChumney_09282012.pdf

Crawford, D. W., & Godbey, G. (1987). Reconceptualizing constraints to family leisure. *Leisure Sciences*, 9(2), 119–127. <https://doi.org/10.1080/01490408709512151>

- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences*, *13*(4), 309–320.
<https://doi.org/10.1080/01490409109513147>
- Dolnicar, S., Kaiser, S., Lazarevski, K., & Leisch, F. (2012). Biclustering: Overcoming Data Dimensionality Problems in Market Segmentation. *Journal of Travel Research*, *51*(1), 41–49. <https://doi.org/10.1177/0047287510394192>
- Faullant, R., Matzler, K., & Füller, J. (2008). A positioning map of skiing areas using customer satisfaction scores. *Journal of Hospitality & Leisure Marketing*, *16*(3), 230–245.
<https://doi.org/10.1080/10507050801946833>
- Gilbert, D., & Hudson, S. (2000). Tourism demand constraints: A skiing participation. *Annals of Tourism Research*, *27*(4), 906–925. [https://doi.org/10.1016/S0160-7383\(99\)00110-3](https://doi.org/10.1016/S0160-7383(99)00110-3)
- Gratton, C., & Jones, D. I. (2004). *Research Methods for Sports Studies : Third Edition (First edition.)*. Routledge.
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences*, *23*(3), 145–163. <https://doi.org/10.1080/014904001316896846>
- Hudson, S., & Gilbert, D. (2000). Tourism constraints: The neglected dimension in consumer behaviour research. *Journal of Travel & Tourism Marketing*, *8*(4), 69–78.
https://doi.org/10.1300/J073v08n04_05
- Hungenberg, E., Gray, D., Gould, J., & Stotlar, D. (2016). An examination of motives underlying active sport tourist behaviour: A market segmentation approach. *Journal of Sport & Tourism*, *20*(2), 81–101. <https://doi.org/10.1080/14775085.2016.1189845>

- Iso-Ahola, S. E., Verde, D. L., & Graefe, A. R. (1989). Perceived competence as a mediator of the relationship between high risk sports participation and self-esteem. *Journal of Leisure Research; Arlington, Va., Etc.*, 21(1).
<https://search.proquest.com/docview/1308689732/citation/6585FD1A854C49EDPQ/1>
- Jackson, E. L., & Henderson, K. A. (1995). Gender-based analysis of leisure constraints. *Leisure Sciences*, 17(1), 31–51. <https://doi.org/10.1080/01490409509513241>
- Jackson, E. L., Crawford, D. W., & Godbey, G. (1993). Negotiation of leisure constraints. *Leisure Sciences*, 15(1), 1–11. <https://doi.org/10.1080/01490409309513182>
- Keshkar, S., Ehsani, M., Koozechian, H., Ghasemi, H., & Mohammadi, S. (2012). Examining the hierarchical model of leisure constraints among women in Tehran regarding sports participation. *International Journal of Sport Studies*.
<https://www.semanticscholar.org/paper/Examining-the-hierarchical-model-of-leisure-among-Keshkar-Ehsani/a99f22143e7b880beb3e7aafaaa884f8a29869c7>
- Kim, Y.K., Trail, G. (2010). Constraints and motivators: A new model to explain sport consumer behaviour. *Journal of Sport Management*, 24(2), 190–210,
<https://doi.org/10.1123/jsm.24.2.190>.
- Konu, H., Laukkanen, T., & Komppula, R. (2011). Using ski destination choice criteria to segment Finnish ski resort customers. *Tourism Management*, 32(5), 1096–1105.
<https://doi.org/10.1016/j.tourman.2010.09.010>
- Kotler, P., Bowen, J. T., Baloglu, S., & Morosan, C. (2022). *Marketing for hospitality and tourism* (Eighth edition. Global edition.). Pearson.

- Li, H., Nite, C., Weiller-Abels, K., & Nauright, J. (2020). The development of women's professional ice hockey in China: Leveraging international competition to change institutionalized gender norms. *Sport in Society*, 23(3), 523–538.
- MacFarland, T. W. (2016). *Introduction to Nonparametric Statistics for the Biological Sciences Using R* (1st ed.). Springer Nature. <https://doi.org/10.1007/978-3-319-30634-6>
- MacIntosh, E., Apostolis, N., & Walker, M. (2013). Environmental responsibility: Internal motives and customer expectations of a winter sports provider. *Journal of Sport & Tourism*, 18(2), 99–116. <https://doi.org/10.1080/14775085.2013.838145>
- Matzler, K., Füller, J., Renzl, B., Herting, S., & Späth, S. (2008). Customer satisfaction with alpine ski areas: The moderating effects of personal, situational, and product factors. *Journal of Travel Research*, 46(4), 403–413. <https://doi.org/10.1177/0047287507312401>
- McHugh, M. L. (2013). The Chi-square test of independence. *Biochemia Medica*, 23(2), 143–149. <https://doi.org/10.11613/BM.2013.018>
- Park, S.-H. (2004). Constraints to recreational sport participation for adolescents exposed to internet-related delinquency: Developing marketing strategies for increasing sport participation. *International Journal of Applied Sports Sciences*, 16(1), 41–54.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63(1), 539–569.
- Raymore, L. A. (2002). Facilitators to Leisure. *Journal of Leisure Research*, 34(1), 37–51. <https://doi.org/10.1080/00222216.2002.11949959>
- Shank M. D., & Lyberger M. R. (2015). *Sports marketing: A strategic perspective* (pp.137-169). New York, NY: Routledge.

Shaw, S. M., Bonen, A., & McCabe, J. F. (1991). Do more constraints mean less leisure?

Examining the relationship between constraints and participation. *Journal of Leisure Research; Arlington, Va., Etc.*, 23(4).

<https://search.proquest.com/docview/1308689933/citation/597B4918A234A77PQ/1>

Silva, O., & Correia, A. (2008). Facilitators and constraints in leisure travel participation: The

case of the southeast of Portugal. *International Journal of Culture, Tourism and Hospitality Research*, 2(1), 25–43. <https://doi.org/10.1108/17506180810856121>

Szromek, A. R., Zemla, M., & Hadzik, A. (2012). Multidimensional segmentation of polish ski

resorts visitors. *Journal of Tourism Challenges and Trends; Bucharest*, 5(1), 41–55.

Taks, M., & Scheerder, J. (2006). Youth sports participation styles and market segmentation

profiles: Evidence and applications. *European Sport Management Quarterly*, 6(2), 85–121. <https://doi.org/10.1080/16184740600954080>

Tangeland, T., Aas, Ø., & Odden, A. (2013). The Socio-demographic influence on participation

in outdoor recreation activities – implications for the Norwegian domestic market for nature-based tourism. *Scandinavian Journal of Hospitality and Tourism*, 13(3), 190–207.

<https://doi.org/10.1080/15022250.2013.819171>

Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method

variance: A review of available methods. *Journal of Management Sciences (Karachi)*, 4(2), 142–168. <https://doi.org/10.20547/jms.2014.1704202>

Tjørve, E., Lien, G., & Flognfeldt, T. (2018). Properties of first-time vs. repeat visitors: Lessons

for marketing Norwegian ski resorts. *Current Issues in Tourism*, 21(1), 78–102.

<https://doi.org/10.1080/13683500.2015.1062472>

- Van Tuyckom, C., & Scheerder, J. (2010). Sport for All? Insight into stratification and compensation mechanisms of sporting activity in the 27 European Union member states. *Sport, Education and Society*, 15(4), 495–512.
<https://doi.org/10.1080/13573322.2010.514746>
- Wang, X., Zhang, J. J., Song, G., & Wan, X. (2020). Push and pull factors influencing the winter sport tourists in China: The Case of Leisure Skiers. *SAGE Open*, 10(2), 2158244020938739. <https://doi.org/10.1177/2158244020938739>
- Williams, L. J., Hartman, N., & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive CFA marker technique. *Organizational Research Methods*, 13(3), 477–514.
- Williams, P. W., & Basford, R. (1992). Segmenting downhill skiing's latent demand markets. *The American Behavioural Scientist; Princeton, N.J.*, 36(2).
<https://search.proquest.com/docview/1306756040/citation/65EFC4C00F1A48C6PQ/1>
- Williams, P., & Fidgeon, P. R. (2000). Addressing participation constraint: A case study of potential skiers. *Tourism Management*, 21(4), 379–393. [https://doi.org/10.1016/S0261-5177\(99\)00083-7](https://doi.org/10.1016/S0261-5177(99)00083-7)
- Won, D., Kim, H.-H., & Bae, J.-S. (2021). Predicting continued participation in government-initiated public sports clubs: The role of prior knowledge and awareness through health communications. *International Journal of Environmental Research and Public Health*, 18(13), 7168. <https://doi.org/10.3390/ijerph18137168>
- Wu, B. (2023). *China Ski Industry White Book*.
- Xiao, X., Yaping, L., & Yanqin, L. (2022). Ski tourism experience and market segmentation from the perspective of perceived value: A case study on chongli district of Zhangjiakou.

Journal of Resources and Ecology, 13(4), 655–666. <https://doi.org/10.5814/j.issn.1674-764x.2022.04.011>

Yao, Y., Liu, Y., & Huang, L. (2021). Motivation-based segmentation of yachting tourists in China. *Asia Pacific Journal of Tourism Research*, 26(3), 245–261. <https://doi.org/10.1080/10941665.2020.1851274>

Chapter III

Unravelling the Canadian Ski Market Decline: Exploring Constraints and Facilitators

Affecting Participation Across Different Skier Groups

Yang, Y., & MacIntosh, E. (2024). (In Review). Unravelling the Canadian ski market decline: Exploring constraints and facilitators affecting participation across different skiers' groups. *Managing Sport and Leisure*.

Abstract

Purpose/Rationale: Recent evidence shows declining downhill skiing participation (Canadian Ski Council, 2014-2015; Canadian West Ski Area Association, 2022). Finding ways to counteract this decline is necessary to avoid further negative effects on the ski industry's economic sustainability.

Design/Methodology/Approach: An online survey was created (29 items) to test the leisure constraints model: (1) skiing participation behaviour (four items), (2) constraints (12 items), (3) facilitators (seven items), and (4) demographics (six items).

Findings: The results showed a significant negative relationship between intrapersonal constraints and skiing participation ($\beta = -2.61$, $SE = 1.68$, $p < .01$) and a significant positive relationship between facilitators and skiing participation ($\beta = 8.83$, $SE = .02$, $p < .001$).

Practical Implications: Segmenting the market into different groups makes it possible to predict ski consumer behaviour more effectively.

Research Contribution: This study's findings support previous research and demonstrate that intrapersonal constraints and facilitators are the most important predictors of ski participation behaviour.

Originality/Value: This study provides evidence of interpersonal and structural constraints (e.g., financial factors) and facilitators important for skiers and non-skiers.

Keywords: segmentation, consumer behaviour, sport participation, downhill skiing

Introduction

Although Canada's alpine rates have experienced growth in other periods (i.e., market growth before 1992; see Williams & Fidgeon, 2000), recent evidence has shown declining participation in downhill skiing (i.e., 14% in 1992 to 7% in 2015 (Statistics Canada, 2013; Canadian et al., 2014-2015; Canadian West Ski Area Association, 2022). This is not entirely unexpected, considering the changing climate conditions and the difficulties faced by ski hill operators who rely on extracting natural resources to sustain their winter operations (Bausch & Gartner, 2020; Dawson et al., 2013; Ruddy et al., 2015). It is imperative to identify strategies to mitigate this reduction to prevent additional adverse impacts on the economic viability of the ski market.

Several academic literature regarding constraints to participation in skiing have been published (e.g., Alexandris et al., 2006; Alexandris et al., 2011; Williams & Fidgeon, 2000; Gilbert & Hudson, 2000; Faullant et al., 2008; Füller & Matzler, 2008; Hungenberg et al., 2016; Matzler et al., 2008). Further, Wheeler (2012) and Birchwood et al. (2008) found strong evidence that family cultures underpin individuals' propensities to play sport. These studies examined different determinations in recreation skiing involvement based on gender, age, socio-economic position, race, and other factors. Many past studies investigated the three leisure constraints factors, intrapersonal factors (e.g., Hungenberg et al., 2016; Alexandris et al., 2017), interpersonal factors (e.g., Alexandris et al., 2011; Williams & Basford, 1992), and structural factors (e.g., Matzler et al., 2008; Faullant et al., 2008; Konu et al., 2011; Gilbert & Hudson, 2000). Additionally, facilitators are commonly acknowledged in contemporary downhill skiing research as a significant factor influencing behavioural outcomes (Alexandris et al., 2011 Alexandris et al., 2007). According to Alexandris et al. (2011), a positive correlation exists

between activity attachment and motivation, which aligns with an individual's future skiing behavioural intentions. Since Kim and Trail (2010) claim that consumers evaluate both positive and negative aspects when making decisions, understanding the constraints and the motivations is ultimately important for understanding consumer behaviour. The leisure constraints model is the most often cited in past research; however, few researchers have examined the relationship among facilitators, constraints, and skiing participation in one model.

This study examined the interplay between several factors that promote or hinder downhill skiing participation. This research aimed to respond to the call made by Crawford and Jackson (2005) for studies that test the leisure constraints theory. This study utilized a market segmentation approach. More specifically, the study considered the varying downhill skiing frequency among participants to reveal further differences in non-skiers, low-frequency, and high-frequent skiers. Through a survey-based approach, this research provides a more comprehensive understanding of downhill skiing behaviour, revealing valuable theoretical insights that can help explain why people choose to participate or not in downhill skiing.

Literature Review

Constraints in Skiing Participation

Constraints are “the factors that are assumed by researchers and perceived by individuals to inhibit or prohibit participation and enjoyment in leisure” (Jackson, et al., 1993, p. 273). The concept of leisure constraints theory was first proposed by Crawford and Godbey (1987), which includes intrapersonal, interpersonal, and structural constraints which have gained widespread acceptance in contemporary leisure skiing academic research (e.g., Alexandris et al., 2008; Alexandris et al., 2011; Alexandris et al., 2017; Gilbert & Hudson, 2000).

Intrapersonal constraints refer to internal elements associated with an individual's psychological states and traits and are considered the most influential predictors of engagement in leisure activities (Crawford et al., 1991). Intrapersonal constraints encompass elements such as stress, depression, religiosity, anxiety, perceived self-competence, and personal assessments of the suitability of different leisure pursuits. In skiing research, previous research has indicated that non-participation in downhill skiing can be attributed to intrapersonal constraints, including a lack of interest, the perception that downhill skiing lacks enjoyment and glamour, and a lesser extent well-being (Faullant et al., 2008; Gilbert & Hudson, 2000; Hudson & Gilbert, 2000; Alexandris et al., 2011). The prominent intrapersonal constraint that impacts both non-skiers and skiers is the perception of danger. The research conducted by Alexandris et al. (2008) and Gilbert and Hudson (2000) demonstrated that intrapersonal constraints greatly impacted an individual's choice to begin skiing. According to Williams and Fidgeon (2000), who examined the constraints faced by potential skiers, the most significant factors influencing individuals' decision to start skiing were personal constraints and a lack of awareness about the possible benefits of engaging in the activity. This constraint encompasses various concerns, including moving at excessive speeds, losing balance, sustaining injuries due to inadequate training, fear of heights, and fear of getting injured (Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; Hudson & Gilbert, 2000).

On the other hand, “interpersonal constraints are the consequences of interpersonal interaction or the relationship between individuals’ characteristics” (Crawford & Godbey, 1987, p. 123). For instance, individuals may experience an interpersonal constraint if they lack a partner or friends to participate with them. An individual's reference groups (e.g., interpersonal) influence their degree of engagement, such as the absence of a partner or a perceived lack of

capacity to join others (Gilbert & Hudson, 2000; Hudson & Gilbert, 2000). According to previous research conducted by Williams and Fidgeon (2000), and Alexandris et al. (2011), the negative attitudes of parents and family members were notable constraints that hindered individuals from participating in skiing.

Structural constraints are external elements that persist regardless of an individual's characteristics. These constraints encompass external factors like financial resources, time availability, transportation options, crowd levels, access to information, the quality of ski resorts, and perceptions regarding their management (Crawford & Godbey, 1987). Skiing is seen as an activity that demands substantial financial resources and cultural knowledge from those participating. Previous studies have also indicated the existence of a significant disparity in sports involvement among different socioeconomic classes, as evidenced by factors such as income, education, age, gender, and employment (e.g., Williams & Fidgeon, 2000; Scheerder et al., 2002). Michailidis et al. (2006) explore potential skiers' constraints when deciding whether to participate in the activity. Their research indicates that the cost of downhill skiing, lack of time, and lack of experience are the main constraints to participation. Skiers may encounter significant structural constraints regarding financial obstacles, such as the expenses associated with equipment, lift tickets, transportation, and hotel fees. These cost factors can potentially impact the satisfaction levels of those in downhill skiing activities (Faullant et al., 2008).

Addressing Constraints through Segmentation. While denoting the various types of constraints is helpful, it is also important to consider a segmented approach. Earlier research by Hudson & Gilbert (2000) showed that higher constraints were reported for non-participants yet did not reveal the interplay between constraints and facilitators. Other research has demonstrated weak correlations between an individual's perception of constraints and the ensuing behavioural

consequences (e.g., Alexandris et al., 2011; Alexandris & Carroll, 1997). One possible explanation could be that when faced with constraints, direct negotiations are initiated, which could mitigate the detrimental effects of the constraints, revealing further nuance between segmented groups (Hubbard & Mannell, 2001). Previous research (e.g., Kay & Jackson, 1991; Shaw et al., 1991; Carroll & Alexandris, 1997) has noted the difficulty of establishing an appropriate sports participation or involvement instrument. This may be one of the reasons for a lack of understanding regarding the relationships between segmented markets, something we examine in this study.

Facilitators in Skiing Participation

Facilitators refer to the activating and sustained condition of goal-directed behaviour, helping to enable participation (Kim & Trail, 2010; Ryan & Deci, 2000; Wang et al., 2020; Palmatier et al., 2006). In a conceptual article, Raymore (2002) offered facilitators as a way to understand elements that encourage or support engaging in leisure activities. To comprehend the potential interconnection among facilitators, constraints, and leisure behaviour, it is imperative to delve into the discussion of motivation to establish a cohesive link between these concepts (Raymore, 2002). One theory of motivation that aids in elucidating this relationship is the expectancy-value theory of achievement motivation (Wigfield & Eccles, 2000; Raymore, 2002). In this case, people see value when considering the intrapersonal influences on their behaviour (Raymore, 2002). Motivations are also commonly acknowledged in contemporary downhill skiing research as a significant factor influencing behavioural outcomes (Alexandris et al., 2011; Alexandris et al., 2007). According to Alexandris et al. (2011), a positive correlation exists between activity attachment and motivation, which aligns with an individual's future behavioural intentions. The finding in Alexandris et al. (2002) was investigated by incorporating two specific

variables related to motivation: health and enjoyment. In a subsequent study, Alexandris et al. (2007) employed a mediation analysis to examine the associations between negotiation, intrinsic motivation, and behavioural intentions. The findings offered empirical evidence of the associations between motivations and ski intentions. Other research has also demonstrated that motivation plays a significant role in facilitating new participation in physical activity and sustained engagement in participation (Teixeira et al., 2012).

Skiing research has identified intrapersonal motivators as a significant factor in fostering participants' enthusiasm for downhill skiing. According to Hungenberg et al. (2016), Faullant et al. (2008), and Füller & Matzler (2008), downhill skiing was also shown to be a pleasurable activity for certain individuals, offering chances for personal growth and development. Sirgy et al. (2017) expressed that engagement in leisure activities offers a means to escape the pressures and demands of work, family, or any other sources of stress. Moreover, some individuals were more inclined to seek leisure activities offering freedom and escapism benefits than others (Sirgy et al., 2017; Hallman et al., 2014; Haraszti et al., 2014; Lusby & Anderson, 2010). Findings from prior studies in the field reinforce the correlation between skiing participation and the desire for escapism. Furthermore, Hungenberg et al. (2016) found that other motivational factors were the destination, that participation reduced stress, and that people sought social relationships through their involvement. However, as Raymore (2002) cautioned, when a facilitator is present, that does not always mean that a corresponding constraint has been removed and that a person will engage in the behaviour; it is not that simple. Alexandris et al. (2009) purported that facilitators may aid in a person's engagement in an activity, but there are other key factors in determining behaviour. For instance, Wheeler and Green (2014) found that historical and social aspects passed down through generations within families may help explain behaviour. More recent

studies have highlighted the significant impact of familial culture (interpersonal) on sports involvement, emphasizing its profound and enduring influence on individuals (Birchwood et al., 2008; Van Tuyckom & Scheerder, 2010; Evans & Davies, 2010). Consequently, despite the extensive discourse on constraints and facilitators as a concept and its relationship with behaviour, the framework that consolidates these various characteristics for a comprehensive understanding of skiing participation remains absent. This study aims to address this gap by empirically investigating how we can merge the two dimensions—constraints and facilitators—to comprehend skiing participation more effectively within a segmented market approach.

Hypothetical Model

Based on the conceptual background provided in the literature review, which accounts for constraints and facilitators, there is a reason to believe in a relationship between these variables. Hence, in this study, we posit the following hypotheses to arrive at a greater understanding of downhill skiing participation:

- H1. Facilitators will positively influence skiing participation.*
- H2. Intrapersonal constraints will negatively influence skiing participation.*
- H3. Interpersonal constraints will negatively influence skiing participation.*
- H4. Structural constraints will negatively influence skiing participation.*

Methods

Participants and Procedures

This study applied an online questionnaire method, allowing participants to complete questions about their skiing behaviour at their convenience (Gratton & Jones, 2003). Before the survey was released, a pilot study was conducted with three sports management experts to identify any potential ambiguities in the questions. Minor adjustments were made to clarify some

of the wording. The study was then approved by the University's Office of Research Ethics and Integrity (H-10-21-7401) (see Appendix A). To target the desired population in Vancouver, Canada, 432 participants were recruited using the Qualtrics panel survey comprising 29 items. The participants were divided into three groups: non-skiers (i.e., those who had never skied before), low-frequency skiers (i.e., those who had skied up to 2 days per winter season), and high-frequency skiers (i.e., those who had skied more than 3 days per winter season). The participants were individuals aged 18 or older from Vancouver. Before starting the survey, participants read and signed a consent form indicating their willingness to participate. Completing the survey took approximately 10 minutes.

Based on the segmentation objective, participants included 139 non-skiers (32.2%), 151 low-frequency skiers (35%) and 142 high-frequency skiers (32.9%). The participants ranged in age, gender, education levels, household status, and annual income. The sample comprised 224 males (51.9%) and 208 females (48.1%). Participants aged 18-34 (N = 178, or 41.2%) and 35 and over (N = 254, or 58.8%). Most participants, 290 individuals (67.1%), were employed full-time. The annual household income distribution showed that 79 participants (18.3%) earned less than \$29,999, 163 participants (37.7%) earned \$30,000 to \$79,999, and 190 participants (44%) earned \$80,000 to \$ 100,000. The education levels of the participants varied, with 238 individuals (55.1%) having some university/college/trade school education or less and 194 participants (44.9%) holding undergraduate or graduate degrees (Table 6).

Table 6

Sociodemographic Characteristics of Participation

Sample Characteristic	Percentages	N = 432
Gender		
Woman	48.1	208
Man	51.9	224
Age		

18-34	41.2	178
35 and older	58.8	254
Occupation		
Full time employed	67.1	290
Part time, not employed, and other	32.9	142
Annual Household income after Tax		
Less than \$29,999	18.3	79
\$30,000 to \$79,999	37.7	163
\$80,000 to \$100,000	44.0	190
Household status		
Single without children	31.5	136
Married/partner without children	22.5	97
Single with children	8.8	38
Married/partner with children	37.3	161
Education level		
Some University/college/trade school Education or less	55.1	238
Undergraduate or Graduate degree	44.9	194
Level of ski participation		
Beginner	38.2	112
Intermediate	52.9	155
Excellent	8.9	26
Ski Behaviour		
Non-skiers	32.2	139
Low-frequency skiers	35	151
high-frequency skiers	32.9	142
Self-identify as Downhill skiing participation		
A non-participant	38.9	168
A former participant	30.6	132
A current participant	30.6	132

Research Instrument

The questionnaire was comprised of six sections (totalling 29 items): (1) Ski profile (four items); (2) Intrapersonal constraints (six items); (3) Interpersonal constraints (three items); (4) Structural constraints (three items); (5) Facilitators (seven items); (6) Demographic information (six items). Constraints and facilitators were measured with a 7-point Likert scale, ranging from one (strongly disagree) to seven (strongly agree). Descriptive statistics for the constraint and facilitator items can be found in Table 7.

Table 7

Descriptive Statistics and Measurement Properties

<i>Variables</i>	α /factor loading	Mean	SD	C.R.	AVE
Intrapersonal Constraints	$\alpha = .91$			9.81	.62
Downhill skiing is too difficult to learn	.84	3.45	1.77		
I (still) do not know how to participate in downhill skiing	.83	3.46	1.93		
Downhill skiing is too physically demanding	.81	3.60	1.75		
Downhill skiing is too dangerous	.87	3.57	1.81		
I do not feel confident	.84	3.65	1.87		
Downhill skiing leads to injuries	.83	3.92	1.71		
Interpersonal Constraints	$\alpha = .80$			9.61	.56
Downhill skiing makes me feel embarrassed (in front of others)	.82	2.97	1.81		
Downhill skiing is not part of my culture	.86	3.44	1.75		
My family does not like downhill skiing	.86	3.43	1.72		
Structural Constraints	$\alpha = .77$			7.04	.49
Downhill skiing is too expensive	.85	4.39	1.81		
Downhill skiing environment is unsafe	.85	3.41	1.75		
Financially, I cannot afford to participate in downhill skiing	.77	3.83	1.77		
Facilitators	$\alpha = .92$			10.89	.64
Downhill skiing helps me release tension	.87	4.70	1.60		
Downhill skiing is more worthwhile than spending time on other leisure activities	.84	4.37	1.54		
Downhill skiing is exciting	.82	5.13	1.50		
Downhill skiing increases my feeling of self-worth	.88	4.49	1.60		
Downhill skiing is fun for me	.90	4.95	1.67		
I want to spend time with my family	.70	5.10	1.43		
Downhill skiing is part of my culture	.70	4.30	1.66		

Note. ⁽¹⁾ Rate how much you agree with each statement: Scale from 1 = strongly disagree to 7 = strongly agree

The constraints scale was created for the study based on prior items from past research in skiing (e.g., Alexandris et al., 2011; Hudson & Gilbert, 2000; Gilbert & Hudson, 2000; Williams

& Basford, 1992; Williams & Fidgeon, 2000). Intrapersonal constraints ($\alpha = .91$), such as lack of knowledge of how to ski, physical demands, risk of injury, and perceived danger, were created based on prior research (Williams & Basford, 1992; Williams & Fidgeon, 2000; Hudson & Gilbert, 2000). Interpersonal constraints ($\alpha = .80$), focusing on familial, peers, and cultural aspects, involve attitudes like familial disinterest in skiing and cultural disparities with the sport (Alexandris et al., 2011; Gilbert & Hudson, 2000; Hudson & Gilbert, 2000). As non-skiers lack direct experience with skiing, some of the structural constraints associated with ski resorts may not accurately reflect their perspectives. Therefore, this study primarily focused on financial considerations. Structural constraints ($\alpha = .77$) encompassed items measuring financial considerations, expenses and limitations on participation (noted in Williams & Fidgeon, 2000), as well as the perception of safety in downhill skiing environments (Matzler et al., 2008).

This study's inquiry also incorporated prior research elements to gauge facilitators of downhill skiing. It encompassed factors like skiing's stress-relieving aspect (Hungenberg et al., 2016), its perceived superiority over other activities (cited in Alexandris et al., 2011), and the thrill it provides. Moreover, the scale assessed how skiing boosts self-esteem provides enjoyment, and fosters family bonding. The cultural significance of skiing was another factor considered (Hungenberg et al., 2016; Alexandris et al., 2011). These aspects were selected to assess the facilitators that attract individuals to downhill skiing comprehensively. The measurement achieved satisfactory reliability ($\alpha = .92$).

For the ski profile section, four questions were used to gauge the respondents' level of ski participation. First, the respondents were asked to self-identify as a non-skier (i.e., those who never skied), a former skier (i.e., who had skied before but stopped downhill skiing), or a current skier. Second, skiers were asked to self-identify their skill level, ranging from beginner to

intermediate to excellent. Third, they were asked to report the frequency of downhill skiing in the previous winter, ranging from less than one day, one to two days, three to 10 days, and 11 days or more. The four questions were similar to those in previous studies measuring leisure sport participation, including downhill skiing (e.g., Williams & Fidgeon, 2000; Alexandris et al., 2011; Hudson & Gilbert, 2000). The measurement achieved satisfactory reliability ($\alpha = .81$). Lastly, demographic information was gathered regarding gender, age, occupation, education level, income, household status, and household income. This scale was developed and standardized in the Canadian population and adjusted to be applicable in the context of downhill skiing participation.

Data Analyses Plan

The data from the survey were analyzed using SPSS (version 25) and AMOS (version 26) statistics software. This analysis was based on all 432 participants. SPSS was applied to run frequencies and descriptives for participants' characteristics and each of the variables in the model. We used participation frequency as the standard to separate the group into non-, low-, and high-frequency skiers. Next, confirmatory factor analysis (CFA) was conducted to establish the convergent and discriminant validity of the measurement model. The decision to use CFA instead of exploratory analysis in this study was based on the presence of a well-defined theoretical framework supporting a particular factorial structure. CFA is excellent for testing the relationships between indicators (observed data) and how factors relate (Chumney, 2012). It can be used to compare the fit of various models to determine the best fit for the data (Schreiber et al., 2006) or to compare the fit of a model to data from distinct groups (Chumney, 2012). Next, a Structural Equation Modeling (SEM) was applied to examine the effects of constraints and facilitators on participation in downhill skiing participation. SEM was chosen because it

combined factor and path analysis (Chen, 2011) and could specify a model with unidirectional effects (Golob, 2003). Finally, a Kruskal-Wallis test was performed to investigate differences in median scores for facilitators and constraints among the three groups of skiers. Pairwise comparisons were made using Dunn's (1964) procedure, with a Bonferroni correction applied for multiple comparisons and statistical significance set at the $p < .001$ level. A chi-square test of independence was conducted to examine the relationship among three downhill skiing frequency groups (e.g., non-skiers, low-frequency skiers, and high-frequency skiers) and all demographics. Finally, the standard multiple regression analysis was applied to examine the prediction of three dimensions.

Results

Confirmatory Factor Analysis (CFA)

A confirmatory factor analysis (CFA) was performed to determine if the factor structure could be replicated in the 432 participant dataset. The full measurement model consisted of five constructs, namely intrapersonal constraints ($\alpha = .91$), interpersonal constraints ($\alpha = .80$), structural constraints ($\alpha = .77$), facilitators ($\alpha = .92$), and ski participation ($\alpha = .81$) achieved satisfactory reliability. Examination of Cronbach's alpha demonstrated acceptable reliability of the scales in the survey. The factor loadings ranged from .677 to .868, and AVE values from .57 to .62, demonstrating acceptable convergent validity. The correlation coefficients among the constructs were smaller than their respective squared root of AVEs, supporting the discriminant validity of the latent constructs. The results of the CFA model showed reasonable model fit indices ($\chi^2/df = 4.5$, CFI = .91, TLI = .90, and RMSEA = .08) (see Figure 3). See Table 2 for the breakdown of Cronbach's alpha, average variance extracted (AVE), and correlation matrix of the

study. CFA and the relationships among the five constructs were assessed through structural equation modelling (SEM).

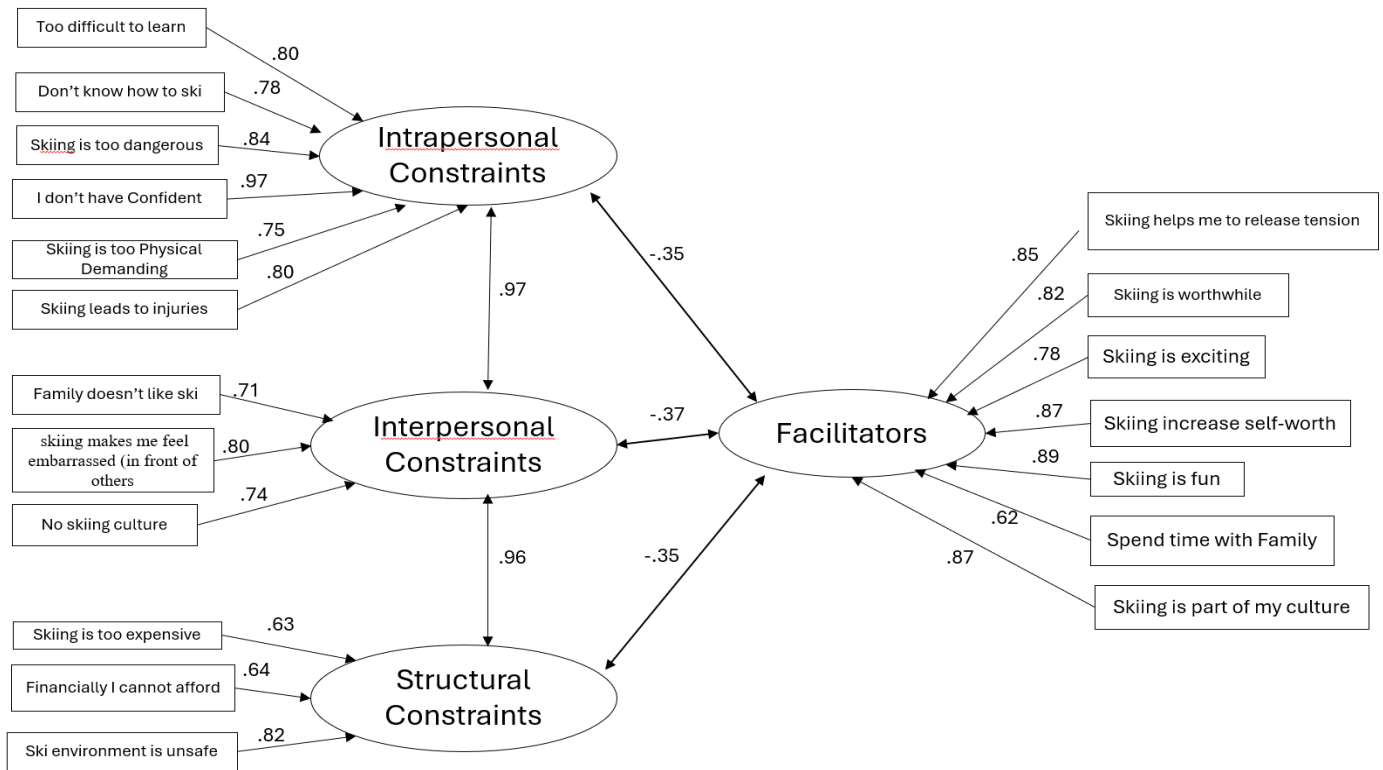


Figure 3 The results of the CFA model showed reasonable mode fit indices, including a χ^2/df value of 4.36, CFI of .91, TLI of .90, and RMSEA of .08

Structural Equation Modeling (SEM)

SEM is a statistical analysis that combines factor analysis and path analysis (Chen, 2011). It was used in this study because it allows for investigating the relationships among constraints, facilitators, and skiing participation. Several model fit indices and their criteria were utilized to assess the model's goodness-of-fit with the given dataset: goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), Tucker-Lewis Index (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA) (Little, 2013). The results of the structural model showed reasonable model fit indices ($X^2/df = 4.2$; CFI = .91; TLI

= .90; RMSEA = .08). The standardized path coefficients indicated a significant negative relationship between intrapersonal constraints and skiing participation ($\beta = -2.61$, $SE = 1.68$, $p < .01$), a significant relationship between facilitators and skiing participation ($\beta = 8.83$, $SE = .02$, $p < .001$). There is a non-significant relationship between interpersonal constraints and skiing participation ($\beta = .16$, $SE = 1.24$, $p = .87$) and a non-significant relationship between structural constraints and skiing participation ($\beta = 1.91$, $SE = 2.72$, $p = .057$) (see Figure 4).

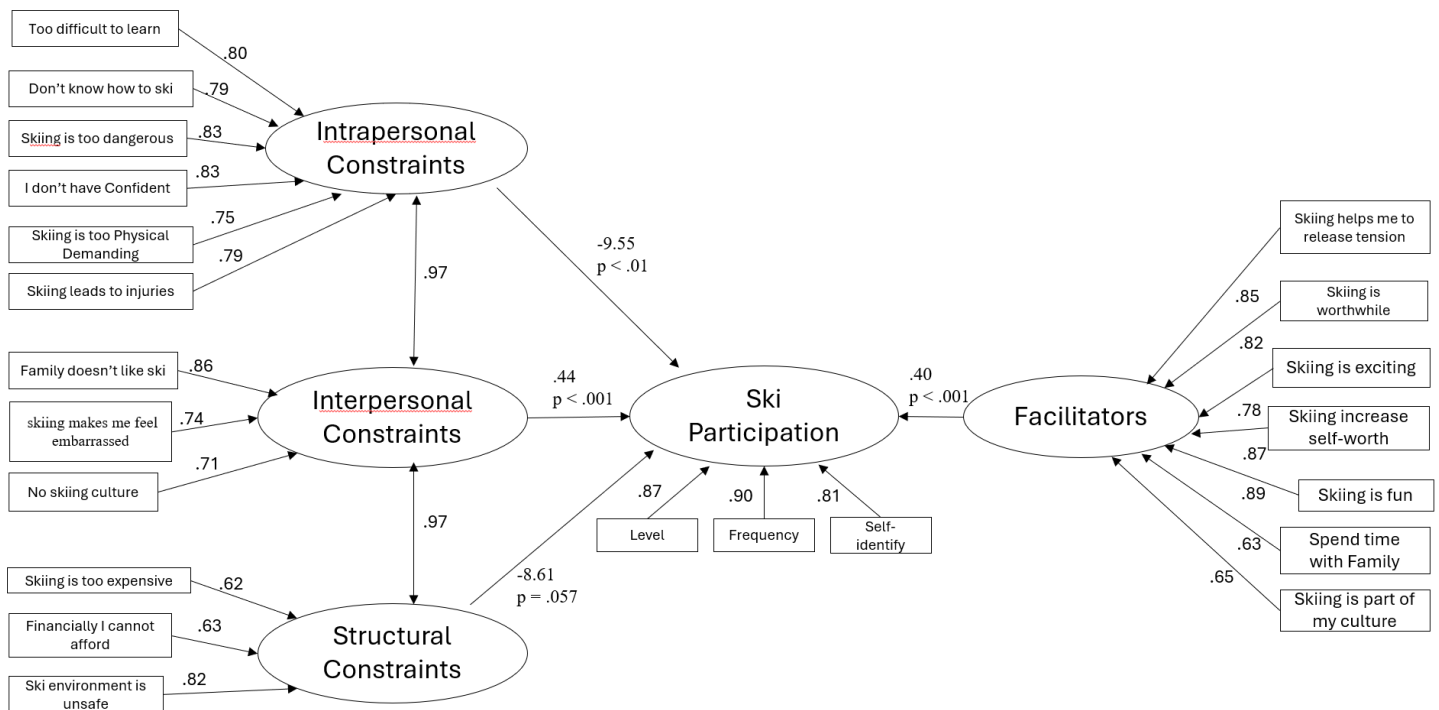


Figure 4 The structural model's results showed reasonable model fit indices ($X^2/pdf = 4.2$; $CFI = .91$; $TLI = .90$; $RMSEA = .08$).

Kruskal-Wallis Test

Intrapersonal constraints were statistically significantly different between the different frequencies of downhill skiing participation groups, $\chi^2(2) = 116.25$, $p < .001$. Subsequently, pairwise comparisons were conducted with a Bonferroni correction applied for multiple

comparisons and statistical significance set at the $p < .001$ level. This post hoc analysis revealed statistically significant differences in intrapersonal constraints scores between the high-frequency skiers (Mdn = 2.00) and non-skiers (Mdn = 5.00) ($p < .000$) and low-frequency skiers (Mdn = 3.50) and non-skiers ($p < .001$), and between the low-frequency skiers and high-frequency skiers ($p < .001$).

Interpersonal constraints were statistically significantly different between the different frequencies of downhill skiing participation groups, $\chi^2(2) = 67.13$, $p < .001$. This post hoc analysis revealed statistically significant differences in interpersonal constraints scores between the high-frequency skiers (Mdn = 2.00) and non-skiers (Mdn = 4.00) ($p < .000$) and low-frequency skiers (Mdn = 3.00) and non-skiers ($p < .001$), and between the low-frequency skiers and high-frequency skiers ($p < .004$).

Structural constraints were statistically significantly different between the frequencies of downhill skiing participation groups, $\chi^2(2) = 84.69$, $p < .001$. This post hoc analysis revealed statistically significant differences in structural constraints scores between the high-frequency skiers (Mdn = 3.00) and non-skiers (Mdn = 5.00) ($p < .000$) and low-frequency skiers (Mdn = 4.00) and non-skiers ($p < .001$), and between the low-frequency skiers and high-frequency skiers ($p < .000$). Furthermore, there was no statistically significant distinction between high-frequency skiers and low-frequency skiers regarding the perception that skiing is too expensive ($p = .09$). This implies that while both low-frequency and high-frequency skiers perceived skiing as an expensive sport, it did not impact their skiing frequency.

Facilitators' scores were statistically significantly different between the different frequencies of downhill skiing participation groups, $\chi^2(2) = 96.44$, $p < .001$. This post hoc analysis revealed statistically significant differences in facilitators scores between the high-

frequency skiers (Mdn = 6.00) and non-skiers (Mdn = 4.00) ($p < .000$) and low-frequency skiers (Mdn = 5.00) and non-skiers ($p < .000$), and low-frequency skiers and high-frequency skiers ($p < .000$). However, the perception that skiing is more worthwhile than spending on other activities did not show statistically significant differences between non-skiers and low-frequency skiers ($p = .06$). Similarly, the desire to spend time with family did not reveal statistically significant differences between non-skiers and low-frequency skiers ($p = .51$) (see Table 8).

Table 8

Kruskal-Wallis Test among Three Groups of Skiers

Ski_Behaviour		Facilitators	Intrapersonal	Interpersonal	Structural
	$\chi^2(2)$	96.44	116.25	67.13	84.69
	Sig	$P < .001$	$P < .001$	$P < .001$	$P < .001$
Non-skiers	N	139	139	139	139
	Std. Deviation	1.60	1.33	1.59	1.33
	Median	4.00	5	4	5
	Mean	3.90	4.77	4.15	4.85
Low-frequency skiers	N	151	151	151	151
	Std. Deviation	1.39	1.59	1.76	1.63
	Median	5.00	3.5	3	4
	Mean	4.78	3.37	3.15	3.97
High-frequency skiers	N	142	142	142	142
	Std. Deviation	.96	1.36	1.45	1.52
	Median	6	2	2	3
	Mean	5.58	2.66	2.5	3.05

Note (s): χ^2 = Indicates that we are comparing to a χ^2 -distribution; (2) = Indicates the degrees of freedom, which is $k - 1$ (where k = number of groups); $\chi^2(2)$ = Indicates the obtained value of the H-statistic (obtained H-value); Sig = Indicates the probability of obtaining the observed H-value given the null hypothesis is true.

Demographics Differences

We further examined the differences in demographics (e.g., age, gender, income, household status, occupation, and education level) across the three segments by a chi-square test. The results revealed a statistically significant association between gender and ski frequency, $p < .000$. Post hoc analysis involved pairwise comparisons using the z-test of two proportions with a Bonferroni correction. The non-skiers group had a higher proportion of females ($p > .05$), and

the high-frequency skiers' group had a higher proportion of males ($p < .05$). Moreover, a significant association was found between downhill skiing frequency group and occupation, $p < .000$. Post hoc analysis revealed the non-skiers group had a higher proportion of students and part-time workers whereas, the high-frequency skiers' group had a higher proportion of full-time workers ($p < .05$). A significant association was found between the downhill skiing frequency group and household annual income (less than \$29,999, \$30,000 to \$79,999, and \$80,000 to \$100,000), $p < .000$. Non-skiers have higher proportion of annual income less than \$29,999 ($p < .05$). A significant association was found between downhill skiing frequency group and household status (single without child, married/partner without child, single with children, and married/partner with children), $p < .001$. The high-frequency skiers had a higher proportion of married or partners with children ($p < .05$). A significant association was found between the downhill skiing frequency group and education level (college/trade school or less and undergraduate and graduate degree), $p < .001$. The high-frequency skiers had a higher proportion of undergraduate and graduate degrees ($p < .05$) (See Table 9).

Table 9

Chi-square Test of Independence Between Ski frequency and Demographics

			Ski Behaviour			Total	Df/X2	Sig
			Non skiers	Low Frequency skiers	High Frequency skiers			
Education Level	Some University, college/trade school Education or less	Count	89 _a	89 _a	60 _b	238	2/14.85	.001
		% within Ski_Behaviour	64.0%	58.9%	42.3%	55.1%		
	University Degree (Undergraduate and Graduate)	Count	50 _a	62 _a	82 _b	194		
		% within Ski_Behaviour	36.0%	41.1%	57.7%	44.9%		
Annual Household Income	Less than \$29,999	Count	39 _a	29 _a	11 _b	79	4/46.28	.000
		% within Ski_Behaviour	28.1%	19.2%	7.7%	18.3%		
	\$30,000 to \$79,999	Count	63 _a	61 _{a, b}	39 _b	163		
		% within Ski_Behaviour	45.3%	40.4%	27.5%	37.7%		
	\$80,000 to \$100,000	Count	37 _a	61 _b	92 _c	190		
		% within Ski_Behaviour	26.6%	40.4%	64.8%	44.0%		
Occupation	Student, part time, and other	Count	66 _a	56 _a	20 _b	142	2/37.38	.000
		% within Ski_Behaviour	47.5%	37.1%	14.1%	32.9%		
	Full time employed	Count	73 _a	95 _a	122 _b	290		
		% within Ski_Behaviour	52.5%	62.9%	85.9%	67.1%		
Gender	Woman	Count	89 _a	75 _b	44 _c	208	2/30.93	.000
		% within Ski_Behaviour	64.0%	49.7%	31.0%	48.1%		
	Man	Count	50 _a	76 _b	98 _c	224		
		% within Ski_Behaviour						

	% within	36.0%	50.3%	69.0%	51.9%		
	Ski_Behaviour						
Household Status	Single without children	Count	53 _a	53 _a	30 _b	136	6/23.93 .001
	% within	38.1%	35.1%	21.1%	31.5%		
	Ski_Behaviour						
	Married/partner without children	Count	34 _a	36 _a	27 _a	97	
	% within	24.5%	23.8%	19.0%	22.5%		
	Ski_Behaviour						
	Single with children	Count	11 _a	17 _a	10 _a	38	
	% within	7.9%	11.3%	7.0%	8.8%		
	Ski_Behaviour						
	Married/partner with children	Count	41 _a	45 _a	75 _b	161	
	% within	29.5%	29.8%	52.8%	37.3%		
	Ski_Behaviour						

Notes: If some of the letters are the same and some are different (e.g., for four groups: "a", "b", "c"), there are no statistically significant differences in proportions between the groups with the same letters

Discussion

Canada recreational ski resort operators are encountering difficulties cultivating more loyal and high-frequency skiers. Compared with skiing participation 25 years ago, these trends are concerning, although perhaps not that surprising given the changing climate realities and the challenges facing ski hill operators reliant on extracting natural resources to continue their winter operations (Bausch & Gartner, 2020; Dawson et al., 2013; Ruddy et al., 2015). Many skiers discontinue the activity or participate infrequently (Alexandris et al., 2017). The findings of the present study corroborated these observations. Nevertheless, this study sought to determine the constraints and facilitators of skiing behaviour specifically through a segmented approach. This study examined the leisure constraints theory, and the investigation helped determine the interplay of intrapersonal, interpersonal, and structural constraints and facilitators, which accounted for reasons why people ski or not. Further, integrating demographic factors and participation frequency to categorize consumers into non-, low-, and high-frequency segments, drawing from the recommendations of Tsiotsou (2006), has enabled a more precise picture regarding what helps determine ski behaviour.

Aligned with the hypothesis (H1), facilitators emerged as indicators of positive contributions to participant behaviour, echoing findings from prior research of Alexandris et al. (2011), Alexandris et al. (2007), Hungenberg et al. (2016), Faillant et al. (2008), Son et al. (2021), and Füller & Matzler (2008). However, our study findings did not completely align with the conclusions drawn by Hubbard and Mannell (2001), who proposed that facilitators indirectly influenced participation. Instead, our findings indicated a significant direct influence of facilitators on skiing participation. Notably, our research observed that ski individuals frequently reported more potent facilitators than infrequent skiers and non-skiers, consistent with previous

research (e.g., Faullant et al., 2008; Szromek et al., 2012). Participants noted that skiing was enjoyable, skiing with family was important, and that downhill skiing was part of one's cultural identity. The finding on family importance and cultural identity is noteworthy as previous research on downhill skiing primarily focused on psychological or internal motivational factors predicting ski behaviour. Our findings suggest a more pronounced familial and cultural influence on downhill skiing participation. While past research highlighted family obligations as constraints for young families engaging in downhill skiing (Gilbert & Hudson, 2000; Hudson & Gilbert, 2000; Williams & Basford, 1992; Williams & Fidgeon, 2000), our study found that families with children are more inclined to participate in downhill skiing. Consequently, these findings imply that family involvement can shape individuals' attitudes toward participating in downhill skiing.

The present study has demonstrated that intrapersonal constraints play a crucial role in determining why certain persons choose not to engage in skiing. Therefore, it is imperative to investigate these constraints in order to gain a comprehensive understanding of skiing participation. The SEM results revealed a significant negative relationship between intrapersonal constraints and skiing participation, confirming H2. Notably, intrapersonal constraints were the most influential determinants of skiing participation, corroborating previous studies by Gilbert & Hudson (2000), Williams & Fidgeon (2000), and Hudson & Gilbert (2000). The hierarchical model of leisure constraints suggests that intrapersonal constraints significantly impact leisure involvement, whereas structural and interpersonal factors have the least influence (Jackson et al., 1993). Individuals in the attraction stage may exhibit a positive attitude towards an activity but lack the motivation to develop negotiation strategies to overcome perceived and actual constraints and establish a psychological bond with the activity (Jackson et al., 1993; Alexandris

et al., 2017). The findings of this study partially confirm this hierarchical pattern of influence. The results also showed significant differences in intrapersonal constraints between skiers and non-skiers. More specifically, the findings provide an account of intrapersonal constraints (e.g., I do not have confidence, skiing leads to injuries, and skiing is too dangerous) needing to be overcome to help a person engage in the behaviour of skiing, especially important in the non-skier segment.

Although some of the past research purports that interpersonal and structural constraints (e.g., family responsibility, children being too young, environmental issues, and financial burden) have important negative influences on skiing participation (Alexandris et al., 2011; Gilbert & Hudson, 2000; Hudson & Gilbert, 2000; Williams & Fidgeon, 2000), both types of constraints did not demonstrate significant effects in our study, rejecting H3 and H4. However, as posited within the hierarchical constraints model proposed by Crawford et al. (1991), these factors should not be among the most influential determinants of skiing participation, a finding bolstered in our study. Perhaps a possible explanation is that challenges may influence the relationship between structural constraints and skiing participation in classifying constraints within the intrapersonal and structural categories (Carroll & Alexandris, 1997). For individuals who have never skied before, it could be argued that financial and environmental constraints may be considered structural and intrapersonal. Another possible explanation is that constraints may not always result in non-participation, as in our study, where people in the low and high-frequency category both perceived constraints and overcame them to continue to ski. According to the study by Alexandris et al. (2017), participants categorized in the highest level of loyalty, representing the most intense and long-lasting psychological attachment, regardless of time and expense constraints (structural), were still present. This indicates that skiers loyal to the activity

could overcome different constraints to maintain their involvement effectively. The current study did not investigate skiers' utilization of negotiation strategies, which remains a significant domain for future research.

This study also revealed that various demographic variables, such as gender, occupation, income, household status, and education level, can significantly predict downhill skiing participation frequency. For example, notable educational differences in downhill skiing participation rates were observed. Individuals with education levels at college, trade school, or lower levels were found to have the lowest participation frequency. These findings are consistent with the research conducted by Williams and Fidgeon (2000) and the idea that education is correlated with income level; the higher the income, the more likely a person is to ski. The high-frequency skiers' group featured a more considerable proportion of household income. This finding corroborates the study conducted by Szromek et al. (2012). Furthermore, the study uncovered a statistically significant relationship between gender and ski participation frequency. The group of non-skiers had a higher proportion of females, while the high-frequency skiers' group had a higher proportion of males. This gender disparity in downhill skiing participation supports and confirms the findings of previous studies conducted by Alexandris & Carroll (1997), Tangeland et al. (2013), and Williams & Fidgeon (2000). Stoddart (2011) pointed out that gender-based power disparities continue in downhill skiing activity. The participation of women in outdoor sports such as downhill skiing, snowboarding, surfing, windsurfing, and skydiving is often devalued within the context of athletic masculinity (Stoddart, 2011). Stoddart (2011) also suggests that men often influence women's interactions in snow sports, potentially creating an unwelcoming atmosphere for women. Such findings alarm ski hills in that diversity issues are likely present in the choice of ski behaviour. Moreover, the non-skiers group

comprised a higher proportion of students and part-time workers, whereas the high-frequency skiers' group predominantly comprised full-time employed individuals. This observation is in line with the findings of Tangeland et al. (2013). In addition, the high-frequency skiers' group had a more significant representation of married individuals with children, highlighting the potential influence of family dynamics on downhill skiing participation. An interesting finding in our study is that age did not significantly influence the frequency of downhill skiing participation. This finding is inconsistent with the study from Williams and Fidgeon (2000).

Theoretical Implications

This study's hypothesized structural model was based on the leisure constraints model, but the results revealed inconsistent relationships. The current study investigated the relationships among intrapersonal, interpersonal, and structural constraints and facilitators within a single model to examine skiing behaviour. This study's model only partially supported the mitigation leisure constraints model by confirming the negative path from intrapersonal to ski participation and the positive path from facilitators to ski participation. Specifically, a significant negative relationship exists between intrapersonal constraints and skiing participation. The negative path between intrapersonal constraints and skiing participation has been confirmed most frequently across skiing research (e.g., Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; and Hudson & Gilbert, 2000). Interestingly, and in contrast to some research by Alexandris et al. (2011) and Williams & Fidgeon (2000), interpersonal and structural constraints did not influence skiing participation in our study. This outcome of our study partly contradicted the idea that increased constraints would result in decreased participation (Hudson et al., 2010; Williams & Fidgeon, 2000; Scheerder et al., 2002; Faullant et al., 2008). Nevertheless, the non-significant relationship between interpersonal and structural constraints and participation is common in

previous research. A handful of studies reported the relationship between leisure participation and constraints as non-significant (e.g., Chun et al., 2022; Gilbert & Hudson, 2000; Alexandris & Carroll, 1997; Kay & Jackson, 1991). This discovery validates the findings of Gilbert and Hudson (2000), indicating that interpersonal constraints are frequently absent in the context of skiing. Considering the results of this research, it is apparent that individuals must address intrapersonal constraints (e.g., I do not have confidence, skiing leads to injuries, and skiing is too dangerous) to initiate involvement in skiing. Additionally, a significant positive relationship between facilitators and skiing participation was revealed in the current study, which confirms past research of Alexandris et al. (2011) and Hungenberg et al. (2016). The results demonstrate that people require various facilitators to enable their ski participation behaviour. This study revealed additional empirical support regarding leisure constraints and the facilitator's important role in skiing participation.

Practical Implications

The findings of this study offer valuable insights for strategy planning. The results suggest that reducing intrapersonal constraints and increasing facilitators may be the best way forward for practitioners interested in supporting Vancouver participants' engagement in skiing. Consequently, tailored strategies for each group are warranted to enhance participation. An additional strategy for mitigating intrapersonal constraints, such as I do not feel confident, skiing is too dangerous, and skiing leads to injuries, might involve increasing opportunities for instructional sessions and engaging introductory activities. These initiatives would facilitate skill development among non-skiers and low-frequency skiers and foster their familiarity with fundamental downhill skiing techniques. While it may be tough to entirely eradicate negative impressions around downhill skiing, such as its perceived danger and high risk of injury, an

individual's decision to engage in it is likely influenced by personal rewards and positive emotions. Ski marketers have the ability to promote greater engagement in downhill skiing by highlighting the good emotions and tangible advantages connected with the activity (e.g., downhill skiing is fun, increases feelings of self-worth, and downhill skiing helps to release tension). Instead of disregarding the hazards associated with downhill skiing, emphasizing its potential for relaxation and enjoyment would be more advantageous.

Limitations and Future Directions

This research is constrained by the limited number of questions included in the survey, which did not cover certain situational and structural factors such as the significance of the natural environment, snow quality of the slope, and service quality aspects provided at the selected ski resort. Consequently, non-skiers may lack relevant perceptions of structural circumstances associated with downhill skiing due to their lack of experience. Furthermore, structural elements are subject to variability, even among seasoned skiers who may visit different ski resorts. Therefore, future studies should address these limitations by exploring additional factors that could contribute to understanding ski consumer behaviour. Moreover, due to its complex nature, the study did not explore the negotiation aspect. Individuals may employ cognitive or behavioural negotiation tactics (Jackson & Rucks, 1995). Cognitive strategies involve deliberate actions individuals take to effectively manage the demands of a specific sports activity, such as acquiring new skills. Conversely, behavioural strategies involve intentional actions to modify or reinforce positive attitudes towards the activity, such as recognizing its physical, social, and psychological benefits (Jackson & Rucks, 1995). Further research should delve into negotiation strategies employed by skiers to participate in skiing, encompassing cognitive and behavioural dimensions.

Conclusion

In a single model, this study examined facilitators, constraints, and downhill skiing frequency with a comprehensive segmentation (e.g., non-, low-, and high-frequency skiers). Despite the numerous facilitators skiing offers non-skiers, both perceived and actual intrapersonal constraints significantly prevent many potential skiers from participating in the sport. This study demonstrated that overcoming the intrapersonal constraints needs to be addressed. Moreover, familial and cultural dimensions contributed to skiing participation frequency. These findings are important for ski resorts to help predict ways to increase skiing participation from the non-skier groups and retain high-frequency skiers. Understanding the impacts of constraints and facilitators within a segmented approach can provide a more nuanced understanding of what drives behaviour within this context. Such an approach can allow for a more comprehensive understanding of sports participation, offering further insight into why people choose to do what they do within a given context.

References

- Alexandris, K., & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: Results from a study in Greece. *Leisure Studies*, 16(2), 107–125. <https://doi.org/10.1080/026143697375449>
- Alexandris, K., Du, J., Funk, D., & Theodorakis, N. D. (2017). Leisure constraints and the psychological continuum model: A study among recreational mountain skiers. *Leisure Studies*, 36(5), 670–683. <https://doi.org/10.1080/02614367.2016.1263871>
- Alexandris, K., Funk, D. C., & Pritchard, M. (2011). The impact of constraints on motivation, activity attachment, and skier intentions to continue. *Journal of Leisure Research*, 43(1), 56–79.
- Alexandris, K., Kouthouris, C., & Girgolas, G. (2007). Investigating the relationships among motivation, negotiation, and alpine skiing participation. *Journal of Leisure Research*, 39(4), 648–667.
- Alexandris, K., Kouthouris, C., & Meligdis, A. (2006). Increasing customers' loyalty in a skiing resort. *International Journal of Contemporary Hospitality Management*, 18(5), 414–425. <https://doi.org/10.1108/09596110610673547>
- Alexandris, K., Kouthouris, C., Funk, D., & Chatzigianni, E. (2008). Examining the relationships between leisure constraints, involvement and attitudinal loyalty among Greek recreational skiers. *European Sport Management Quarterly*, 8(3), 247–264. <https://doi.org/10.1080/16184740802224175>
- Bausch, T., & Gartner, W. C. (2020). Winter tourism in the European Alps: Is a new paradigm needed? *Journal of Outdoor Recreation and Tourism*, 31, 100297-.

- Birchwood, D., Roberts, K., & Pollock, G. (2008). Explaining differences in sport participation rates among young adults: Evidence from the South Caucasus. *European Physical Education Review, 14*(3), 283–298. <https://doi.org/10.1177/1356336X08095667>
- Canadian Ski Council. (2014-2015). Retrieved May 14, 2024, from <https://www.skicanada.org/wp-content/uploads/2016/01/2014-15-Facts-and-Stats.pdf>
- Carroll, B., & Alexandris, K. (1997). Perception of constraints and strength of motivation. *Journal of Leisure Research, 29*(3), 279.
- Chen, Z. (2011). Is the weighted z-test the best method for combining probabilities from independent tests? *Journal of Evolutionary Biology, 24*(4), 926–930. <https://doi.org/10.1111/j.1420-9101.2010.02226.x>
- Chumney, F. (2012). *Principal Components Analysis, Exploratory Factor Analysis, and Confirmatory Factor Analysis*.
- Chun, S. B., Halpenny, E. A., Jeon, J. Y., & Lee, C. W. (2022). Leisure constraints and negotiation among Canadian and South Korean mountain hikers: An Extension of motivations with the constraints-effect-mitigation model. *Leisure Sciences, 1*. <https://doi.org/10.1080/01490400.2022.2069614>
- Crawford, D. W., & Godbey, G. (1987). Reconceptualizing constraints to family leisure. *Leisure Sciences, 9*(2), 119–127. <https://doi.org/10.1080/01490408709512151>
- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences, 13*(4), 309–320. <https://doi.org/10.1080/01490409109513147>
- Dawson, J., Scott, D., & Havitz, M. (2013). Skier demand and behavioural adaptation to climate change in the US Northeast. *Leisure = Loisir, 37*(2), 127–143.

- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4), 227.
https://doi.org/10.1207/S15327965PLI1104_01
- Dunn, O. J. (1964). Multiple Comparisons Using Rank Sums. *Technometrics*, 6(3), 241–252.
<https://doi.org/10.1080/00401706.1964.10490181>
- Evans, J., & Davies, B. (2010). Family, class and embodiment: Why school physical education makes so little difference to post-school participation patterns in physical activity. *International Journal of Qualitative Studies in Education*, 23(7), 765–784.
<https://doi.org/10.1080/09518398.2010.529473>
- Faullant, R., Matzler, K., & Füller, J. (2008). The impact of satisfaction and image on loyalty: The case of Alpine ski resorts. *Managing Service Quality: An International Journal*, 18(2), 163–178. <https://doi.org/10.1108/09604520810859210>
- Füller, J., & Matzler, K. (2008). Customer delight and market segmentation: Applying the three-factor theory of customer satisfaction on lifestyle groups. *Tourism Management*, 29(1), 116–126. <https://doi.org/10.1016/j.tourman.2007.03.021>
- Gilbert, D., & Hudson, S. (2000). Tourism demand constraints: A skiing participation. *Annals of Tourism Research*, 27(4), 906–925. [https://doi.org/10.1016/S0160-7383\(99\)00110-3](https://doi.org/10.1016/S0160-7383(99)00110-3)
- Golob, T. F. (2003). Structural equation modeling for travel behaviour research. *Transportation Research Part B: Methodological*, 37(1), 1–25. [https://doi.org/10.1016/S0191-2615\(01\)00046-7](https://doi.org/10.1016/S0191-2615(01)00046-7)
- Gratton, C., Jones, I., Dr, & Jones, I. (2003). *Research Methods for Sports Studies*. Taylor & Francis Group. <http://ebookcentral.proquest.com/lib/ottawa/detail.action?docID=182283>

- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences*, 23(3), 145–163. <https://doi.org/10.1080/014904001316896846>
- Hudson, S., & Gilbert, D. (2000). Tourism constraints: The neglected dimension in consumer behaviour research. *Journal of Travel & Tourism Marketing*, 8(4), 69–78. https://doi.org/10.1300/J073v08n04_05
- Hungenberg, E., Gray, D., Gould, J., & Stotlar, D. (2016). An examination of motives underlying active sport tourist behaviour: A market segmentation approach. *Journal of Sport & Tourism*, 20(2), 81–101. <https://doi.org/10.1080/14775085.2016.1189845>
- Jackson, E. L., & Rucks, V. C. (1995, January). Negotiation of leisure constraints by junior-high and high-school students: An exploratory study. *Journal of Leisure Research*, 27(1), 85–105. <https://doi.org/10.1080/00222216.1995.11969978>
- Jackson, E. L., Crawford, D. W., & Godbey, G. (1993). Negotiation of leisure constraints. *Leisure Sciences*, 15(1), 1–11. <https://doi.org/10.1080/01490409309513182>
- Kay, T., & Jackson, G. (1991). Leisure despite constraint: The impact of leisure constraints on leisure participation. *Journal of Leisure Research; Arlington, Va., Etc.*, 23(4). <https://search.proquest.com/docview/1308689946/citation/74D9F2CE072541E8PQ/1>
- Kim, Y. K., & Trail, G. (2010). Constraints and motivators: A new model to explain sport consumer behaviour. *Journal of Sport Management*, 24(2), 190–210. <https://doi.org/10.1123/jsm.24.2.190>
- Konu, H., Laukkanen, T., & Komppula, R. (2011). Using ski destination choice criteria to segment Finnish ski resort customers. *Tourism Management*, 32(5), 1096–1105. <https://doi.org/10.1016/j.tourman.2010.09.010>

- Matzler, K., Füller, J., Renzl, B., Herting, S., & Späth, S. (2008). Customer satisfaction with alpine ski areas: the moderating effects of personal, situational, and product Factors. *Journal of Travel Research*, 46(4), 403–413. <https://doi.org/10.1177/0047287507312401>
- Michailidis, A., Samathrakis, V., Mamalis, S., & Theodosiou, G. (2006). Understanding participation constraints of potential skiers. *Tourism Economics: The Business and Finance of Tourism and Recreation*, 12(3), 421–435.
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A Meta-Analysis. *Journal of Marketing*, 70(4), 136–153. <https://doi.org/10.1509/jmkg.70.4.136>
- Raymore, L. A. (2002). Facilitators to Leisure. *Journal of Leisure Research*, 34(1), 37–51. <https://doi.org/10.1080/00222216.2002.11949959>
- Rutty, M., Scott, D., Johnson, P., Jover, E., Pons, M., & Steiger, R. (2015). Behavioural adaptation of skiers to climatic variability and change in Ontario, Canada. *Journal of Outdoor Recreation and Tourism*, 11, 13–21.
- Scheerder, J., Vanreusel, B., Taks, M., & Renson, R. (2002). Social sports stratification in Flanders 1969-1999: Intergenerational reproduction of social inequalities? *International Review for the Sociology of Sport*, 37(2), 219–245. <https://doi.org/10.1177/1012690202037002006>
- Shaw, S. M., Bonen, A., & McCabe, J. F. (1991). Do more constraints mean less leisure? examining the relationship between constraints and participation. *Journal of Leisure Research; Arlington, Va., Etc.*, 23(4). <https://search.proquest.com/docview/1308689933/citation/597B4918A234A77PQ/1>

Son, J. S., Chen, G., Liechty, T., Janke, M. C., West, S. T., Wong, J. D., & Naar, J. J. (2021).

The role of facilitators in the constraint negotiation of leisure-time physical activity.

Leisure Sciences, 1–20. <https://doi.org/10.1080/01490400.2021.1919253>

Sport in Canada. (2024, January 26). Statista. <https://www.statista.com/topics/8659/sport-in-canada/#topicOverview>

Statistics Canada. (2013). Sports participation 2010, Canada. Retrieved from

http://publications.gc.ca/collections/collection_2013/pc-ch/CH24-1-2012-eng.pdf

Stoddart, M. (2011). Constructing masculinized sportscapes: Skiing, gender and nature in British Columbia, Canada. *International Review for the Sociology of Sport*, 46(1), 108–124.

<https://doi.org/10.1177/1012690210373541>

Szromek, A. R., Zemla, M., & Hadzik, A. (2012). Multidimensional segmentation of polish ski resorts visitors. *Journal of Tourism Challenges and Trends; Bucharest*, 5(1), 41–55.

Tangeland, T., Aas, Ø., & Odden, A. (2013). The socio-demographic influence on participation in outdoor recreation activities – Implications for the Norwegian domestic market for nature-based tourism. *Scandinavian Journal of Hospitality and Tourism*, 13(3), 190–207.

<https://doi.org/10.1080/15022250.2013.819171>

Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: a systematic review. *The International Journal of Behavioral Nutrition and Physical Activity*, 9(1), 78–78.

<https://doi.org/10.1186/1479-5868-9-78>

The Canada West Ski Areas Association| CWSAA. (2021, December 31). Canada West Ski Areas Association. <https://cwsaa.org/>

- Tsiotsou, R. (2006). Using visit frequency to segment ski resorts customers. *Journal of Vacation Marketing*, 12(1), 15–26. <https://doi.org/10.1177/1356766706059029>
- Van Tuyckom, C., & Scheerder, J. (2010, December). A multilevel analysis of social stratification patterns of leisure-time physical activity among Europeans. *Science & Sports*, 25(6), 304–311. <https://doi.org/10.1016/j.scispo.2010.04.003>
- Wang, X., Zhang, J. J., Song, G., & Wan, X. (2020). Push and pull factors influencing the winter sport tourists in China: The Case of Leisure Skiers. *SAGE Open*, 10(2), 2158244020938739. <https://doi.org/10.1177/2158244020938739>
- Wheeler, S. (2012). The significance of family culture for sports participation: The significance of family culture for sports participation. *International Review for the Sociology of Sport*, 47(2), 235–252. <https://doi.org/10.1177/1012690211403196>
- Wheeler, S., & Green, K. (2014). Parenting in relation to children's sports participation: Generational changes and potential implications. *Leisure Studies*, 33(3), 267–284. <https://doi.org/10.1080/02614367.2012.707227>
- Wigfield, A., & Eccles, J. S. (2000, January). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68–81. <https://doi.org/10.1006/ceps.1999.1015>
- Williams, P. W., & Basford, R. (1992). Segmenting downhill skiing's latent demand markets. *The American Behavioural Scientist; Princeton, N.J.*, 36(2). <https://search.proquest.com/docview/1306756040/citation/65EFC4C00F1A48C6PQ/1>
- Williams, P., & Fidgeon, P. R. (2000). Addressing participation constraint: A case study of potential skiers. *Tourism Management*, 21(4), 379–393. [https://doi.org/10.1016/S0261-5177\(99\)00083-7](https://doi.org/10.1016/S0261-5177(99)00083-7)

Chapter IV

Negotiation Strategies Regarding Ski Participation: An Exploratory, Cross-Cultural Study

Introduction

Past research has investigated several determinants of skiing participation that can be grouped accordingly: intrapersonal factors (e.g., Hungenberg et al., 2016; Alexandris et al., 2017), interpersonal factors (e.g., Alexandris et al., 2011; Williams & Basford, 1992), and structural factors (e.g., Matzler et al., 2008; Faullant et al., 2008; Konu et al., 2011; Gilbert & Hudson, 2000). Nevertheless, there remains a lack of research investigating how people negotiate their involvement in skiing, including what constrains their participation (Mueller et al., 2019; Xie & Ritchie, 2019). Studies examining constraints and negotiations in outdoor recreation settings (such as the focus in this study regarding downhill skiing) remain scarce.

In addition, there is a significant disregard for cultural variation in the research on constraints in leisure activities and examining negotiation strategies more precisely (Dong & Chick, 2012; Guo & Schneider, 2015; Ito et al., 2020). An analysis of literature from five reputable leisure journals revealed that less than 5% of publications published between 1990 and 2009 were dedicated to exploring leisure activities from non-Western or cross-cultural viewpoints (Ito et al., 2014). Furthermore, only three studies have exclusively examined the cross-cultural differences between Anglo-Canadians and Mainland Chinese. Therefore, this study aims to incorporate the principles of leisure constraints, leisure facilitators, and leisure negotiation theory to understand how consumers decide about skiing behaviour. This study seeks to answer the following research questions for both culture groups (Beijing and Vancouver): (1) What facilitators influence the decision to participate in skiing? (2) What types of constraints affect an individual's decision to engage in skiing? (3) What negotiation strategies do participants use to overcome these constraints?

Literature Review

Leisure Constraints: Intrapersonal, Interpersonal and Structural

This paper's literature review does not aim to thoroughly review studies on leisure constraints, facilitators, and constraint negotiation. Instead, readers may refer to the reviews and critiques of the leisure constraints theory, leisure facilitators theory, and leisure negotiation theory provided in Chapter I. The purpose of this section is to establish a foundation to support our study's objectives and to provide context in skiing research, assisting readers who are not well-versed in the field of leisure constraints to understand the framework within which Jackson et al.'s (1993) classification of negotiation efforts was formulated. *Intrapersonal constraints* refer to the internal aspects of an individual's psychological state and traits. According to Crawford et al. (1991), these constraints are key indicators of a person's involvement in leisure activities. Previous research in skiing has identified constraints such as a lack of interest, the belief that downhill skiing is neither enjoyable nor glamorous, and concerns regarding personal well-being, as factors that deter participation (Faullant et al., 2008; Gilbert & Hudson, 2000; Hudson & Gilbert, 2000; Alexandris et al., 2011). Both skiers and non-skiers often experience intrapersonal constraints related to perceived risks associated with the sport, including fears of high speeds, losing balance, sustaining injuries due to inadequate training, acrophobia, and potential harm (Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; Hudson & Gilbert, 2000). In addition, *interpersonal constraints* arise from social interactions (Crawford & Godbey, 1987). An individual's social network can significantly influence participation levels, including the absence of a companion or feelings of inadequacy in social settings (Gilbert & Hudson, 2000; Hudson & Gilbert, 2000). Previous studies by Williams and Fidgeon (2000) and Alexandris et al. (2011) have similarly indicated that negative perceptions from parents and family members pose

substantial barriers to engaging in downhill skiing. Research has also demonstrated marked differences in sports participation based on socioeconomic status, influenced by financial resources, education, age, gender, and occupation (Williams & Fidgeon, 2000; Scheerder et al., 2002). Finally, *structural constraints* are external factors unrelated to personal characteristics (Crawford et al., 1991). Skiers may face significant structural challenges, including financial burdens related to equipment, lift tickets, transportation, and accommodation, which can affect their overall enjoyment of the skiing experience (Faullant et al., 2008). Michailidis et al. (2006) examined constraints potential skiers face and highlighted the financial costs of skiing and time limitations as primary structural challenges. Additionally, past research by Williams & Fidgeon (2000) and Scheerder et al. (2002) has identified notable disparities in sports participation linked to social class, including income, education, age, gender, and occupation. According to Taks and Scheerder (2006), skiing is often perceived as an extravagant and expensive activity, requiring a significant financial commitment from participants. Skiers and non-skiers may encounter considerable financial challenges, including costs for equipment, lift tickets, transportation, and lodging, which can impact their overall skiing experience (Faullant et al., 2008).

Leisure Negotiation Strategies

Despite facing different constraints on their leisure activities, individuals may maintain a specific frequency of engagement in leisure pursuits. One potential reason is that individuals employ resources and strategies to address or navigate constraints, a process known as constraint negotiation (Hubbard & Mannell, 2001; Jackson et al., 1993). Crawford and colleagues (1991) proposed that the emergence of leisure preferences occurs when internal constraints, previously mentioned, are either absent or resolved through a combination of advantage and individual resolve. Depending on the nature of the sports activity, individuals may face constraints at the

interpersonal level. This is more common in activities that involve at least one partner or co-participant but may be less important in solo leisure activities like skiing. Structural constraints become evident only after successfully overcoming any relevant interpersonal constraints. When structural constraints are absent or successfully overcome, participation takes place. However, significant structural constraints may lead individuals to choose not to participate. Crawford and colleagues (1991) introduced new ideas but conceptually fragmented these models. While they broadened our understanding of leisure activity participation compared to previous models, they did not examine the dynamic process by which individuals overcome constraints to engage in participation. The negotiation proposition expresses this point clearly. Scott (1991) originally introduced the 'negotiation proposition,' and Jackson et al. (1993) expanded on the hierarchical model of leisure constraints established by Crawford et al. (1991), marking a significant conceptual progression in the study of constraints within an individual's decision-making process. This helped propagate the idea of negotiation strategies to facilitate involvement. Negotiation strategy refers to the strategies and methods that individuals employ and develop to overcome constraints (Stanis et al., 2009). This proposition suggests that individuals might employ various behavioural and cognitive strategies to counteract perceived leisure constraints. Jackson and Rucks (1995) provided a more comprehensive insight into negotiating leisure activities by classifying them into two distinct approaches: behavioural and cognitive.

Behaviour Strategy

According to Jackson et al. (1993), individuals may change non-leisure aspects of their lives, such as adjusting their schedules and reducing expenses, as well as modifying their leisure activities, opportunities, and participation frequency to fulfill their needs. Additionally, Elkins et al. (2007), Lyu and Lee (2016), Dionigi et al. (2013), Ma et al. (2012), Powers et al. (2019), and

Zhou et al. (2021) have extensively investigated many behavioural strategies for negotiating leisure constraints. Alexandris et al. (2013) delineated two pivotal objectives pursued in contemporary research on leisure constraint negotiations. The first research delved into the behaviour negotiation strategies employed by various demographic groups engaged in leisure activities, such as students, women, employees, and individuals with special needs.

Representative works in this domain include those by Elkins et al. (2007), Lyu and Lee (2016), Dionigi et al. (2013), Ma et al. (2012), Powers et al. (2019), and Zhou et al. (2021). Elkins et al. (2007) found that students employ different behaviour strategies depending on their gender regarding recreational sports participation. Place of residence showed modest differences, while education level did not show any distinctions. Another area of research focused on developing and examining decision-making models that explore the connections between behaviour strategy negotiation, constraints, motivation, attitudes, and their resulting influence on actual behaviours. This is evident in the studies conducted by Alexandris et al. (2002, 2007, 2011, 2013), Hubbard and Mannell (2001), Son et al. (2008, 2009, 2021), and White (2008). For example, Jackson and Rucks (1995) identified seven types of behaviour strategies: time management, skill acquisition, interpersonal relationship modification, financial improvement, physical rehabilitation, changes in leisure preferences, and others. Hubbard and Mannell (2001) and Son et al. (2008) condensed Jackson and Rucks's compilation of behavioural negotiation strategies into four categories: time management, skill acquisition, interpersonal coordination, and financial improvement. Another example by Alexandris et al. (2013) is the classification of recreational swimmers based on their levels of involvement and the examination of how behaviour strategies affect the development of swimming commitment. The study utilized the five-dimensional leisure behaviour strategy scale established by Alexandris et al. (2007), which includes dimensions such as enhancing

knowledge, adapting lifestyle, obtaining information, managing time, and seeking companionship. Compared to other groups, swimmers who were highly engaged demonstrated greater positive perceptions in all aspects of negotiation methods, according to the results.

Cognitive Strategy

In 1991, Jackson et al. suggested that individuals can raise their cognitive level by intentionally reducing "psychic discomfort" through negotiating constraints. Cognitive strategies are individuals' emotional actions to overcome challenges that hinder their participation in specific leisure activities (e.g., ignoring the constraints, forgetting about them, and thinking about how important the activities are). Stanis et al. (2009) highlighted the importance of cognitive negotiating methods. They recognized that these strategies are similar to stress-coping strategies, including problem-focused and emotion-focused ones. Additionally, they suggested that future studies should incorporate and further develop cognitive strategies for negotiation. However, to our knowledge, only a few studies examine cognitive strategies in outdoor recreation settings (e.g., Jackson & Rucks, 1995; Li & Stodolska, 2007; Stanis et al., 2009; Kono et al., 2021). According to Kono et al. (2021), previous research primarily concentrated on behavioural strategies that might directly result in higher participation. Implementing cognitive strategies could improve immediate outcomes like leisure participation and enjoyment and positively impact more comprehensive outcomes such as health and well-being. Further investigation into this subject seems necessary (Kono et al., 2021).

Leisure Facilitators in Skiing Participation

Raymore (2002) noted that "a facilitator is an intrapersonal, interpersonal, or structural condition that enables leisure participation, while motivation is the process in which that condition energizes or motivates behaviour, either facilitating or constraining leisure

participation” (pp. 43–44). In this dissertation, facilitators identify elements or conditions that might encourage greater engagement in skiing participation.

Intrapersonal facilitators are individual characteristics, traits, and beliefs that promote leisure participation (Raymore, 2002). Research has shown that these facilitators are essential in attracting new participants and keeping current participants engaged in physical activities (Teixeira et al., 2012; White, 2008; Stanis et al., 2009). For instance, Hungenberg et al. (2016) identified several factors that encourage participation in skiing, such as exploring new places, appealing destination attributes, stress relief, competitive drive, physical fitness, and mastery of skills. Birch et al. (2020) emphasized the advantages of connecting with nature through skiing, highlighting the experience of escape that temporarily allows individuals to unplug from technology, rules, and societal expectations. Similarly, Kerr et al. (2012) highlighted that escaping monotony is a significant intrapersonal facilitator for engaging in adventure sports like downhill skiing. Research from Kouthouris (2009) and Papadimitriou & Gibson (2008) further emphasizes this escape's positive influence on ongoing skiing participation. Engaging in outdoor leisure activities like skiing provides substantial benefits of freedom and escapism, greatly enhancing life satisfaction and subjective well-being, particularly among those who value freedom and escapism (Sirgu et al., 2017). *Interpersonal facilitators* encompass the involvement and encouragement of friends, parental attitudes, and the opportunities that parents create (Raymore, 2002). Previous studies have indicated that parents play a crucial role in introducing their children to various sports and ensuring they have the necessary equipment and transportation. Moreover, parents create a supportive psychological environment that promotes and sustains ongoing participation in sports (Greendorfer, 2002; Stodolska et al., 2014). According to Alexandris et al. (2011) and Hungenberg et al. (2016), the perspectives of others

and the desire for social interaction significantly influence individuals' decisions to participate in skiing. Research shows that those who prioritize the opinions of significant figures in their social networks are more likely to express positive intentions regarding future skiing endeavours (Alexandris et al., 2011). Furthermore, Walker and Green (2014) noted that transmitting historical and social narratives across generations within families can illuminate behavioural patterns. Recent studies demonstrate that family culture has a profound and lasting impact on sports participation (Birchwood et al., 2008; Van Tuyckom & Scheerder, 2010; Evans & Davies, 2010). *Structural facilitators* are described as “social and physical institutions and organizations that operate external to individuals to enable or enhance leisure participation” (Raymore, 2002, p. 47). In skiing, factors such as the diversity of ski slopes and the quality of ski resorts serve as significant structural facilitators in selecting a ski destination. Peng et al. (2022) emphasized that accommodation, transportation, ski conditions, ticketing services, and travel costs are critical determinants when choosing to ski. They also noted a significant contrast between developed and emerging ski markets.

Method

Using an exploratory qualitative approach, we explored the constraints, facilitators, and negotiation strategies of Chinese and Canadian' skiing participation. Qualitative methods are preferable to quantitative methods because they elicit comprehensive descriptions of individuals' perceptions and opinions (Neuman, 2006). Qualitative research approaches are based on discovering people's beliefs and behaviour about a phenomenon, such as understanding how people negotiate whether to participate in skiing. Qualitative studies aim to preserve the meaning and complexity of a phenomenon and the details of its various aspects rather than pursuing generalizability (Husbands et al., 2017). This study employed semi-structured interviews, which

combine structured and unstructured techniques. Interviewers may ask specific prepared questions while seizing opportunities to clarify informants' responses allowing for greater flexibility in probing and investigating specific issues in depth or posing questions about unexpected subjects (Nuttavuthisit, 2019).

Participants and Procedure

This study was approved by the University's Ethics Committee (Ethics Reference No: H-10-21-7401) (see Appendix A). A purposeful sampling method was utilized. Initially, the research data was distributed on the Qualtrics platform to recruit participants from Vancouver, Canada. Additionally, research recruitment information was provided to Beijing Sports University in China to encourage participation from Chinese individuals. Potential participants were instructed to contact the primary investigator if they were interested in participating. Before participation, individuals were required to read and sign a consent form (see Appendix G) outlining the study's voluntary, anonymous, and confidential nature. Participants received a \$20 reward as compensation for their time and participation. The eligibility criteria for participation were: (1) being at least 18 years old and (2) currently residing in either Beijing (China) or Vancouver (Canada). Participants provided their socio-demographic information, including age, gender, and occupation. They were informed about the study's objective and allowed to withdraw at any point. All names mentioned during the interviews were guaranteed confidentiality. Recruitment commenced in October 2022 for both cultural groups and ended in February 2024.

The study comprised 38 semi-structured interviews, with 15 participants from Beijing and 23 from Vancouver. As Hennink et al. (2017) described, the goal was to achieve meaning saturation. All interviews were conducted by the principal researcher, averaging 20 minutes and ranging from 10 to 40 minutes. Interviews were recorded in audio or video format on the Zoom

platform, with the choice of language (English or Chinese) based on the respondents' preferences. Transcripts were emailed to participants for confirmation of accuracy, with a ten-day window for any changes or clarifications. During the member-check process, participants were asked to review their transcripts carefully, reflect on their experiences, address any ambiguities, and validate the researchers' interpretations (Camiré, 2016). One Chinese participant provided a minor change. Finally, a proficient Chinese translator translated all Chinese interviews into English to ensure linguistic equivalence, facilitating the data analyses described below. After finishing the transcription of all interviews, the researchers reviewed each transcript multiple times using the NVivo 11 software to aid in coding. According to our study, we believe that data meaning saturation mainly occurred after analyzing 12 interviews in Beijing and 15 interviews in Vancouver; it was found that no additional new information was emerging.

Interview Guide

We framed all interview questions in an open-ended manner to elicit rich details about the participants' skiing experiences, drawing from past skiing literature. Participants were asked about their facilitators and constraints for skiing participation and how they negotiated the constraints they were facing (Hudson et al., 2010). The first section included self-identified questions which pertained to the person's general ski frequency (e.g., do you, or have you ever participated in downhill skiing?). The second section examined the constraints (e.g., why do you not or, do you have any constraints regarding skiing?). The third section focused on facilitators (e.g., what factors would motivate you to go skiing?). The fourth section dealt with the negotiation strategies (e.g., how do you overcome the constraints you mentioned?). The semi-structured interview guide can be referred to in Appendix F.

Deductive Qualitative Analysis

A deductive qualitative analysis helped to examine and refine specific theories related to leisure constraints, facilitators, and negotiation strategies. The researchers followed a structured process from Fife and Gossner (2024) to evaluate and enhance existing theories. The details of the deductive qualitative analysis process can be referred to in Chapter I.

Results: Ski Participation in Beijing

We conducted 38 in-depth, semi-structured interviews with 15 participants from Beijing and 23 from Vancouver. The data from the Beijing participants is first reported. Of the Beijing participants, 11 were male, and four were female. Five were high-frequency skiers, nine were low-frequency skiers, and one was a non-skier. Table 10 provides the demographic details of Beijing participants. The interviews from Beijing revealed five main themes: (1) the lack of traditional ski culture in China; (2) intrapersonal constraints, which show the difficulties of dealing with physiological and internal constraints; (3) structural constraints, which show the difficulties of dealing with external and environmental constraints; (4) facilitators, which describe the things that make people want to go skiing; (5) negotiation strategies, which show the behavioural and cognitive strategies people applied to overcome constraints.

Table 10

Beijing Participants Demographics

	Pseudonym	Gender	Ski Frequency	Travel Distance
Participant 1	Jack	Male	Low-frequency	1 hour
Participant 2	James	Male	High-frequency	30 minutes drive
Participant 3	Ella	Female	Low-frequency	1 hour
Participant 4	William	Male	High-frequency	another city
Participant 5	Joseph	Male	Low-frequency	another city
Participant 6	Henry	Male	Low-frequency	4 hours
Participant 7	Oliver	Male	Non-skiers	5 hours
Participant 8	Sophia	Female	Low-frequency	30 minutes
Participant 9	Emma	Female	High-frequency	4 hours

Participant 10	Benjamin	Male	Low-frequency	4 hours
Participant 11	Alexander	Male	High-frequency	4 hours
Participant 12	Amelia	Female	Low-frequency	4 hours
Participant 13	Leo	Male	Low-frequency	1 to 1.5 hours
Participant 14	Liam	Male	Low-frequency	2 hours
Participant 15	Lucas	Male	High-frequency	1.5 hours

The current study utilized the concept of 'leisure negotiating strategies' (Jackson et al., 1993) to examine how individuals from Beijing and Vancouver overcome constraints and their specific strategies. The use of deductive coding confirmed the existence of behaviour and cognitive negotiation strategies within the Beijing group. These categories include developing skiing knowledge, searching for skiing-related information, implementing lifestyle adjustments, finding partners, and scheduling time. In total, there were 15 items connected to these behaviour cognitive categories. In addition, we have discovered five items related to cognitive strategies. The overview of the results is presented in Tables 11 and 12. Note, the results section of this paper does not intend to provide an exhaustive review of all factors related to leisure constraints and facilitators. Readers are encouraged to consult Tables 11 and 14 for detailed information on these factors. Instead, the primary focus of the results section is to highlight negotiation strategies that have been rarely explored in existing skiing literature. This will establish a foundation to support the objectives of our study, which aims to examine the differences in negotiation strategies between the two cities.

Table 11

Constraints and Facilitators of Beijing Participants

Themes	Sub-themes	Constraints	Number of references	Sub-themes	Facilitators	Number of references	
Cultural	Lack of ski culture	There is no skiing culture in childhood	2				
	culture	Skiing is not popular in China	2				
Intrapersonal	Lack of skiing knowledge	No Instructors and Coaches	7	Novelty-seeking	Skiing is cool	1	
		I do not know how to ski	6		Skiing is novel	7	
		Skiing is too difficult	11		Want an experience	9	
	Lack of motivation	No passion		2	Positive Feeling	I feel freedom	1
			Skiing is not attractive	3		Skiing is enjoyable	1
		I do not have an interest in skiing		8		Skiing is fun	2
						8	Skiing is interesting
	Perception of risk	Afraid of cold		1	Skill mastery	Skiing is exciting	7
				1		Sense of achievement	1
				5		Coaches are good	1
Afraid of heights			5	Doing exercise		2	
			6	I like an extreme sport		3	
Afraid of getting an injury		7	Sense of challenging	2			

		Skiing is too dangerous	6		Sense of speed	2
					I want to learn this sport	15
Interpersonal	Social aspect	No friends to ski with	5	Social aspect	Family members	7
		Family responsibility	1		Social activities	10
		Skiing is an individual sport	1		Social surroundings	13
					Social media	5
					Friends to go with	34
		Ski Resort Facilities	The equipment is not good-looking	3		
		No equipment	2	2022 winter Olympic	2022 Winter Olympic	1
		Low quality of rental equipment	6			
		Low quality of service	1	Ski Resort Facilities	Design of snow resorts	3
		Snow quality	1		Lift quality	1
		Snow season is too short	9		Restroom	2
Structural		Too crowded in the Ski Resort	13		Restaurant	5
					Slope quality	8
					Snow quality	5
					Natural environment	7
		Travel distance	24		Multi-activities	9
					Shopping center	1
					Accommodation	2
					transportation	5
					Service quality	3

Covid-19 pandemic	Covid-19 pandemic	20
Financial Constraints	Coach is too expensive	4
	Skiing is too expensive	17
	Equipment is too expensive	7
Time Constraints	No available time	2
	Skiing needs too much planning	5

Notes: this table presents all factors identified during the interviews. However, the results section will focus on a selection of key themes. Structural factors, such as snow quality and shopping centers, are not exhaustively discussed in the results section.

Table 12*Negotiation Strategies of Beijing Participants*

Sub-themes	Negotiation strategies	Number of references	
Cognitive Level	1. decrease the ski frequency	3	
	2. endure the low-quality ski equipment	3	
	3. ignore the constraints	1	
	4. increase the ski frequency	1	
	5. sense of obligation	1	
Behaviour Level			
Enhancing skiing knowledge	1. Wear more protected equipment	2	
	2. enhancing skiing knowledge	4	
Searching skiing-related information	3. Checking the price	2	
	4. Checking the available transportation	2	
	5. Checking for available facilities	4	
	6. Checking available accommodations	2	
	7. Checking the how crowded ski resort	2	
	8. Checking the available restaurant	2	
	Lifestyle adjustment	9. Go indoor ski resort	1
		10. Go to other ski resort	3
Find partners	11. Ski with Friends or family	22	
Organization of time	12. Take a light rail	1	
	13. Avoid holidays and weekend	1	
	14. Ski on holidays	2	
	15. Drive by car	5	

Theme 1: Cultural

Our theme revealed that participants' attitudes toward skiing were not something they could easily afford and thoroughly enjoy, given their limited exposure to this sport. Structural, interpersonal, and intrapersonal constraints clearly emerged in our conversations among Beijing participants. They acknowledge that their cultural background could influence their skiing participation. While the 2022 Beijing Winter Olympic Games present an opportunity to raise awareness of skiing among the Chinese populace, many Chinese participants still express disinterest due to their limited exposure to skiing during childhood: “It is not a sport that I have

been exposed to since childhood, nor is it an easy sport [skiing] for people like me, so I have no chance to develop interest” (Participant 6, Beijing participant). Another Beijing participant reported: “Skiing is not so popular in China. I feel that our [2022] Olympic Winter Games in China this time are a skiing craze. However, before that, I may only personally think that China is not popular for this sport [skiing]” (Participant 5, Beijing participant). He also commented that: “after the launch of the Winter Olympics, there may be more and more ski resorts in China. There were not many ski resorts in the past, but the number may be relatively small, and then the publicity is not enough.” Another participant said skiing is not their daily life sport: “It can not be said that there is no interest, not no attraction, it is a kind of not daily life is skiing, in my daily life, I have less contact, that is, I have little chance to go skiing” (Participant 5, Beijing participant). Therefore, despite the promotional efforts surrounding the Beijing Winter Olympics, these deep-seated traditional sports culture constraints indicate that increasing skiing participation among the Chinese populace requires more than raising awareness. It necessitates addressing the cultural constraints that currently hinder skiing engagement. This could involve initiatives to make skiing more accessible, providing more opportunities for early exposure, and fostering a supportive community environment for new participants.

Theme 2: Intrapersonal Constraints

Lack of Skiing Knowledge

A significant intrapersonal constraint identified among Beijing participants revolves around their perceived lack of skiing knowledge. Participants articulated a shared sentiment that skiing appears dauntingly challenging to grasp. They expressed apprehensions about potentially accelerating too rapidly or struggling to maintain control while navigating the slopes. This perceived complexity and the fears of mishaps contribute significantly to their reluctance to

engage with the sport. As a result, this lack of confidence and understanding further undermines their interest in skiing. “The coach told me he learned from his predecessor and practiced for a long time, almost an entire snow season” (Participant 3, Beijing participant). Beijing participants discussed their experiences with learning to ski, highlighting several significant challenges. They expressed that skiing is considerably more difficult to learn than other sports, requiring much hard work, time, and dedication. One participant described the differences between table tennis and skiing:

When you play other sports like table tennis, you mainly use your hands. As long as you can catch the ball, you can hit it. It does not matter if you pay for lessons or not.

However, skiing is different. I think the threshold for skiing is higher than for other sports. I want to ski the way I envision, but figuring out how to ski alone is challenging, especially when I fall down (Participant 13, Beijing participant).

Lack of Motivation

Skiing requires a significantly higher level of passion and commitment to participate compared to many other sports. Several factors collectively shape the skiing experience, driving this heightened need for enthusiasm. Our study investigated various aspects of motivation, uncovering why some participants may lack the necessary drive to engage in skiing, such as finding skiing unattractive, lacking interest, and having no passion for the sport.

I think this thing [participation in skiing] must be interested first, I have no interest in the process of skiing. I can't find happiness, because I don't like the kind of speed that is too fast and has a lot of impact. I don't think it's exciting for me anyway. I dare not play anything like going to an amusement park or a roller coaster (Participant 1, Beijing participant).

Perception of Risk

Beijing participants perceived skiing as a high-risk sport. Participants also highlighted safety concerns as a major deterrent. The risk of injury, particularly for those unfamiliar with the sport, can be a significant intrapersonal constraint. The fear of falling or getting hurt can inhibit participants from fully engaging in learning, making them more hesitant and cautious. The initial learning stages, which typically involve many falls and minor injuries, often compound this fear, further reinforcing the perception of skiing as a high-risk activity. One Beijing participant described skiing: “Many professional skiers frequently get injured despite their high skill level. They push themselves to the limit each skiing season and often get hurt. Skiing is a high-risk sport, and injuries are almost unavoidable. (Participant 14, Beijing participant).

It's easy to see the slope from the bottom, but once you get to the slope and slide down, you feel very dangerous, and then you want to pull it out faster in the process of slowly advancing, and then sometimes you can't stop, or you can't turn. You hit someone or you can't get up (Participant 1, Beijing participant).

Theme 3: Structural Constraints

Ski Resort Facilities

Snow Season is too Short. In China, the snow season is too short, presenting a challenge for those keen on winter sports like skiing. The short duration of the snow season limits the opportunity for skiing enthusiasts to partake in their preferred recreational pursuits. One participant states: “Skiing is a sport that is limited by natural conditions. For example, in summer or at any time, the place where can engage in this activity will be more limited” (Participant 10, Beijing participant). This condensed snow season is primarily due to the country's geographical

and climatic characteristics. Consequently, Beijing skiers often have only a narrow window to indulge in their sport, accentuating the importance of optimizing the available snow conditions.

Low Quality of Rental Equipment. Low-quality rental equipment presents a significant challenge for Beijing individuals engaging in activities such as skiing. Skiers encountering low-quality rental equipment may experience discomfort.

Renting can be troublesome sometimes because the gear and boards, operated by the ski resort, may not always be clean. Moreover, having your own snowboard is best, as everyone's body type and skiing habits are different, requiring adjustments to the board's angle and width (Participant 15, Beijing participant).

The dissatisfaction stemming from inadequate gear can detract from the overall enjoyment of the skiing outing and may deter individuals from returning to the sport. Thus, addressing the issue of low-quality rental equipment is crucial for enhancing the skiing experience and ensuring the safety and satisfaction of participants.

Too Crowded in Ski Resort. Overcrowded ski resorts can significantly detract from the enjoyment and accessibility of skiing. When ski slopes and facilities are densely packed with people, several issues arise that can deter participation and reduce the overall quality of the experience. The sheer number of people can also diminish the quality of the skiing experience. Crowded slopes can become congested, making finding space to ski comfortably and enjoyably difficult. This congestion can disrupt the natural flow of skiing and lead to a more stressful and less relaxing experience. Skiers may find it challenging to practice techniques or enjoy the serenity of the mountains when constantly surrounded by large groups of people. "I spent two hours there in the afternoon, but the experience wasn't very satisfying. I would slide down from

the top, then wait in line to go back up, and repeat the process” (Participant 10, Beijing participant).

Travel Distance. Many Chinese participants regarded the perceived distance to ski resorts as a deterrent, complicating their ability to partake in skiing as a leisure activity. The inconvenience of travelling to these remote locations accentuated the logistical hurdles inherent in skiing as a recreational pursuit, particularly for those far from ski resort areas. The Chinese low-frequency skiers said that: “You have to leave very early in the morning. If you want to sleep a little longer in the morning, you will have a traffic jam when you start again, and then you will play for half a day at noon” (Participant 3, Beijing participant).

If you're going to ski around Beijing, you might have to drive for a long time or take the high-speed rail. This involves travelling from your home to the high-speed rail station and then from the station to your accommodation, which can take up to half a day (Participant 6, Beijing participant).

Covid-19 Pandemic

The COVID-19 pandemic brought about stringent restrictions in many regions, and Beijing was no exception. These restrictions included lockdowns, travel bans, and strict health protocols, all of which significantly affected the ability of residents to engage in outdoor and recreational activities like skiing. Extended periods saw the closure of ski resorts, and upon their reopening, they operated under strict guidelines that restricted visitor numbers, enforced strict health checks, and enforced social distancing measures. These constraints created a unique set of challenges for Beijing participants, making it difficult to access skiing facilities and engage in the sport. One Beijing participant commented: “The most important possibility is the coronavirus

epidemic, which may lead to the inability to leave Beijing for skiing (Participant 11, Beijing participant). Another participant reported:

I think the current strategy of the Chinese government is still very restrictive. For example, especially if you want to go to Zhangjiakou, which requires cross-provincial transportation and travel, you will be greatly affected (Participant 6, Beijing participant).

Financial Constraints

Individuals shared the perception of skiing as an expensive and luxurious activity. This financial constraint was linked to various aspects of the skiing experience, including the expenses of acquiring essential gear and clothing, purchasing lift tickets, and enrolling in ski lessons. One participant said: “Rented clothes also feel dirty some also stink, but if you like to play snowboard snow clothing some of these things, also to buy is quite a high cost” (Participant 1, Beijing participant). The participant's remark suggests that the heightened popularity and visibility of skiing during the 2022 Olympic Games may have led to an uptick in demand for skiing-related services and facilities, subsequently driving prices higher:

We went skiing in the two years leading up to the Winter Olympics, and the prices were pretty stable. Then, during the Winter Olympics year, the prices clearly increased. I believe it was due to the influx of people during the Winter Olympics (Participant 15, Beijing participant).

Time Constraints

Skiing often requires significant travel time, especially for those living in urban areas or regions without nearby ski resorts. This travel can include driving for several hours to reach a suitable location, which can be a major deterrent for people with busy schedules or limited free time. The long travel time adds to the overall time commitment needed for a day or weekend of

skiing. The preparation time for skiing is also considerable. Participants need to allocate time for gathering and transporting equipment, changing into appropriate clothing, and preparing for the physical demands of the sport.

First, you have to drive to the suburbs, book accommodations, and carry all the equipment, which can be quite troublesome. Many weekends involve spontaneous plans, and organizing a skiing trip on a whim can be exhausting and cumbersome. The thought of these hassles can sometimes deter me from going, making me more hesitant due to these factors (Participant 14, Beijing participant).

Theme 4: Facilitators

Novelty-seeking

Beijing participants are motivated by the novelty associated with the sport. For Beijing individuals who haven't tried skiing, the attraction lies in its new and unfamiliar aspects. This novelty is a significant driving force for Beijing individuals, motivating them to explore skiing and embrace its unique challenges and excitement. Consequently, the novelty surrounding skiing played a crucial role in shaping the attitudes and intentions of participants. One person said, "The first aspect is to be curious about a new sport and want to experience it" (Participant 7, Beijing participant). A low-frequency skier noted: "It is a new thing for me; I want to go out of curiosity, but also for the purpose of curiosity, I want to understand, just want to experience" (Participant 13, Beijing participant). He also mentioned that: "skiing is a relatively novel sport, which is very different from the ball games I used to play ... I think skiing is a very innovative sport" (Participant 13, Beijing participant).

The novelty associated with skiing is a powerful motivator for Chinese participants, driving their interest and willingness to explore the sport. This novelty is linked to the exotic and

prestigious nature of skiing, the influence of media and promotional campaigns, psychological drivers for new experiences and adventure, and social and communal aspects. By understanding and leveraging these motivations, ski resorts and organizations can create targeted strategies to attract and engage Chinese participants. The opportunity to try something different and exciting that is not typically part of their cultural or recreational repertoire adds to the appeal.

Positive Feeling

A common attitude was shared that skiing is an exhilarating sport. Chinese participants acknowledge that: “The feeling of sliding down a mountain, the sense of speed, it's somewhat similar to driving fast, and it can stimulate adrenaline. I think the experience is quite good” (Participant 14, Beijing participant).” Therefore, heightened excitement and stimulation associated with skiing should also amplify positive feelings and satisfaction with this sport.

Skill Mastery

Beijing individuals placed significant value on skill development and mastery of skiing.. Engaging in activities like skiing provides individuals with opportunities to enhance their skills and experience a sense of mastery, eliciting positive emotions. This emphasis on personal growth and achievement underscores the importance of skill development in shaping the leisure experiences of Chinese participants. As one participant explained:

It's mainly because it gives me a sense of self-improvement in my skill. I've already spent a considerable amount of time learning to ski, but we're still far from being able to perform any action effortlessly on the snow. Sometimes, it's all about wanting to improve my skiing skills” (Participant 15, Beijing participant).

Social Aspect

Beijing participants reported that the social aspect is the important driving factor to motivating them to ski. Most leisure activities [skiing] predominantly entail social elements, encompassing gatherings where individuals interact and socialize while engaging in leisure pursuits. These activities often fulfill a range of social needs through interpersonal engagements and interactions: “I feel that if I go skiing alone, it may soon be very monotonous, and then there is no motivation. I may be accompanied by a small partner or something” (Participant 9, Beijing participant). Therefore, skiing fulfills significant social needs, particularly the desire to socialize and strengthen bonds with others, including family and friends. Skiing is often seen as a group activity that offers opportunities for social bonding and shared experiences. Beijing participants are motivated by the prospect of enjoying skiing with friends and family. Beijing participants are also motivated by social media. For Beijing participants, the influence of social media platforms and the broader social atmosphere significantly shape their interest in skiing. Participant 7 mentioned that: “I’m influenced by friends or the Internet, everyone is in the program or related videos or can be said to follow the trend and want to experience it” (Participant 7, Beijing Participant). Social media platforms like WeChat, Weibo, Douyin (TikTok), and Xiaohongshu (Little Red Book) are filled with visually appealing content that showcases skiing as an exciting and glamorous activity.

Ski Resort Facilities

Slope and Snow Quality. The quality and variety of ski resort facilities played a crucial role in shaping the skiing experience. As participant 11 noted “The quality and variety of these venues are one of the main reasons why I choose a particular ski resort.” Beijing participants are also significantly driven by snow quality at ski resorts. The quality of snow, often referred to as

"snow conditions," is a critical factor in shaping the skiing experience and can greatly influence the satisfaction and enjoyment of skiers. Skiers generally prefer natural snow for its texture and feel. Resorts with abundant natural snowfall are often more appealing because the snow tends to be softer and powdery. However, in regions with less predictable weather, the ability to produce high-quality artificial snow is equally important. Overall, Beijing participants valued resorts that maintain excellent snow conditions regardless of natural snowfall.

Natural Environment. Beijing participants acknowledged the importance of the natural environment in impacting their interest in skiing. Participant 13 mentioned, "I prefer to ski outdoors in natural scenes in winter." The scenic surroundings, including majestic mountain views, pristine snow-covered slopes, and tranquil alpine landscapes, create an immersive backdrop for outdoor pursuits. Participant 5 mentioned, "I feel that it is still the environment, and the ski resort is more attractive because of the natural environment." The serene beauty of nature and the exhilaration of skiing down thrilling slopes enhance the allure of ski resorts, attracting participants seeking both adventure and relaxation amidst stunning scenery. Skiing in natural outdoor settings allows participants to connect with nature uniquely and profoundly. The beauty of snow-covered mountains, forests, and open landscapes offers a sense of tranquillity and escape from the urban environment. For Beijing participants, the opportunity to experience the serenity and majesty of winter landscapes is a key aspect of the skiing experience.

Multiple Activities. For Beijing participants, the availability of multiple activities beyond skiing is a significant motivator. Various recreational options enhanced the overall experience, catering to diverse interests, and attracting a broader audience. As expressed by participant 1 "doing downhill cycling in summer, and then there are many scenic spots to see and take pictures, and then karting" facilitated their continued interest. Ski resorts can create a

comprehensive and appealing destination by providing alternatives such as snowboarding, tubing, snowshoeing, ice skating, spa services, cultural programs, and quality dining and shopping. Effective marketing and creating diverse, family-friendly itineraries can further enhance the resort's attractiveness and ensure a memorable winter experience.

Service Quality. Beijing individuals tend to place a higher emphasis on the quality of service provided by ski resort personnel. There was a heightened concern for service quality regarding the various aspects of the skiing experience (e.g., attentive and cordial staff). Beijing visitors valued personalized attention, prompt assistance, and courteous treatment from ski resort staff members. They expected ski resort personnel to be attentive to their needs, responsive to inquiries, and capable of providing assistance when necessary.

They assist you from check-in, buying tickets, guiding where to change clothes and snow boots, leading you to the ski track, and advising on what to be cautious about, including which ski tracks correspond to which cable cars. This comprehensive service includes helping you if you fall or need assistance (Participant 14, Beijing participant).

Theme 5: Negotiation Strategies

Negotiation at the Cognitive Level

Participants consciously or unconsciously developed negotiation strategies to help them overcome the constraints. For instance, participants may change their frequency to avoid the possibility of financial burden associated with skiing. One notable financial strategy a participant employed was adjusting the frequency of their skiing trips. By reducing the number of visits, they could manage their budgets more effectively and avoid the possibility of financial burden. For example, participants might opt for monthly trips instead of skiing every weekend, saving money and making each trip more affordable. Participant 13 mentioned that the way he could

overcome the financial issues is to reduce the frequency: “To overcome this, the strategy is to reduce the frequency of trips and to take advantage of opportunities when the financial situation allows.” Another participant also mentioned: “Then we can only visit a few more times, as we can't rebuild the track anyway” (Participant 2, Beijing participant). Further, many participants adopted a psychological strategy of emphasizing enjoyment over perfection. Recognizing that skiing is a recreational activity meant to be fun, they focused on having a good time rather than achieving technical perfection. This mindset helped reduce pressure and anxiety, making the experience more enjoyable. “I go to other places where the scenery might not be as good as at ski resorts, so I take the opportunity to ski more, otherwise, I wouldn't be able to ski at all for the entire year” (Participant 15, Beijing participant).

Enduring the Low-quality Ski Equipment. Enduring low-quality ski equipment is another cognitive-level strategy participants employ to lower their expectations and manage the challenges associated with skiing. “There is no way, and I can't buy some. I can only wear this kind of rental clothes” (Participant 1, Beijing participant). This approach helps them navigate financial constraints and still enjoy the sport despite the limitations of rented or subpar equipment. Participants consciously or unconsciously lower their expectations regarding the quality of ski equipment. By accepting that rental gear may not be as comfortable, well-fitting, or high-performing as personal equipment, they adjust their mindset to focus on the overall skiing experience rather than the imperfections of the gear. This cognitive adjustment helps them cope with the discomfort and potential limitations of using rental equipment.

Because it's too expensive to buy your own equipment, you can't afford it, so you have to endure it ... it's okay to be poor. What I mean is that the rental clothes may look a little

wrinkled and loose. It's not as close-fitting as your own ski suit, and its protective effect and thermal effect will be better (Participant 13, Beijing participant).

Sense of Obligation. Participants also experience feelings of guilt when contemplating giving up skiing after already investing in the necessary equipment and expenses. This obligation to continue despite challenges underscores the psychological and emotional complexities of their commitment to the sport. “I also think that once you start a sport, it's a pity to give up. We have bought snow suits and some equipment. If we don't use these, they would go to waste” (Participant 15, Beijing participant). The significant financial outlay for purchasing skiing gear, lift tickets, and related expenses makes it more difficult to quit skiing. Participants who have invested heavily in these items may feel that discontinuing the sport would waste their money, leading to guilt and regret.

Negotiation at the Behaviour Level

Enhancing Skiing Knowledge. Beijing participants effectively utilized a behaviour strategy to address the challenges of learning skiing. By focusing on fundamental skills, seeking professional instruction, familiarizing themselves with equipment, and overcoming psychological constraints, they were able to develop their skiing abilities. Technology and resources, combined with a consistent commitment to practice and goal setting, enabled participants to navigate the learning curve successfully. A significant part of the learning strategy involved becoming proficient with ski equipment. Participants spent time familiarizing themselves with the proper fit and adjustment of boots, bindings, and skis. This hands-on experience with the equipment helped them feel more comfortable and controlled on the slopes. Understanding the function and maintenance of their gear also contributed to their overall confidence. One participant mentioned that:

I will first understand how to ski before skiing, braking and some sports skills and sports technology, I will understand in advance, so as to avoid that I don't know anything when I go on the stage, just put it down, and then I will also understand the equipment, because I am a sports professional. So, I will be more concerned about sports equipment and things like protective equipment, and I will prepare these things in advance (Participant 13, Beijing participant).

Finding Partners. Beijing participants utilized interpersonal negotiation (finding friends or family members to go with) to overcome interpersonal constraints. Family ski vacations were popular among participants who wanted to combine family time with skiing. Planning a vacation around skiing allowed participants to introduce their family members to the sport and enjoy quality time together. This approach made skiing a family-oriented activity, enhancing its appeal. One Beijing participant commented: "In China, there's a stronger emphasis on family values, and weekends are typically spent with family, without much importance placed on the activity itself" (Participant 14, Beijing participant). Another participant noted: "I also want to go with my friends, which bring me much happiness. I will only go if my friends invite me. If my friends don't invite me, I won't go" (Participant 8, Beijing participant). By finding companions to share the journey, Beijing participants mitigated the perceived inconvenience of constraints such as travel distance to ski locations.

Organization of Time. To mitigate the issue of overcrowding at ski resorts, Chinese participants demonstrated a greater inclination to seek alternative times to avoid the crowded conditions. This proactive approach involved strategically planning their skiing outings during off-peak hours or less busy periods, such as weekdays or early mornings. By choosing times when ski resorts are less congested, Beijing participants aimed to optimize their skiing

experience and minimize the challenges posed by overcrowding: “If the ski resort is too crowded, we usually avoid skiing on weekends and during the Spring Festival. We prefer to ski on weekdays, especially in the evenings and during holidays, as it's generally less crowded then” (Participant 15, Beijing participant).

Searching for Skiing-related Information. Conversely, Beijing participants prioritized checking facilities such as accommodation and transportation arrangements before skiing excursions. This strategic approach involved assessing factors such as lodging options, availability of transportation services to and from the ski resort, and other amenities offered at the destination.

I will look for it, for example, what kind of supporting facilities it will have around the ski resort, such as transportation, and then it will be more convenient for accommodation, and I will not draw something that may be less well-known (Participant 10, Beijing participant).

Lifestyle Adjustment. Participants' desire to change ski resorts due to overcrowding highlights the importance of a pleasant and safe skiing environment. Overcrowded resorts pose safety risks, create longer wait times, and diminish the overall quality of the experience. By exploring less crowded ski resorts, participants can enjoy improved safety, more slope time, and enhanced enjoyment. Researching alternative locations, visiting during off-peak times, and exploring regional resorts are effective strategies for a better skiing experience. This approach allows skiers to fully appreciate the beauty and excitement of the sport in a more relaxed and enjoyable setting.

If you go a little farther from downtown Beijing, there are more ski resorts in places like Zhangjiakou, such as Yulong and other Winter Olympics venues. For trips further away,

you might need more time off, like traveling to the northeast to places like Changbai Mountain, which also has good ski fields (Participant 4, Beijing participant).

Results: Ski Participation in Vancouver

In terms of Vancouver participants, 15 were male and eight were female. The participants included ten high-frequency skiers, four low-frequency skiers, and eight non-skiers. Table 13 provides demographic details. The interviews conducted in Vancouver revealed seven major themes: (1) immigrant culture constraints, (2) intrapersonal constraints, (3) interpersonal constraints, (4) structural constraints, (5) facilitators, (6) negotiation strategies, and (7) suggestions for ski resorts, outlining potential future improvements.

Table 13

Vancouver Participants Demographics

	Pseudonym	Gender	Ski Frequency	Travel Distance
Participant 1	Alexis	Male	High-frequency	1.5 hours
Participant 2	Azariah	Female	Low-frequency	4 to 5 hours
Participant 3	Baylor	Male	High-frequency	2 hours
Participant 4	Emory	Male	Non-skiers	2 hours
Participant 5	Finley	Male	High-frequency	2 hours
Participant 6	Hayden	Female	Non-skiers	Not mention
Participant 7	Justice	Male	Low-frequency	45 minutes
Participant 8	Landry	Male	High-frequency	Not mention
Participant 9	Skylar	Female	Non-skiers	2 hours
Participant 10	Spencer	Female	Low-frequency	20 to 30 minutes
Participant 11	Alex	Female	Non-skiers	2 hours
Participant 12	Morgan	Female	Non-skiers	1 Hour
Participants 13	John	Male	High-frequency	1 Hour
Participants 14	Kayce	Male	Low-frequency	1 Hour
Participants 15	Dutton	Male	Low-frequency	2 Hours
Participants 16	Rip	Male	High-frequency	2 Hours
Participants 17	Lloyd	Male	High-frequency	2 hours
Participants 18	Walker	Male	High-frequency	1.5 hours
Participants 19	Alice	Female	High-frequency	Not mention

Participants 20	Carter	Male	Non-skiers	30 minutes
Participants 21	Bob	Male	Non-skiers	Not mention
Participants 22	Brent	Male	Non-skiers	Not mention
Participants 23	Marry	Female	High-frequency	Not mention

Tables 14 and 15 summarize the findings for Vancouver participants. Within the Vancouver group, we have found six distinct areas of behavioural negotiation. These categories consist of 19 items, including increasing skiing knowledge, seeking skiing-related information, adapting one's lifestyle, finding skiing companions, managing an individual's time, and handling financial issues. In addition, we discovered two items related to cognitive strategies.

Table 14

Constraints and Facilitators of Vancouver Participants

Themes	Sub-themes	Constraints	Number of references	Sub-themes	Facilitators	Number of references
Cultural	Immigrants' cultural constraints	No skiing culture in childhood	16	Culture	Skiing is traditional	5
Intrapersonal	Lack of Skiing knowledge	Skiing is a physically demanding sport	6	Sense of Escape	Sense of escape	12
		I don't know how to ski	7			
		Lack of ski information	1			
	Lack of motivation	I don't have interested in ski	4	Positive feeling	Skiing is fun	6
			14			
		Skiing is an individual sports	7			
Perception of risk	Health related concern	28	Skill mastery	Sense of challenge	2	
		14				
		Afraid of getting injury				5
Interpersonal	Social aspect	No friends to ski with	1	Social aspect	Friends go ski with	53
		Family responsibility	7			
		Kids are too young to ski	2			
		Kids do not like to ski	6			
		Family members do not ski	2			
Structural	Equipment	No equipment	9	Ski resorts Facilities	Shopping center	3
		Equipment maintenance	2			
					Ski Resort scenery	22

Weather conditions	The weather is not good to ski	4	restaurants	12
	Too cold	1	Multi-activity rather than skiing	17
Facilities	Snow conditions	1	Accommodations	4
	Too crowd in ski resort	12	facilities	7
			Available coach	4
Covid-19	Covid-19 pandemic	1		
Financial constraints	Coach is too expensive	1		
	Skiing is too expensive	43		
	Equipment is too expensive	4		
Time	Time-consuming	21		
Travel Distance	No available transportation	2		
	Travel distance	12		
	The location is too far	9		

Notes: this table presents all the factors identified during the interviews. However, the results section will focus on a selection of key themes. Structural factors, such as equipment, weather conditions, facilities, Covid-19, and time, are not exhaustively discussed in the results section.

Table 15*Negotiation Strategies of Vancouver Participants*

Negotiation strategies	Sub-themes	Number of references
Cognitive Strategies	1. Give up	1
	2. Ignore the constraints	1
Behaviour Strategies	1. Improve skiing skill	8
	2. Learning skiing knowledge from friends	7
	3. Preparing ski equipment	3
	4. Checking weather conditions	12
	5. Checking hours of operation	1
	6. Checking snow conditions	7
	7. Checking road conditions	3
	8. Checking parking spot	1
	9. Checking available slopes	1
	10. Checking accommodations	5
Lifestyle adjustment	11. Wearing more protective equipment	1
	12. Take a break and rest when feeling exhausted	1
	13. Doing more exercise before skiing	4
Find partners	14. Ski with Friends or family	6
Organization of time	15. Avoid holidays and weekend	5
Financial management	16. Find discounts	12
	17. Promotions with friends	8
	18. Checking price	6
	19. Checking available promotions	2

Theme 1: Cultural

In many cultures, skiing may not be a traditional or accessible sport due to climate, geography, and socio-economic conditions. For individuals from these backgrounds, skiing can seem unfamiliar or even intimidating. This lack of cultural familiarity with skiing can create a barrier to participation. To explain how and why these immigrant culture constraints emerged, one Vancouver participant explained: “Unfortunately, I come from India. To have a skiing experience. We have to travel to another city, which is pretty far away. My first experience of snow and these kinds of experiences was when I landed in Canada” (Participant 21, Vancouver participant). The participant noted that his original cultural background did not emphasize skiing

as an everyday recreational activity. Another Canadian participant explained how his original cultural background influenced him, and he believed that there is a dichotomy between the original cultural background and established Canadians, which had an impediment to his skiing participation:

I didn't grow up with it. I grew up on European football and Basketball. Skiing was barely an option when I grew up. So I can't really choose to do that. It's also very far from where I live. I didn't care much about skiing. I grew up on other sport (Participant 1, Vancouver Participant).

The participant highlighted a perceived dichotomy between his original cultural background (non-Canadian) and the established Canadian culture which accepts skiing as a common winter sport. For newcomers or individuals from different cultural backgrounds, this can create a sense of exclusion or discomfort. The established Canadian norms and practices around skiing may seem foreign, making it difficult for people to feel included or confident in participating. This was particularly the case for new immigrants like Chinese Canadians, who reported:

Chinese individuals don't gravitate towards excessively thrilling sports. Westerners, particularly their younger generation, often exhibit a tremendous enthusiasm for such activities [skiing], whereas Asians, particularly the Chinese population, typically show less interest in engaging in them [skiing] (Participant 9, Vancouver participant).

Theme 2: Intrapersonal Constraints

Lack of Skiing Knowledge

In addition to risk perception, a lack of skiing knowledge is another critical constraint. Potential skiers who lack basic information about the sport, such as choosing the right

equipment, understanding safety protocols, or navigating ski resorts, may feel overwhelmed and ill-prepared. This knowledge gap can create a barrier to entry, making the sport seem inaccessible. The non-skier said: “I don't have the knowledge to truly enjoy it. To get the best skiing experience, I'd want to have some level of skill and knowledge to truly have fun” (Participant 12, Vancouver participant). Skiing can be an intimidating sport for beginners who are unfamiliar with its basics. Individuals may feel overwhelmed without knowledge of how to ski, what equipment to use, or the proper techniques. This intimidation can lead to increased anxiety and reluctance to try the sport. Another participant mentioned: “Basically, I don't know how to ski. If I were to find someone to teach me, it would be quite expensive, and the travel costs are also high, so I'm not keen on going” (Participant 9, Vancouver participant).

Vancouver participants commonly perceived skiing as physically demanding. Many participants recounted experiencing significant fatigue and exertion while skiing, underscoring the rigorous nature of the sport. Furthermore, they highlighted the required intricate skill set, suggesting that skiing demands physical prowess and a high level of proficiency and technique, which is linked to learning constraints. Participants commend that: “You don't realize you're using a lot of repetitive movements. If your body is not used to that type of level of exercise, it's very taxing ... endurance is definitely a big one” (Participant 10, Vancouver participant). Skiing is recognized as an intense physical activity that engages various muscle groups. Vancouver participants reported that skiing requires strength, endurance, and balance. The sport involves continuous movement, navigating slopes, and maintaining control at varying speeds, all contributing to physical fatigue. “It's physically; it's a really hard sport. There's a lot of muscles. You have to be a little bit on the athletic side to participate in something like that, little bit athletic anyway to start” (Participant 6, Vancouver participant).

Perception of Risk

The perception of risk stands out as a significant intrapersonal constraint deterring people from engaging in skiing. The perception of risk can profoundly affect an individual's willingness to try the sport. As one person noted: "I think it's more dangerous because you have to slide down from a mountain. If you know the techniques, it's fine. But if you're just starting, there is a certain risk" (Participant 9, Vancouver participant). Another interesting finding is a Canadian non-skier also perceived a high-level perception of risk even though he had never skied before: "I would be concerned about injury, injury to a child, and the injury aspect. It was made out to me that when we were young, it was dangerous skiing because you could easily get hurt." (Participant 4, Vancouver participant). Such perceptions may be derived from the experiences of friends, family and media communications.

Lack of Motivation

Lack of motivation was reported as an important intrapersonal constraint to many of the Vancouver participants. Participant 6 reported: "I think skiing you have to really have a passion for. It really has to like it. Something that maybe from when you were younger, and it's just like any other sport" (Participant 6, Vancouver participant). Another participant mentioned that: "it is never interested me. It was at the cold and going down the hills. It's not for me" (Participant 11, Vancouver participant).

Theme 3: Interpersonal Constraints

Social Aspect

Family Obligations. Family obligations and the challenge of having children who are too young to ski are important interpersonal constraints faced by many Vancouver participants when it comes to skiing. These constraints can significantly impact the ability of individuals and

families to engage in the sport, necessitating thoughtful strategies to overcome them. Balancing family responsibilities with the desire to ski can be challenging. One participant said: “It's very hard with the kids being starting kindergarten and stuff. It's hard to find the weekend time and the time off at the same time as everybody” (Participant 7, Vancouver participant). Participant 9 shared that her daughter: “has never shown an interest in skiing despite attempts to introduce her during her younger years, she did not enjoy it.” Family obligations also encompassed financial constraints. Skiing can be expensive, requiring investment in equipment, lift tickets, and travel. For families, these costs multiply, making it harder to justify the expense, notably when budget priorities may include childcare, education, and other household needs.

No Friends to Go With. The Vancouver participants stated they were reluctant to ski due to a lack of people to go with. Participants noted that they needed to be guided into skiing by an experienced or committed person, either a friend or a ski instructor, who could familiarize them with the ski resort and make them feel that skiing is a fun and exciting experience. However, as one participant said, “I think skiing is more so an individual sport... as much as we go up with friends and we like hanging out, it's more so an individual thing” (Participant 16, Vancouver participant).

Theme 4: Structural Constraints

Financial Constraints

Another finding is that Canadian immigrants reported more financial and settlement constraints. Sports and leisure activities might be challenging for Canadian immigrants to participate in because of various constraints (e.g., lack of time, money, and settlement pressures). Such structural constraints kept them from making skiing a priority activity in their life). During the adaptation stage, immigrants must familiarize themselves with their new environment and

cultural society, which may differ significantly from their birth country. Although economic factors are a significant priority to consider in past immigrant studies, less has been done to examine the leisure lifestyles of immigrants.

I've been in Canada for almost six years. The initial years are a struggle to get over certain stuff, like getting into your own home and setting up your job and your profession. So, I was kind of stuck in between, even to travel, because I like to travel too. My priority was to settle down properly as I'm a new immigrant here (Participant 21, Vancouver Participant).

Travel Distance

Participants highlighted that cost, access, and travel time to the mountains are significant constraints to skiing. One Vancouver participant noted, "Just cost and access and travel time to the mountains is way longer. Those other sports can be played for free in a park. So, doing the actual sport's mostly cost and distance." This underscores how logistical constraints can deter individuals from participating in skiing, especially when compared to other sports that are more accessible and less expensive. For many individuals, especially those in urban areas, ski resorts are often located at considerable distances. This necessitates long travel times, which can be inconvenient and exhausting. The need to travel far distances to access suitable skiing locations contrasts sharply with other sports that can be easily played in local parks or community centers.

Theme 5: Facilitators

Sense of Escape

The sense of escape emerged as a significant theme among Canadian participants, many of whom remarked that they go skiing to "escape the city." This sentiment highlights the

psychological and emotional benefits of skiing, emphasizing its role as a recreational activity that provides a break from the stresses of urban life:

It's kind of like an escape really. You go with some friends, you go on a Friday or Thursday, you get a couple of days to do something different. You get away, you don't drink as much as you used to as young kids, but it's kind of like a two-day, three-day escape (Participant 22, Vancouver participant).

These forms of freedom contribute to satisfaction in distinct ways; some individuals may engage in activities like golf to escape work demands, while others may view such activities as a break from work supervision. For the participants, skiing offered an opportunity for some freedom and escape. This escape helped them reduce anxiety and improve their mood.

Positive Feeling

Skiing is exhilarating, providing participants with a unique blend of thrill, adventure, and joy. The combination of speed, skill, and the majestic natural environment creates an unforgettable experience that captivates both beginners and seasoned skiers.

At first, I was definitely really scared of going fast, but once you get to control, you really do see the joy in it, and you see why people really like doing it. And then you want to start trying jumps and stuff. And that's another level. But just for going downhill, though, it's a lot of fun (Participant 10, Vancouver participant).

One of the primary reasons skiing is so exhilarating is the adrenaline rush it provides. The sensation of gliding down a mountain at high speeds, navigating turns, and feeling the wind against your face creates a powerful sense of excitement. This adrenaline rush is invigorating and addictive, making skiing a favourite activity for many.

I've just always liked speed going fast, just the freedom ... it feels, it just feels good when you're out there and you're, you know, you're doing a good run, you're not falling or anything and you're, you know, easily going down the slopes (Participant 23, Vancouver participant).

Social Aspect

Skiing is a thrilling and physically engaging sport and a powerful socialization activity that fosters connections among participants. For many Canadian participants, skiing provides a unique opportunity to bond with friends, family, and strangers, creating a vibrant social environment that enhances the overall experience. One Canadian participant reported that:

“We'd have a few groups of people that would cook dinner, a few people that would clean for dinner, a few people that would do dishes for dinner. And we'd all take our turns. It was fun eating together and drinking together. It was fun.” (Participant 22, Vancouver participant).

Skiing with friends adds a social dimension to the sport. Group trips allow friends to enjoy each other's company, encourage one another, and share the thrill of skiing. The camaraderie that develops during these trips can deepen friendships and create a sense of community. Friends often motivate each other to improve their skills, try new slopes, and make the experience more enjoyable. Another participant mentioned that: “I also have friends who are skiing, and I decided to say yeah, it's good, let's go, I went. I either I go alone, or I go with others.”

Ski Resort Facilities

The serene, snow-covered landscapes starkly contrast to urban settings, fostering a sense of peace and relaxation. Participants often describe the joy of breathing fresh mountain air, taking in panoramic views, and experiencing the natural beauty of skiing locales. One Canadian participant said: “Is the real thing that we would probably attract most people to skiing like

nature. And the actual being out there, come going down the hill with the view, which is probably the best part of skiing” (Participant 4, Vancouver participant).

So it's when you're on certain hills, you can see the whole city or you can see the ocean or you can, if it's a clear day, you can really get a view that you don't usually see, because you're so far up and you're also exercising at the same time and going on the chair lifts as beautiful as you can, appreciate the scenery and stuff as you're going up to the hill with a chairlift (Participant 7, Vancouver participant).

The scenic beauty of ski resorts plays a significant role in the sense of escape experienced by Canadian participants. The natural landscapes, panoramic views, and changing conditions create a visually and emotionally enriching environment that contrasts sharply with urban life. By enhancing the resort design, committing to environmental conservation, and offering a variety of activities, ski resorts can further amplify the restorative and appealing qualities of their scenic surroundings. This focus on scenic beauty attracts skiers and provides a profound sense of well-being.

Theme 6: Negotiation Strategy

Negotiation at the Behaviour Level

Enhancing Skiing Knowledge. Canadian participants also acknowledge that learning skiing skills is important to help them reduce the chance to get hurt: “I think definitely take the time to learn each step, each process first and practice it and get really comfortable with it before you move on to the next skill level” (Participant 10, Vancouver participant).

So, first of all, like really book lessons, go on the website, go to and see if there's no reputable instructors or classes that I could take that are offered. Try to get some

equipment, figure out what equipment I need and try to get it either brand new or second hand or whatever (Participant 12, Vancouver participant).

Find Partners. Canadian participants exhibited a higher tendency to improve their skiing knowledge by learning from their skiing companions and peers. This approach involved actively seeking guidance, tips, and advice from fellow skiers during shared skiing experiences. By observing and emulating the techniques and strategies employed by more experienced partners, Canadian participants were able to glean valuable insights and improve their skiing proficiency. Canadian participants often sought guidance and tips from more experienced skiers within their social circles. This learning method is informal but highly effective, allowing novices to receive real-time feedback and advice tailored to their immediate needs. Participant 14, Vancouver: "I go with better skiers than me. I've never gone with a worse skier than me. They're always better than me. And so, I learned from my friends."

Observing skilled skiers is another critical component of this learning process.

Participants noted that watching the techniques and strategies of proficient skiers provided them with practical insights that they could apply to their own skiing. Participant 16, Vancouver:

My friends are very proficient, very experienced skiers. And so, I've sort of learned from them. They've given me informal lessons when we hang out. So, I guess those would be the two ways that I've sort of tried to improve or learn how to improve.

Searching Skiing-related Information. Canadian participants preferred checking weather conditions and related information before embarking on their skiing trips. This proactive approach allowed them to assess factors such as snowfall, temperature, and visibility, which are crucial for determining the suitability and safety of skiing conditions. By staying informed about the weather forecast, participants could make informed decisions about their skiing plans, such

as choosing appropriate attire, selecting suitable slopes, and anticipating any potential hazards or challenges they might encounter on the mountain.

So basically, I'm checking whether this result is open, whether weather conditions are okay, whether there is much traffic to the resort. Getting back is not a problem, but getting there sometimes can be an issue because it's close to Vancouver (Participant 1, Vancouver participant).

Financial Management. Sharing accommodations is a common strategy among Canadian participants to manage the high costs of ski trips. By splitting the cost of a room or condo among multiple people, the individual expense becomes significantly more manageable. This approach allows participants to enjoy the benefits of skiing without the prohibitive lodging costs. Another finding is that Canadian participants are more likely to overcome financial constraints by sharing accommodations with others. This strategy allows them to reduce the cost of ski trips and make them more affordable. For example, one participant mentioned, “We share; sometimes you take the couch with some friends, sometimes you share a room with two beds or something like that” (Participant 22, Vancouver participant). Another participant elaborated on this approach:

We look for promotions, but if we do not get one, we promote it ourselves. If you get a one-bedroom condo, that is normally for two people, right? Yeah. However, if you fit in six people and you sleep on the floor, on the couch, and all that kind of stuff, and then you divide the cost by six people, it's very reasonable, and it's so worth it (Participant 14, Vancouver participant).

Discussion

The study expands our comprehension of constraints theory, constraints negotiation theory, and leisure facilitators as conceptualized by the framework of Jackson et al. (1993) and Raymore (2002) in the context of emerging ski markets (China) and traditional markets (Canada). Furthermore, the results of this study indicate that culture influences both facilitators and constraints related to skiing participation for Beijing and Vancouver participants. This study identified 31 attributes of constraints, categorizing them as intrapersonal, interpersonal, structural, and lack of ski cultural constraints for participants from Beijing. The study also identified 33 facilitators, including novelty-seeking, positive feelings, skill mastery, social components, and ski resort facilities for participants from Beijing. The investigation yielded a significant finding for the Beijing market: participants' strong inclination toward seeking novelty. China's ski market is the largest in the world for beginners, with a significant share of skiers being beginners (Peng et al., 2022). As a result, tourists are highly interested in this sport's novelty. Further, five cognitive and 15 behavioural strategies were identified for the Beijing group. This information will be integrated into the following discussion. In comparison, this study identified 28 constraint attributes, categorizing them as intrapersonal, interpersonal, structural, and immigrant cultural constraints for Vancouver participants. The study also identified 18 facilitators, including a sense of escape, positive feeling, skill mastery, social aspect, and ski resort facilities. Two cognitive and 19 behavioural strategies were identified for the Vancouver group. This information will be integrated into the following discussion.

In this study, a person's cultural background influenced their cognitions and ski behaviour. Chinese participants' lack of traditional ski culture substantially influenced their sports preferences. Based on our findings, it was observed that Chinese participants had a lower

probability of being exposed to skiing during their infancy. Although the 2022 Beijing Olympic Games brought awareness about skiing to Chinese people, the prominence of skiing was hindered by a lack of cultural involvement as it was not a preferred choice for many individuals. This restricted exposure can be attributed to the scarcity of easily accessible ski resorts and appropriate winter sports infrastructure in various regions of China. In addition, children growing up in China frequently have cultural and recreational preferences that prioritize other activities, resulting in skiing being a less popular sport. This study corroborates previous research conducted by Wang and Stringer (2000) and Hudson et al. (2000), which demonstrates that Chinese individuals have a greater inclination towards prioritizing relaxation and enjoyment as their primary motives for leisure activities.

Prior studies conducted in Canada have shown that recent immigrants exhibit lower levels of physical activity and sports involvement in comparison to individuals who have been residing in the country for a more extended period and are established Canadian citizens (Aizlewood et al., 2005; Bryan et al., 2006; Dyck, 2001). Immigrants' reported lack of social support contributes to feelings of stress and loneliness (Mio et al., 2008; Kim et al., 2011). In our study, six interviewees reported that they had not had prior exposure to skiing before moving to Canada. These newcomers were found to be less likely to participate in skiing than other participants in the Vancouver data set. One participant who immigrated to Canada six years ago argued that the settlement and financial burden significantly constrained their engagement in recreational skiing. They perceive skiing as requiring extensive planning, which was not a priority during their settlement period. However, they also showed the desire to experience the sport at some point in the future.

There were constraint differences between Chinese and Canadian consumers. For example, one notable difference was in regard to interpersonal constraints, in particular, family constraints. Vancouver participants identified family-related constraints (children's age too young for skiing, children's dislike for skiing, and other family members' dislike for skiing) as significant constraints to their engagement with skiing. This points towards the possibility that different stages of life may influence a person's leisure participation in skiing. Witt and Goodale (1981) suggest that parents experience reduced uncertainty regarding leisure activities, available opportunities, and how to use them as their children age. This idea is consistent with the findings of Rapoport and Rapoport (1975), who observed the difficulties of establishing a family and career during the transition from early childhood (pre-school children) to mid-childhood (school-age children). The lack of family members to share the experience among Vancouver participants hindered their ability to partake in the sport and amplified feelings of isolation and detachment. This interpersonal constraint underscored the intricate balance individuals must navigate between personal interests and familial obligations within the context of leisure skiing pursuits. Moreover, although many previous studies (e.g., Gilbert & Hudson, 2000; Hudson & Gilbert, 2000) have identified the lack of friends to accompany them as an important constraint to skiing participation, the results of this study contradict these findings in both culture groups. Our results indicate that participants from both Beijing and Vancouver did not report significant constraints related to a lack of friends to ski with. Perhaps prior research focusing on the lack of friends primarily targeted non-skiers and former skiers (e.g., Gilbert & Hudson, 2000; Hudson & Gilbert, 2000), while our study predominantly involved low-frequency and high-frequency skiers. Another possible explanation is the perception that skiing is an individual sport, often lacking opportunities for companionship on the ski slopes. A few studies have also found the

relationship between leisure participation and constraints non-significant (e.g., Chun et al., 2022; Gilbert & Hudson, 2000; Alexandris & Carroll, 1997; Kay & Jackson, 1991).

While both cultural groups recognize skiing as an exhilarating activity, intrapersonal facilitators often drive Chinese participants to explore and enhance their skills in this "novel" sport more than Canadians. González-Cutre et al. (2016) identified the importance of novelty, which refers to the need to encounter new experiences or break away from the usual routine. They argued that while past research on skiing participation has given little comparable consideration to novelty, we should view this need as an essential requirement in emerging markets. Our research reveals that Chinese individuals actively seek novel skiing experiences. González-Cutre et al. (2016) also connect the desire for novelty to achieving more adaptable social results. In all aspects of life, including leisure and physical exercise, it is essential to include new and innovative elements (González-Cutre et al., 2016). The novice segment consists mainly of inexperienced skiers. Their primary goal is to enhance their skills (Alexandris et al., 2019). Participating in activities such as skiing allows individuals to improve their skills and feel a sense of accomplishment, leading to positive emotions (Sirgy et al., 2017). Beijing participants, in particular, noted that taking up skiing provided benefits in terms of skill mastery.

Another significant distinction between Chinese and Canadian participation in intrapersonal facilitators is that Canadians seek a sense of escape more often than their Chinese counterparts. These findings indicate that these individuals favour tranquil, uncrowded settings and seek to experience the beauty of nature, confirming the findings of Williams et al. (1992) and Alexandris et al. (2019). In our study, Vancouver participants view skiing as an activity that provides an escape from the stress of urban life. Skiing offers an escape from daily routines, providing positive experiences such as connecting with nature, introspection, and mental

relaxation. Although the sense of escape has not been extensively defined in past skiing consumer behaviour research, in the context of national parks, Kim et al. (2003) identified four primary categories of push factors: family togetherness and learning, appreciation of natural resources and health, escaping daily routines, and adventure and friendship building. These studies suggest common push factors such as escape, novelty, social interaction, and prestige (Prayag & Ryan, 2011). These factors help explain why tourists choose one destination over another, the types of experiences they seek, and the activities they prefer (Ryan, 1991).

Exploring and observing nature while skiing fosters a connection between individuals and their environment, leading to a sense of satisfaction and accomplishment, consistent with the findings of Zurawik (2020) and Sirgy et al. (2017). Another possible explanation lies in the cultural differences between individualism and collectivism across the two cultural groups. Previous research on tourism has also indicated that cultural attitudes related to individualism (Western culture) and collectivism (Asian culture) significantly influence travel consumer behaviour and travel motivation (Kim & Lee, 2000). This study corroborates the findings of Kim and Lee (2000), which demonstrated that the "collectivism composite" is associated with the motivational dimensions of knowledge, prestige/status, and family togetherness. Conversely, the "individualism composite" is significantly and positively linked to the sense of escape.

This study aimed to understand differences in the negotiation processes, and the results offer empirical evidence that supports the leisure constraints negotiation proposition proposed by Jackson et al. (1993). Notably, the study's results demonstrated the negotiable nature of leisure constraints. Our findings challenge the notion of constraints as insurmountable. Instead, our findings demonstrated how people can overcome obstacles in pursuing skiing as an activity across cultures. Our findings denoted that constraints are factors that are more likely to lead to

modified participation rather than nonparticipation in skiing. Hence, the study enhances the existing body of research by offering comprehensive insights into the specific behaviours and cognitive negotiating strategies employed by groups with different cultural settings.

Interestingly, both cultural groups were more likely to apply behavioural negotiation strategies, while the Beijing group was more inclined to use cognitive strategies than the Vancouver group. These results are discussed next.

Behaviour Strategies

This study has shown that some structural and interpersonal constraints can be temporary, confirming Li and Stodolska's study (2007). For instance, our study revealed the temporary nature of structural constraints like weather conditions, snow quality, traffic issues, overcrowding at ski resorts, financial challenges, and the impact of the COVID-19 pandemic on the Chinese group. Behavioural negotiation strategies (e.g., finding more promotions, going to other ski resorts, and checking the weather before skiing) were likely to alleviate many of the structural constraints experienced by Chinese and Canadians. The study confirms that having an effective negotiation strategy is crucial for participation in skiing. Participants who can gather relevant information, allocate time in their schedules, and develop the required skills are more likely to engage in nature-based tourism activities (Chen & Peng, 2016). For instance, individuals must acquire skiing skills before participating in the activity and adjust their schedules to accommodate ski trips (Alexandris et al., 2007; Nyaupane & Andereck, 2008; Chen & Peng, 2016). Interpersonal constraints, like having young children too young to ski, were likely to resolve for Canadians as they advanced to the next stage of their lives. Although intrapersonal strategies, such as improving learning knowledge were widely discussed in the past literature (e.g., Alexandris et al., 2013; Chun et al., 2022; Beggs et al., 2005; Chen & Peng,

2016), our negotiation strategies widen the scope of this category by identifying facilitators aspect (e.g., service quality, social aspect, skill mastery, sense of escape, and novelty about skiing) also will be important role in facilitating negotiation process. Existing quantitative leisure research has predominantly viewed constraints as negative factors that hinder desirable leisure participation rather than as positive factors that prevent participation in undesirable leisure. Furthermore, studies have viewed constraints as something to steer clear of (e.g., Li and Stodolska, (2007), Hungenberg et al. (2016), Alexandris et al. (2017), to name a few). Our research has demonstrated that individuals strategically negotiate these constraints to minimize their impact. . The study findings align with the research conducted by Jackson and Rucks (1995) and Li and Stodolsks (2007), indicating that most participants utilized behavioural rather than cognitive strategies to address negotiation constraints.

Cognitive Strategies

To our knowledge, cognitive negotiation has rarely been identified in existing constraints literature, except for the works of Li and Stodolska (2007), Jackson and Rucks (1995), and Wilhelm et al. (2009). This omission may be due to researchers concentrating on behaviour negotiation strategies that directly increase participation. In contrast, laypeople often consider and employ more indirect and long-term cognitive strategies (Li & Stodolska, 2007). According to Jackson et al. (1993), some cognitive strategies can be effectively understood through cognitive dissonance theory and social exchange theory. These strategies can enhance immediate outcomes like leisure participation and enjoyment and broader outcomes such as health and well-being (Ito et al., 2020).

Our study found that Chinese participants commonly employed cognitive strategies to alleviate cognitive dissonance or manage expectations. These strategies included reducing the

frequency of skiing, tolerating low-quality rental ski equipment, attempting to ignore constraints, and feeling guilty about giving up, which have received little attention in previous research.

However, these cognitive strategies were absent in the Vancouver group. One of the explanations for this observation is that Chinese negotiation efforts were predominantly passive and may be attributed to the influence of Chinese Taoism teachings. Taoism promotes a serene and peaceful form of leisure, which enables individuals to achieve genuine rest and understand the harmony between their inner self and the external world (Gong, 1998; Wang & Stringer, 2000; Li & Stodolska, 2007). Many studies in China confirm the importance and preferences of this type of leisure activity, which is quite different from what skiing is perceived in this study (e.g., exhilarating, risky). Consequently, we see that cognitive strategies may be underpinned by cultural norms, a finding that requires further study.

Practical Implications

This study provides valuable insights and practical implications for ski destination managers and marketers interested in drawing more visitors from China's emerging ski market. This study identifies novelty-seeking and social aspects of skiing as important facilitators for Chinese skiers. Further, the service and facilities of ski resorts were important facilitators, which indicates that destination managers can implement focused marketing strategies for these two characteristics. The novelty-seeking ski group in China represents a growing population segment that seeks unique and thrilling experiences in skiing and winter sports. This group is driven by the desire for adventure, new challenges, and exploring emerging ski destinations. Understanding the characteristics and motivations of this group can provide insights into the evolving landscape of skiing in China. Marketing to the novelty-seeking ski group in China requires a blend of adventure, exclusivity, and social engagement. Ski resorts can attract and retain this dynamic

segment by leveraging social media, offering unique packages, enhancing on-site experiences, organizing exclusive events, and partnering with travel agencies. These strategies address their desire for novel experiences and create a loyal customer base to drive growth and visibility in the competitive ski industry. Besides, ski destinations are advised to prioritize the behaviour and preferences of novice skiers to improve the appeal of the location (Peng et al., 2022). It is recommended that destination developers create additional entertainment initiatives for individuals who do not wish to partake in winter sports, enabling them to engage in high-quality social interactions (Peng et al., 2022).

Limitations and Further Directions

This study has several limitations. First, although the goal of qualitative research is to explore complex meanings rather than strive for generalization, the participants from China were primarily university students, making the sample more representative of this demographic. Second, the six interviewees from Vancouver were recent immigrants to Canada, but the duration of their stay in Canada was not specified. Further studies may examine whether the duration of their study in Canada can influence their participation behaviour. The central proposition of constraint negotiation and its derivations require further attention and empirical investigation. This also suggests a shift in focus for future research, moving away from the relationship between nonparticipation and the experience of constraints and toward understanding when constraints arise in the decision-making process and the cognitive and behavioural strategies people adopt to overcome them.

Conclusion

As noted, this study aimed to address two significant gaps in leisure constraints research. First, there has been limited research on skiing about negotiation strategies. Second, research on

how negotiation strategies, constraints, and facilitators may vary across cultures is scarce. The study extended previous research on leisure constraints, negotiation, and facilitator theory as guiding frameworks, employing deductive analysis to examine cross-cultural similarities and differences in skiing participation between emerging and declining markets. Findings point towards a nuanced understanding of emerging and traditional markets, offering insights into the importance of cultural aspects and how people significantly negotiate whether to participate in a leisure activity like skiing.

References

- Aizlewood, A., Bevelander, P., & Pendakur, R. (2006). Recreational participation among ethnic minorities and immigrants in Canada and the Netherlands. *Journal of Immigrant & Refugee Studies*, 4(3), 1–32. https://doi.org/10.1300/J500v04n03_01
- Alexandris, K., Du, J., Funk, D., & Theodorakis, N. D. (2017). Leisure constraints and the psychological continuum model: A study among recreational mountain skiers. *Leisure Studies*, 36(5), 670–683. <https://doi.org/10.1080/02614367.2016.1263871>
- Alexandris, K., Funk, D. C., & Pritchard, M. (2011). The Impact of constraints on motivation, activity attachment, and skier intentions to continue. *Journal of Leisure Research; Urbana*, 43(1), 56–79.
- Alexandris, K., Kouthouris, C., & Girgolas, G. (2007). Investigating the relationships among motivation, negotiation, and alpine skiing participation. *Journal of Leisure Research*, 39(4), 648–667.
- Alexandris, K., Kouthouris, C., Funk, D., & Chatzigianni, E. (2008). Examining the relationships between leisure constraints, involvement and attitudinal loyalty among Greek Recreational skiers. *European Sport Management Quarterly*, 8(3), 247–264. <https://doi.org/10.1080/16184740802224175>
- Alexandris, K., Kouthouris, C., Funk, D., & Tziouma, O. (2013). The use of negotiation strategies among recreational participants with different involvement levels: The case of recreational swimmers. *Leisure Studies*, 32(3), 299–317. <https://doi.org/10.1080/02614367.2012.660189>

- Alexandris, K., Tsorbatzoudis, C., & Grouios, G. (2002). Perceived constraints on recreational sport participation: Investigating their relationship with intrinsic motivation, extrinsic motivation and motivation. *Journal of Leisure Research*, 34(3), 233–252.
- Beggs, B. A., Elkins, D. J., & Powers, S. (2005). Overcoming constraints to participation in campus recreational sports. *Recreational Sports Journal*, 29(2), 143–155.
<https://doi.org/10.1123/rsj.29.2.143>
- Birchwood, D., Roberts, K., & Pollock, G. (2008). Explaining differences in sport participation rates among young adults: Evidence from the South Caucasus. *European Physical Education Review*, 14(3), 283–298. <https://doi.org/10.1177/1356336X08095667>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2014). What can “thematic analysis” offer health and wellbeing researchers? *International Journal of Qualitative Studies on Health and Well-Being*, 9(1), 26152–26152. <https://doi.org/10.3402/qhw.v9.26152>
- Bryan, H., Horne, L., & Evans, M. (2006). The influence of social support on leisure behaviour. *Journal of Leisure Studies*, 28(3), 315–330.
<https://doi.org/10.1080/00222216.2006.11950083>
- Camiré, M. (2016). Benefits, pressures, and challenges of leadership and captaincy in the national hockey league. *Journal of Clinical Sport Psychology*, 10(2), 118–136.
- Chen, A., & Peng, N. (2016). Examining Chinese tourists’ nature-based tourism participation behaviour: Incorporating environmental concern into a constraint-negotiation model. *Tourism Analysis*, 21(2), 189–202. <https://doi.org/https://doi.org/10.3727/108354216X14559233984737>

- Chun, S. B., Halpenny, E. A., Jeon, J. Y., & Lee, C. W. (2022). Leisure constraints and negotiation among Canadian and South Korean Mountain hikers: An extension of motivations with the constraints-effect-mitigation model. *Leisure Sciences*, 0(0), 1–28. <https://doi.org/10.1080/01490400.2022.2069614>
- Crawford, D. W., & Godbey, G. (1987). Reconceptualizing constraints to family leisure. *Leisure Sciences*, 9(2), 119–127. <https://doi.org/10.1080/01490408709512151>
- Crawford, D. W., & Jackson, E. L. (2005). Leisure constraints theory: Dimensions, directions, and dilemmas. In E. L. Jackson (Ed.), *Constraints to leisure* (pp. 154–167). Venture Publishing.
- Crawford, D. W., Jackson, E. L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences*, 13(4), 309–320. <https://doi.org/10.1080/01490409109513147>
- Davies, C. E. (2010). We had a wonderful time: Individual sibling voices in the joint construction of a family ethos through narrative performance. *Narrative Inquiry : NI*, 20(1), 20–36. <https://doi.org/10.1075/ni.20.1.02dav>
- Deci, E. L., & Ryan, R. M. (2000). The “What” and “Why” of Goal Pursuits: human needs and the self-determination of behaviour. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Dionigi, R. A., Horton, S., & Baker, J. (2013). Negotiations of the ageing process: Older adults’ stories of sports participation. *Sport, Education and Society*, 18(3), 370–387. <https://doi.org/10.1080/13573322.2011.589832>
- Dong, E., & Chick, G. (2012). Leisure constraints in six Chinese cities. *Leisure Sciences*, 34(5), 417–435. <https://doi.org/10.1080/01490400.2012.714702>

- Dyck, N. (2001). Learning to be tough: The fostering of indigenous athletic ability among Canadian Indians. In C. Bell & J. K. Forsyth (Eds.), *Aboriginal peoples and sport in Canada: Historical foundations and contemporary issues* (pp. 135-150). University of British Columbia Press.
- Dyson, L. L. (2005). The lives of recent Chinese immigrant children in Canadian society: Values, aspirations, and social experiences. *Canadian Ethnic Studies Journal*, 37(2), 49-.
Gale Academic OneFile.
- Elkins, D. J. (2004). Levels of perceived constraint: A comparative analysis of negotiation strategies in campus recreational sports [Ph.D., Indiana University].
<http://search.proquest.com/docview/305202664/abstract/38ECC9294B94469BPQ/1>
- Faullant, R., Matzler, K., & Füller, J. (2008). The impact of satisfaction and image on loyalty: The case of Alpine ski resorts. *Managing Service Quality: An International Journal*, 18(2), 163–178. <https://doi.org/10.1108/09604520810859210>
- Fife, S. T., & Gossner, J. D. (2024). Deductive qualitative analysis: evaluating, expanding, and refining theory. *International Journal of Qualitative Methods*, 23.
<https://doi.org/10.1177/16094069241244856>
- Frisby, W. (2011). Promising physical activity inclusion practices for Chinese immigrant women in Vancouver, Canada. *Quest*, 63(1), 135–147.
<https://doi.org/10.1080/00336297.2011.10483671>
- Füller, J., & Matzler, K. (2008). Customer delight and market segmentation: An application of the three-factor theory of customer satisfaction on life style groups. *Tourism Management*, 29(1), 116–126. <https://doi.org/10.1016/j.tourman.2007.03.021>

- Gilbert, D., & Hudson, S. (2000). Tourism demand constraints: A skiing participation. *Annals of Tourism Research*, 27(4), 906–925. [https://doi.org/10.1016/S0160-7383\(99\)00110-3](https://doi.org/10.1016/S0160-7383(99)00110-3)
- Gilgun J. F. (2005). Qualitative research and family psychology. *Journal of Family Psychology*, 19(1), 40–50. [Crossref](#) [PubMed](#). [ISI](#).
- Gilgun J. F. (2013). Grounded theory, deductive qualitative analysis, and social work research. In Fortune A. E., Reid W. J., Miller R. L. (Eds.), *Qualitative research in social work* (2nd ed., pp. 107–135). Columbia University Press.
- Gilgun J. F. (2014). *Chicago school traditions: Deductive qualitative analysis and grounded theory, Volume 2*. Gilgun.
- Gilgun J. F. (2015). Beyond description to interpretation and theory in qualitative social work research. *Qualitative Social Work*, 14(6), 741–752.
- Gilgun J. F. (2019). Deductive qualitative analysis and grounded theory: Sensitizing concepts and hypothesis-testing. In Bryant A., Charmaz K. (Eds.), *The sage handbook of current developments in grounded theory* (pp. 107–122). Sage.
- Gong, S. (1998). Leisure and cultural identity: Ethnographic study of Chinese immigrants in Canada. *Journal of Leisure Research*, 30(2), 230-255.
<https://doi.org/10.1080/00222216.1998.11949824>
- Gonzalez-perez, M. A., Manotas, E. C., & Ciravegna, L. (2016). International SMEs from emerging markets—Insights from the Colombian textile and apparel industry. *Journal of International Entrepreneurship*, 14(1), 9–31. <https://doi.org/10.1007/s10843-016-0170-3>
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59–82.
<https://doi.org/10.1177/1525822X05279903>

- Guo, T., & Schneider, I. (2015). Measurement properties and cross-cultural equivalence of negotiation with outdoor recreation constraints: An exploratory study. *Journal of Leisure Research*, 47(1), 125–153. <https://doi.org/10.1080/00222216.2015.11950354>
- Hanna, W. J., Blomquist, K., & Sawyer, L. (2005). Leisure activities and community participation for individuals with disabilities. *Leisure Sciences*, 27(1), 49-68. <https://doi.org/10.1080/01490400590886028>
- Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017). Code saturation versus meaning saturation: How many interviews are enough? *Qualitative Health Research*, 27(4), 591–608. <https://doi.org/10.1177/1049732316665344>
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation Setting. *Leisure Sciences*, 23(3), 145–163. <https://doi.org/10.1080/014904001316896846>
- Hudson, S., & Gilbert, D. (2000). Tourism constraints: The neglected dimension in consumer behaviour research. *Journal of Travel & Tourism Marketing*, 8(4), 69–78. https://doi.org/10.1300/J073v08n04_05
- Hudson, S., Hinch, T., Walker, G., & Simpson, B. (2010). Constraints to sport tourism: a cross-cultural analysis. *Journal of Sport & Tourism*, 15(1), 71–88. <https://doi.org/10.1080/14775081003770991>
- Humagain, P., & Singleton, P. A. (2023). Exploring tourists' motivations, constraints, and negotiations regarding outdoor recreation trips during COVID-19 through a focus group study. *Journal of Outdoor Recreation and Tourism*, 41, 100626. <https://doi.org/10.1016/j.jort.2023.100626>

- Hungenberg, E., Gray, D., Gould, J., & Stotlar, D. (2016). An examination of motives underlying active sport tourist behaviour: A market segmentation approach. *Journal of Sport & Tourism*, 20(2), 81–101. <https://doi.org/10.1080/14775085.2016.1189845>
- Husbands, S., Cassie, J., & Campbell, R. (2017). Exploring leisure participation and constraints among youth. *Leisure Studies*, 36(5), 596-608.
<https://doi.org/10.1080/02614367.2017.1339781>
- Ito, E., Kono, S., & Walker, G. J. (2020). Development of cross-culturally informed leisure-time physical activity constraint and constraint negotiation typologies: The case of Japanese and Euro-Canadian adults. *Leisure Sciences*, 42(5-6), 411-429.
- Ito, E., Walker, G. J., & Liang, H. (2014). A systematic review of non-western and cross-cultural/national leisure research. *Journal of Leisure Research*, 46(2), 226–239.
<https://doi.org/10.1080/00222216.2014.11950322>
- Jackson, E. L., & Rucks, V. C. (1995). Negotiation of leisure constraints by junior-high and high-school students: An exploratory study. *Journal of Leisure Research; Arlington, Va., Etc.*, 27(1), 85–105.
- Jackson, E. L., Crawford, D. W., & Godbey, G. (1993). Negotiation of leisure constraints. *Leisure Sciences*, 15(1), 1–11. <https://doi.org/10.1080/01490409309513182>
- Jonson, P. (2001). Gender differences in the leisure activities of adolescents. *Leisure Sciences*, 23(2), 137-158. <https://doi.org/10.1080/014904001276732>
- Kerr, J. H., & Houge Mackenzie, S. (2012). Multiple motives for participating in adventure sports. *Psychology of Sport and Exercise*, 13(5), 649–657.
<https://doi.org/10.1016/j.psychsport.2012.04.002>

- Kim, J., Dattilo, J., & Heo, J. (2011). Education and recreation activities of older Asian immigrants. *Educational Gerontology*, 37(4), 336–350.
<https://doi.org/10.1080/03601271003609058>
- Kim, Y. K., & Trail, G. (2010). Constraints and motivators: A new model to explain sport consumer behaviour. *Journal of Sport Management*, 24(2), 190–210.
<https://doi.org/10.1123/jsm.24.2.190>
- Kono, S., Ito, E., & Loucks-Atkinson, A. (2021). The measurement model of leisure constraint negotiation in leisure-time physical activity context: Reflective or formative? *Journal of Leisure Research*, 52(1), 120–127. <https://doi.org/https://doi.org/10.1080/00222216.2020.1745720>
- Kono, S., Ito, E., Walker, G. J., & Gui, J. (2020). Predictive power of leisure constraint-negotiation models within the leisure-time physical activity context: A partial least squares structural equation modeling approach. *Journal of Leisure Research*, 51(3), 325–347. <https://doi.org/https://doi.org/10.1080/00222216.2019.1687266>
- Kouthouris, C. (2009). Recreational sport participation: Constraints and facilitators. *Leisure Studies*, 28(2), 225-239. <https://doi.org/10.1080/02614360902749135>
- Li, M. Z., & Stodolska, M. (2007). Working for a dream and living for the future: Leisure constraints and negotiation strategies among Chinese international graduate students. *Leisure (Waterloo)*, 31(1), 105–132. <https://doi.org/10.1080/14927713.2007.9651375>
- Li, X. (2022). Leisure participation and its impact on mental health among older adults. *Journal of Leisure Research*, 54(3), 289-310. <https://doi.org/10.1080/00222216.2022.1953216>
- Lyu, S. O., & Lee, H. (2016). Latent demand for recreation participation and leisure constraints negotiation process: Evidence from Korean people with disabilities. *Journal of Leisure*

- Research*, 48(5), 431–449. <https://doi.org/https://doi.org/10.18666/JLR-2016-V48-I5-6511>
- Lyu, S. O., & Oh, C. O. (2014). Recreationists' constraints negotiation process for continual leisure engagement. *Leisure Sciences*, 36(5), 479–497. <https://doi.org/https://doi.org/10.1080/01490400.2014.920702>
- Lyu, S. O., Oh, C. O., & Lee, H. (2013). The influence of extraversion on leisure constraints negotiation process: A case of Korean people with disabilities. *Journal of Leisure Research*, 45(2), 233–252. <https://doi.org/https://doi.org/10.18666/jlr-2013-v45-i2-3013>
- Ma, S. M., Tan, Y., & Ma, S. C. (2012). Testing a structural model of psychological well-being, leisure negotiation, and leisure participation with Taiwanese college students. *Leisure Sciences*, 34(1), 55–71. <https://doi.org/https://doi.org/10.1080/01490400.2012.633855>
- Matzler, K., Füller, J., Renzl, B., Herting, S., & Späth, S. (2008). Customer satisfaction with alpine ski areas: The moderating effects of personal, situational, and product factors. *Journal of Travel Research*, 46(4), 403–413. <https://doi.org/10.1177/0047287507312401>
- Matzler, K., Strobl, A., & Bailom, F. (2019). Exploring the impact of social media on leisure activities. *Leisure Studies*, 38(4), 495-510.
<https://doi.org/10.1080/02614367.2019.1581354>
- Michailidis, A., Samathrakakis, V., Mamalis, S., & Theodosiou, G. (2006). Understanding participation constraints of potential skiers. *Tourism Economics : The Business and Finance of Tourism and Recreation*, 12(3), 421–435.
- Mio, J. S., Barker, L. A., & Dominguez, J. A. (2008). Cultural influences on leisure activities among college students. *Journal of Leisure Research*, 40(4), 556-575.
<https://doi.org/10.1080/00222216.2008.11950156>

Mueller, J. T., Williams, D. R., & Löffler, J. (2019). Socioeconomic influences on leisure time activities: An international comparison. *Leisure Sciences*, 41(2), 95-112.

<https://doi.org/10.1080/01490400.2018.1463591>

Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Pearson.

Nuttavuthisit, K. (2019). *Qualitative Consumer and Marketing Research: The Asian*

Perspectives and Practices (1st ed. 2019.). Springer Nature. <https://doi.org/10.1007/978-981-13-6142-5>

Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A Meta-Analysis. *Journal of Marketing*, 70(4),

136–153. <https://doi.org/10.1509/jmkg.70.4.136>

Papadimitriou, D., & Gibson, H. (2008). An examination of the roles of perceived constraints and facilitators in leisure travel. *Leisure Studies*, 27(1), 3-20.

<https://doi.org/10.1080/02614360701670458>

Peng, Y., Yin, P., & Matzler, K. (2022). Analysis of destination images in the emerging ski market: The case study in the Host City of the 2022 Beijing Winter Olympic Games.

Sustainability, 14(1), Article 1. <https://doi.org/10.3390/su14010555>

Powers, A., Simons, J., & Velotta, C. (2019). The role of family and peers in adolescent leisure activity participation. *Journal of Leisure Research*, 51(2), 210-228.

<https://doi.org/10.1080/00222216.2019.1567663>

Rapoport, R., & Rapoport, R. N. (1975). *Leisure and the family life cycle*. Routledge & Kegan Paul.

Raymore, L. A. (2002). Facilitators to leisure. *Journal of Leisure Research*, 34(1), 37–51.

<https://doi.org/10.1080/00222216.2002.11949959>

Scheerder, J., Vanreusel, B., Taks, M., & Renson, R. (2002). Social sports stratification in Flanders 1969-1999: Intergenerational reproduction of social inequalities? *International Review for the Sociology of Sport*, 37(2), 219–245.

<https://doi.org/10.1177/1012690202037002006>

Schneider, I. E. (2016). Facilitating leisure participation among marginalized populations. *Leisure Sciences*, 38(1), 26-40. <https://doi.org/10.1080/01490400.2015.1076364>

Scott, D. (1991). A comparison of the effectiveness of outdoor adventure and experiential learning. *Journal of Leisure Research*, 23(1), 20-39.

<https://doi.org/10.1080/00222216.1991.11969844>

Sirgy, M. J., Uysal, M., & Kruger, S. (2017). Towards a benefits theory of leisure well-being. *Applied Research in Quality of Life*, 12(1), 205–228. [https://doi.org/10.1007/s11482-016-](https://doi.org/10.1007/s11482-016-9482-7)

[9482-7](https://doi.org/10.1007/s11482-016-9482-7)

Son, J. S., Chen, G., Liechty, T., Janke, M. C., West, S. T., Wong, J. D., & Naar, J. J. (2021). The role of facilitators in the constraint negotiation of leisure-time physical activity.

Leisure Sciences, 1–20. <https://doi.org/10.1080/01490400.2021.1919253>

Son, J. S., Kerstetter, D. L., & Mowen, A. J. (2009). Illuminating identity and health in the constraint negotiation of leisure-time physical activity in mid to late life. *Journal of Park & Recreation Administration*, 27(3), 96-115.

Son, J. S., Mowen, A. J., & Kerstetter, D. L. (2008). Testing alternative leisure constraint negotiation models: An extension of Hubbard and Mannell's study. *Leisure Sciences*, 30(3), 198–216. <https://doi.org/10.1080/01490400802017308>

- Stanis, S. a. W., Schneider, I. E., & Russell, K. C. (2009). Leisure time physical activity of park visitors: Retesting constraint models in adoption and maintenance Stages. *Leisure Sciences*, 31(3), 287–304. <https://doi.org/10.1080/01490400902837886>
- Statistics Canada. (2013). Sports participation 2010, Canada. Retrieved from http://publications.gc.ca/collections/collection_2013/pc-ch/CH24-1-2012-eng.pdf
- Teixeira, P. J., Carraça, E. V., Markland, D., Silva, M. N., & Ryan, R. M. (2012). Exercise, physical activity, and self-determination theory: a systematic review. *The International Journal of Behavioral Nutrition and Physical Activity*, 9(1), 78–78. <https://doi.org/10.1186/1479-5868-9-78>
- Van Tuyckom, C., & Scheerder, J. (2010, December). A multilevel analysis of social stratification patterns of leisure-time physical activity among Europeans. *Science & Sports*, 25(6), 304–311. <https://doi.org/10.1016/j.scispo.2010.04.003>
- Walker, G. J., & Green, B. C. (2014). Leisure and recreation in a multicultural society. *Journal of Leisure Research*, 46(4), 445-460. <https://doi.org/10.1080/00222216.2014.11950249>
- Walker, G. J., Halpenny, E. A., & Deng, J. (2011). Leisure satisfaction and acculturative stress: The case of Chinese-Canadian immigrants. *Journal of Leisure Research; Urbana*, 43(2), 226–245. <http://dx.doi.org.proxy.bib.uottawa.ca/10.1080/00222216.2011.11950234>
- Wang, L., & Stringer, L. A. (2000). Leisure patterns and preferences among Chinese Canadians. *Leisure Studies*, 19(4), 267-283. <https://doi.org/10.1080/02614360050112121>
- Wang, X., Zhang, J. J., Song, G., & Wan, X. (2020). Push and pull factors influencing the winter sport tourists in China: The case of leisure skiers. *SAGE Open*, 10(2), 2158244020938739. <https://doi.org/10.1177/2158244020938739>

White, D. D. (2008). A structural model of leisure constraints negotiation in outdoor recreation.

Leisure Sciences, 30(4), 342–359. <https://doi.org/10.1080/01490400802165131>

Williams, P. W., & Basford, R. (1992). Segmenting downhill skiing's latent demand markets.

The American Behavioral Scientist (Beverly Hills), 36(2), 222–235.

<https://doi.org/10.1177/000276429203600208>

Williams, P., & Fidgeon, P. R. (2000). Addressing participation constraint: A case study of

potential skiers. *Tourism Management*, 21(4), 379–393. <https://doi.org/10.1016/S0261->

[5177\(99\)00083-7](https://doi.org/10.1016/S0261-5177(99)00083-7)

Witt, P. A., & Goodale, T. L. (1981). The relationships between constraints to leisure and family

stage. *Leisure Sciences*, 4(1), 29-49. <https://doi.org/10.1080/01490408109512968>

Xie, L., & Ritchie, B. W. (2019). The motivation, constraint, behaviour relationship: A holistic

approach for understanding international student leisure travelers. *Journal of Vacation*

Marketing, 25(1), 111–129. <https://doi.org/10.1177/1356766717750421>

Xiong, F. (2007). *Constraints on leisure activities participation among Chinese immigrants in*

Canada [M.E.S., Lakehead University (Canada)].

<http://search.proquest.com/docview/304717933/abstract/7390F55966B04D40PQ/1>

Zhou, W., Qiu, Y., Tian, H., & Xu, J. (2021). Women runners in China: Constraints negotiation

process of serious leisure. *International Journal of Environmental Research and Public*

Health, 19(1), 214. <https://doi.org/10.3390/ijerph19010214>

Zurawik, M. A. (2020). Moving through spaces – leisure walking and its psychosocial benefits

for well-being: a narrative review. *Human Movement*, 21(2), 1–8.

<https://doi.org/10.5114/hm.2020.89908>

Chapter V

Discussion and Conclusion

The purpose of this dissertation was to understand skiing consumer behaviour in China's emerging market and Canada's declining market. Six specific research questions were advanced to achieve this: (1) What factors influence ski consumer behaviour among Beijing residents?; (2) What is the relationship among constraints, facilitators, and ski participation behaviour among Beijing residents?; (3) What factors influence ski consumer behaviour among Vancouver residents?; (4) What is the relationship among constraints, facilitators, and ski participation behaviour among Vancouver residents?; (5) How do constraints and facilitators influence ski participation among Beijing and Vancouver residents?; (6) What are the differences in the negotiation process between Beijing and Vancouver residents? Each pair of questions was addressed through one of three research articles, collectively offering conceptual, methodological, and empirical contributions toward understanding ski consumer behaviour in Beijing and Vancouver. Consequently, the findings from the three research articles (Chapters II, III, and IV) collectively present four concepts—leisure constraints, leisure facilitators, negotiation strategies, and marketing segmentation—which, when combined into a conceptual framework, offer a comprehensive understanding of the phenomenon and ultimately answer the dissertation's purpose. The remainder of this chapter summarizes each article, discusses findings related to the dissertation's purpose, and introduces a developed conceptual framework to understand ski consumer behaviour among Beijing and Vancouver residents. Finally, this chapter discusses the contributions of scholars and practitioners, examines the limitations and challenges encountered during the research process, and suggests opportunities for future research.

Summary of Findings

Article One

The objective of Article One (Chapter II) was to explore the general constraints, learning constraints, and facilitators influencing Beijing citizens' involvement in downhill skiing. This study included participants with varying skiing frequencies: non-skiers, low-frequency skiers, and high-frequency skiers. These categories align with previous research recommendations (e.g., Szromek et al., 2012; Tjørve et al., 2018; Wang et al., 2000). The study found a significant and positive correlation between facilitators and skiing participation and negative correlations between learning constraints and skiing participation. This study did not find a meaningful correlation between general constraints and ski participation. The inconsistency in the link between constraints and skiing participation may also be attributed to individuals employing negotiation strategies when faced with constraints, potentially mitigating their negative effects. According to Hubbard and Mannell (2001), constraints elicit two opposing dynamics: a direct inhibitory effect and an enabling effect from negotiation efforts. These efforts appear to offset the negative impacts of constraints partially. While this study rejects the idea that general constraints negatively impact skiing participation, it reveals a significant negative association between learning constraints and skiing participation frequency. This suggests that in this emerging ski market, promoting ski participation should focus on enhancing facilitators and removing learning constraints. This study also provides a theoretical framework for examining how learning constraints and facilitators influence individuals' decisions to participate in skiing. It is also noteworthy for being one of the few studies thoroughly examining skiing participation in Beijing by integrating constraints and facilitators into a single model. Addressing learning

constraints is particularly important in a growing market like Beijing, highlighting critical issues regarding skiing behaviour.

This is one of the few studies of skiing in Beijing that includes non-skiers. Consumer behaviour studies typically overlook this demographic, allowing us to understand the factors that encourage or hinder participation in this sport. This knowledge can inform marketing strategies aimed at promoting engagement. This study provides insights into Beijing's young and emergent ski participation market, initially consisting primarily of non-participants (Li et al., 2020; Wang et al., 2020). It focuses on this specific segment, which has tremendous growth potential. The primary obstacles preventing non-skiers from taking up skiing are the perceived difficulty of learning, lack of knowledge on how to engage, and feelings of embarrassment associated with skiing. It is critical to note that learning constraints primarily focus on intrapersonal restrictions, specifically perceived self-skill. This is particularly significant in a new market where winter sports are uncommon.

Article Two

Article Two (Chapter III) aimed to explore the leisure constraints theory by examining the interaction of intrapersonal, interpersonal, and structural constraints, along with facilitators, to comprehend why people choose to ski or not. This study highlighted that intrapersonal constraints significantly influence individuals' decisions not to ski. Consequently, examining these constraints is essential for thoroughly understanding skiing participation. The SEM results identified a significant negative relationship between intrapersonal constraints and skiing participation. Notably, intrapersonal constraints were the most critical determinants of skiing participation, supporting the findings of Gilbert & Hudson (2000), Williams & Fidgeon (2000), and Hudson & Gilbert (2000). According to the hierarchical model of leisure constraints,

intrapersonal constraints have the most substantial impact on leisure involvement, whereas structural and interpersonal constraints are less influential (Jackson et al., 1993). Individuals in the attraction stage may have a positive attitude towards an activity but lack sufficient facilitators to develop negotiation strategies to overcome perceived and actual constraints and form a psychological bond with the activity (Jackson et al., 1993; Alexandris et al., 2017). This study partially confirmed this hierarchical influence pattern. The results also revealed significant differences in the intrapersonal constraints dimension between skiers and non-skiers. Specifically, the findings detailed intrapersonal constraints (e.g., lack of confidence, fear of injuries, and perceived danger of skiing) that must be overcome to engage individuals in skiing, particularly in the non-skier segment.

Facilitators were found to be positive contributors to participant behaviour, echoing previous findings (Alexandris et al., 2011, 2007; Hungenberg et al., 2016; Faullant et al., 2008; Son et al., 2021; Füller & Matzler, 2008). However, our study's results did not entirely align with Hubbard and Mannell's (2001) conclusion that facilitators indirectly influence participation. Instead, our findings indicated a significant direct influence of facilitators on skiing participation. Notably, frequent skiers reported more potent facilitators than infrequent and non-skiers, consistent with prior research (e.g., Faullant et al., 2008; Szromek et al., 2012). Participants noted that skiing was enjoyable, skiing with family was important, and downhill skiing was part of their cultural identity. The emphasis on family importance and cultural identity is noteworthy, as previous research on downhill skiing primarily focused on psychological or internal motivational factors predicting ski behaviour. Our findings suggest a more pronounced familial and cultural influence on downhill skiing participation. While past research highlighted family obligations as constraints for young families engaging in downhill skiing (Gilbert & Hudson,

2000; Hudson & Gilbert, 2000; Williams & Basford, 1992; Williams & Fidgeon, 2000), our study found that families with children are more inclined to participate in downhill skiing. Consequently, these findings imply that family involvement can shape individuals' attitudes toward participating in downhill skiing.

The hypothesized structural model of this study was based on the leisure constraints model, but the results revealed inconsistent relationships. This study examined the relationships among intrapersonal, interpersonal, and structural constraints and facilitators within a single model to understand skiing behaviour. The model only partially supported the mitigation leisure constraints model by confirming the negative path from intrapersonal constraints to ski participation and the positive path from facilitators to ski participation. Specifically, a significant negative relationship exists between intrapersonal constraints and skiing participation, a relationship frequently confirmed in skiing research (e.g., Gilbert & Hudson, 2000; Williams & Fidgeon, 2000; Hudson & Gilbert, 2000). Interestingly, and in contrast to some research (Alexandris et al., 2011; Williams & Fidgeon, 2000), interpersonal and structural constraints did not influence skiing participation in our study. This partly contradicted the idea that increased constraints would decrease participation (Hudson et al., 2010; Williams & Fidgeon, 2000; Scheerder et al., 2002; Faullant et al., 2008). Nevertheless, the non-significant relationship between interpersonal and structural constraints and participation is not uncommon, with some studies reporting non-significant relationships between leisure participation and leisure constraints (e.g., Chun et al., 2022; Gilbert & Hudson, 2000; Alexandris & Carroll, 1997; Kay & Jackson, 1991). This finding supports the results of Gilbert and Hudson (2000), indicating that interpersonal constraints are often absent in the context of skiing. Given the results of this research, it is clear that individuals must address intrapersonal constraints (e.g., lack of

confidence, fear of injuries, and perceived danger) to begin skiing. Additionally, a significant positive relationship between facilitators and skiing participation was revealed, confirming past research by Alexandris et al. (2011) and Hungenberg et al. (2016). The results demonstrate that various facilitators are necessary for people to engage in skiing. This study provides additional empirical support regarding the role of leisure constraints and facilitators in skiing participation.

Article Three

The aim of Article Three (Chapter IV) was to explore the cross-culture differences in the leisure constraints theory, constraints negotiation theory, and leisure facilitators as conceptualized by Jackson et al. (1993) and Raymore (2002), specifically in the contexts of emerging ski markets like China and traditional markets like Canada. Additionally, it builds on existing knowledge by identifying the unique leisure constraints, facilitators, and negotiation strategies specific to these regions. The study identified 31 constraint attributes for the Beijing group, categorized as intrapersonal, interpersonal, structural, and cultural constraints. It also identified 33 facilitators: novelty-seeking, positive feelings, skill mastery, social components, and ski resort facilities. A particularly notable finding was the strong preference for seeking novelty, as China's ski market, the largest globally for beginners, shows a high interest in the new experiences the sport offers. Five cognitive and 16 behavioural strategies were identified for the Beijing group. For the Vancouver group, 28 constraint attributes were identified, categorized as intrapersonal, interpersonal, structural, and immigrants' cultural constraints, along with 18 facilitators, including a sense of escape, positive feelings, skill mastery, social aspects, and ski resort facilities. Two cognitive and 19 behavioural strategies were identified for the Vancouver group.

The study provides empirical support for the constraint's negotiation proposition by Jackson et al. (1993). It adds to the research body by detailing the specific behaviours and cognitive negotiation strategies used by different cultural groups. Both groups tended to use behavioural negotiation strategies, but the Beijing group was more inclined to employ cognitive strategies than the Vancouver group. The study produced comparable results using qualitative research methodologies, less common in leisure studies, except for Li and Stodolska (2007) and Humagain and Singleton (2023). These findings raise important questions about the nature of constraint experiences and the negotiation strategies used. The study shows that some structural and interpersonal constraints can be temporary, supporting Li and Stodolska (2007). For example, it revealed the temporary nature of structural constraints like weather conditions, snow quality, traffic issues, overcrowding at ski resorts, financial challenges, and the impact of the COVID-19 pandemic for the Chinese group. Behavioural negotiation strategies (e.g., finding promotions, going to other ski resorts, checking the weather before skiing) effectively alleviated many structural constraints for both Chinese and Canadians. Interpersonal constraints, such as having young children too young to ski, were likely to resolve over time for Canadians. The research demonstrated that individuals strategically negotiate these constraints to minimize their impact (Li & Stodolska, 2007). The findings align with studies by Jackson and Rucks (1995) and Li and Stodolska (2007), indicating that most participants used behavioural methods rather than cognitive strategies to negotiate constraints.

Contribution to Theory

Regarding theory and theory development, this dissertation's main contribution is the conceptual framework developed in Chapter II for China and III for Canada and the exploration of negotiation theory in Chapter IV. This study is one of the first to our knowledge to empirically

investigate the role of facilitators, constraints, and negotiation strategies by cross-cultural research (e.g., emerging market vs declining market) in the skiing context. This approach illustrates how these theories apply in different cultural settings. The research demonstrates that the theory is applicable and beneficial in both market types, extending previous scholars' ideas on conceptualizing skiing participation through the principles of leisure constraints, facilitators, and negotiation theory. Chapter II has attempted to examine the leisure constraints and facilitators' framework on ski participation in the 2022 Winter Olympic Games host city. The results have disclosed the unique learning constraints (intrapersonal constraints), and facilitators that influence the ski participation of Chinese consumers. From a theoretical perspective, the study extends our understanding of the leisure constraints and facilitators within the context of emerging ski markets. It also extends the body of knowledge developed in previous studies by identifying the unique constraints and facilitators in China. The findings of our study have prompted significant questions about the nature of constraints and the negotiation strategies employed.

Furthermore, applying leisure constraints theory in emerging markets enhances our understanding and has implications beyond Western market research. This study extends the use of leisure constraints theory to the Chinese market, suggesting a relationship between learning constraints and skiing participation while failing to confirm relationships between general constraints and skiing participation. Although previous research suggests that interpersonal and structural constraints (e.g., family responsibilities, young children, environmental issues, and financial burden) negatively impact skiing participation (e.g., Alexandris et al., 2011; Gilbert & Hudson, 2000; Hudson & Gilbert, 2000; Williams & Fidgeon, 2000), these constraints did not show significant effects in our study. This application of leisure constraints theory illustrates how

emerging markets respond to the needs of a large consumer base, thereby informing future marketing initiatives.

Additionally, operationalizing concepts of negotiation strategies for both cultural groups has advanced the empirical application of negotiation theory, which has been underexplored in past cross-cultural studies. Chapter IV enhances the empirical application of negotiation theory by examining how both cultural groups utilize strategies to overcome skiing participation constraints. The study found that behavioural strategies and facilitators are the most prevalent methods used to overcome constraints for both cultural groups. Additionally, the Chinese group employed more cognitive strategies to overcome constraints than the Canadian group. Cultural differences also influenced both groups' attitudes towards participating in skiing. These conclusions offer valuable insights into the differential application of negotiation strategies. Cognitive negotiation strategies have rarely been identified in constraints literature. This might be because researchers often focus on behaviour negotiation strategies that directly increase participation, while laypeople frequently consider more indirect and long-term cognitive strategies (Li & Stodolska, 2007). These strategies can enhance immediate outcomes like leisure participation and enjoyment and broader outcomes such as health and well-being. In our study, Chinese participants commonly used cognitive strategies to alleviate cognitive dissonance or manage expectations, such as reducing skiing frequency, tolerating low-quality rental equipment, ignoring constraints, and feeling guilty about giving up. These cognitive strategies were nearly absent in the Vancouver group.

Conceptual Framework

These conceptual frameworks provide an extensive understanding of the negotiation process related to skiing participation among Beijing and Vancouver residents. The frameworks

in Figures Five and Six feature three distinct components: leisure constraints, facilitators, and negotiation strategies, which describe the decision-making process for skiing participation.

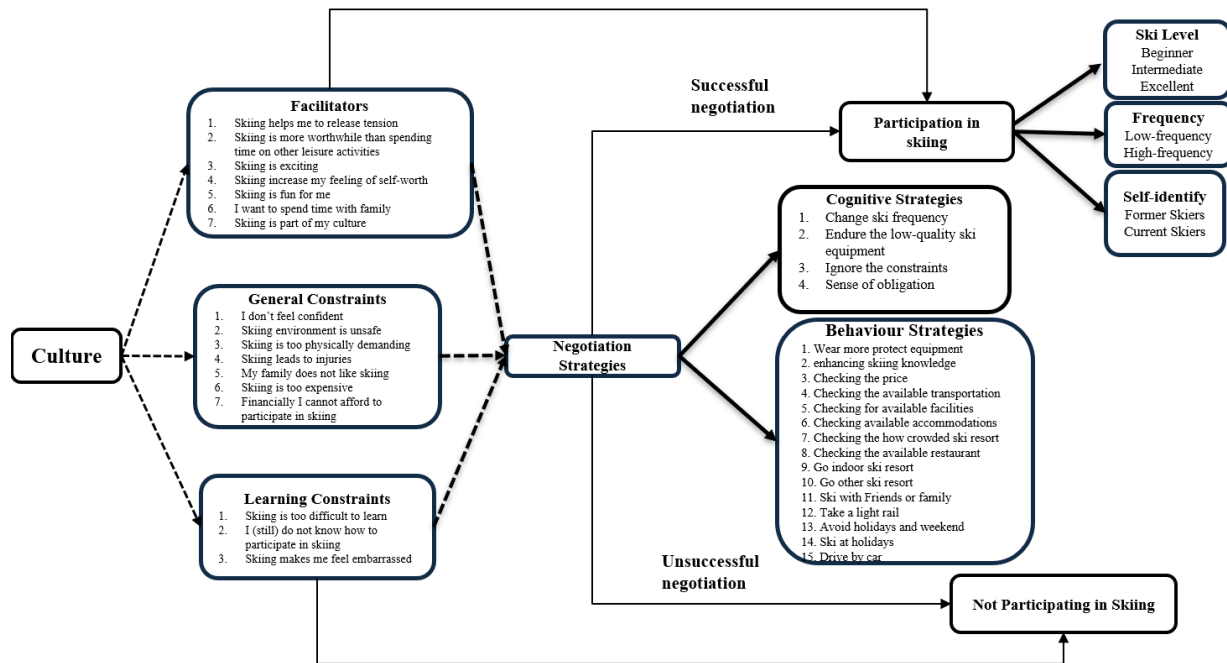


Figure 5. A Conceptual Framework for Beijing Residents' Negotiating Skiing Participation

These frameworks were developed based on prior theories and models and the findings from the dissertation. Although there is some qualitative support for the concepts and relationships proposed on the right side (e.g., negotiation strategies) of the model, the rarity of development and complexity of testing over the last decade limit available comparisons to the early leisure constraints model. The left side of the conceptual framework presents the cultural factors demonstrated through Chapter IV, which shows that this variable directly or indirectly affects leisure constraints. The middle section of the model is partially grounded in Jackson and Scott's (1999) assertion that leisure participation was influenced by three micro-level factors: intrapersonal, interpersonal, and structural constraints. Consequently, constraint negotiation (i.e., how individuals attempt behaviour or cognition to mitigate or alleviate the effects of these constraints) is viewed as a two-phase process: cognitive and behaviour strategies. After

participation, whether it occurs fully, partially, or not at all, individuals assess their experiences, which subsequently influences their perceptions of (1) the constraints faced, (2) the facilitators initially held for participating, and (3) the effectiveness of the constraint negotiation strategies employed.

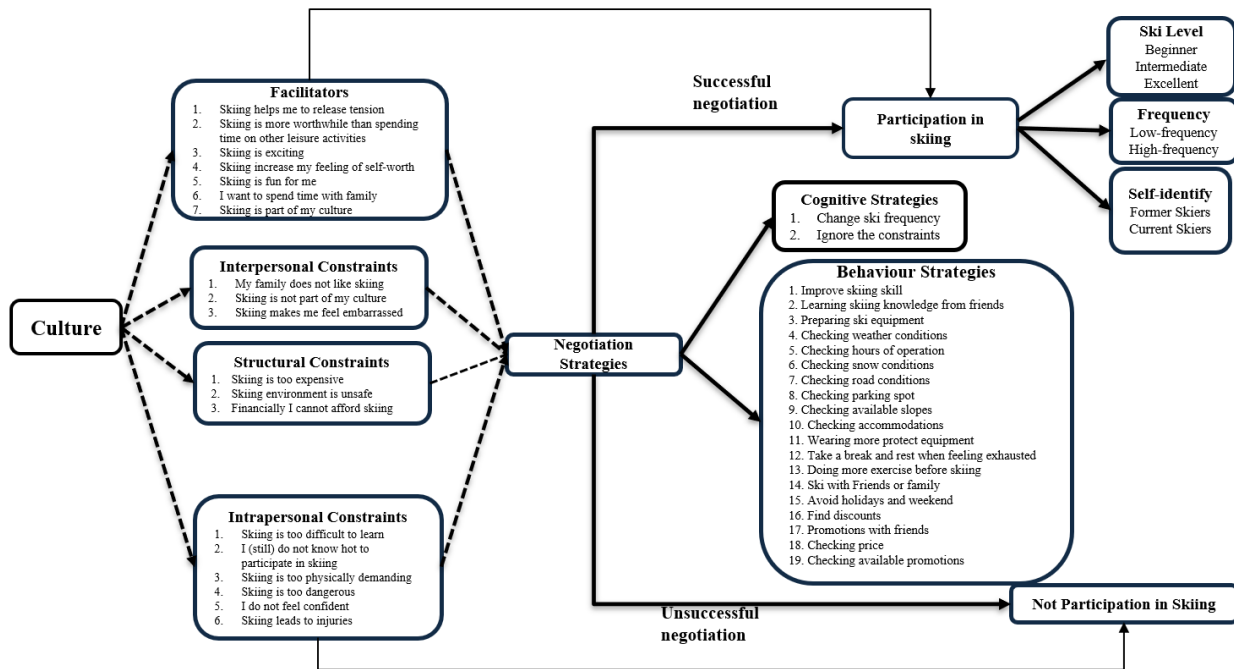


Figure 6. A Conceptual Framework for Vancouver Residents' Negotiating Skiing Participation

Contribution to Literature

The dissertation predominantly contributes to and advances downhill skiing research more broadly. First, through this research, we endeavoured to address knowledge and evidence gaps in (1) the relationship between constraints, facilitators, and skiing participation and (2) the negotiation strategies, which have rarely been addressed in past skiing research. Second, sport management research examining skiing participation has focused on who is already involved in skiing and has limited experiential research on non-skiers. This research is one of the few that includes non-skiers in the study of skiing in emerging and declining markets. Analyzing a

demographic typically overlooked in consumer behaviour studies allows for an understanding of factors that promote or hinder engagement in this sport. This knowledge may be used to develop marketing strategies aimed at increasing participation. This specific sector has tremendous potential for the growth of the sport. This was highlighted in Chapters II and III, where non-skiers were the important segment and indicated differences compared to low-frequency and high-frequency skiers.

Contribution to Practice

Emerging Market

This dissertation provides valuable insights and practical implications for ski resort administrators and marketers aiming to attract more visitors from China's emerging ski market. With their theoretical and methodological significance, the findings can significantly assist these practitioners. The study identified learning constraints as the primary constraints to skiing participation in Beijing. The limited skiing expertise and awareness among non-skiers present a significant challenge for marketers seeking to expand their clientele. The results suggest that customized support strategies and tailored educational approaches could be crucial in promoting skiing engagement. Prior knowledge of skiing was strongly associated with participation. Therefore, creating and sharing engaging and informative content on social media may enhance skiing knowledge among non-skiers or infrequent skiers in non-traditional markets like Beijing. This could include skiing tips, information about ski resorts, beginner tutorials, and other relevant knowledge.

To foster the growth and improvement of novice skiers, ski resorts should offer educational programs catering to various skill levels, such as comprehensive training seminars, which may help reduce risk perception. An individualized training approach considering the

specific factors enabling or hindering each novice could improve marketers' ability to encourage skiing participation. Acquiring the necessary skiing skills is a significant challenge to expanding the skiing industry, especially among non-skiers and infrequent skiers. Consequently, organizational initiatives promoting winter sports participation and the rise of the skiing market have highlighted the importance of addressing these learning constraints to sustain the industry's growth. Offering family packages at ski resorts can be an effective strategy to appeal to a broader audience by catering to families' unique needs and preferences. Implementing this strategy could lead to increased visitor numbers, higher satisfaction levels, and positive word-of-mouth recommendations, vital for the skiing industry's success. Ultimately, resorts must allocate resources to meet the needs of skiing enthusiasts and non-skiers.

During the data collection period, Chinese participants faced more significant structural constraints, including strict COVID-19 pandemic regulations, which were absent in the Canadian market. These limits impacted different areas of their daily lives, including leisure activities such as skiing participation. The government's implementation of these steps to control the pandemic substantially impacted the participants' capacity to participate in leisure skiing activities. Furthermore, travel limitations hindered their ability to reach skiing spots outside their immediate region. An interesting discovery arose when a Chinese participant saw a substantial rise in the expenses associated with engaging in skiing after the conclusion of the 2022 Winter Olympic Games. This observation illuminates the influence of significant athletic events on sports participation and the costs involved. Matzler et al. (2019) compared the impact of the pricing factor on first-time tourists and repeat visitors to a particular ski region. The study revealed that individuals visiting for the first time were more responsive to the influence of pricing. In the emerging ski industry, a relatively large percentage of individuals are skiing for

the first time (Peng et al., 2022). Thus, the study places significant emphasis on the price issue, which aligns with the findings of earlier studies.

Another important difference is that Chinese individuals are more constrained by service quality and rental ski equipment quality. Our results indicate that many Chinese participants report that the low quality of rental equipment affects their willingness to participate in skiing, and they place a higher emphasis on service quality, such as online service and intelligent service. Peng et al. (2022) suggest that in emerging ski markets, suitability for beginners is an important criterion for choosing a ski destination, highlighting a difference between developed (Canada) and emerging ski markets (China). The increasing use of intelligent systems at tourist destinations has made online booking a mainstream method for purchasing tickets (Peng et al., 2022). Additionally, skiing tourism differs from general tourism in that the preparation time before actual skiing, such as changing clothes and renting equipment, is relatively long (Peng et al., 2022). Therefore, the convenience and speed of ticket collection are crucial, possibly explaining why tourists prioritize service attributes (Peng et al., 2022). The unique results identified in our research support the existing leisure constraints theory. Therefore, we argue that the service attributes and quality should be investigated, and more attention should be paid to the emerging ski market to understand repeat skiing visits.

Chapter IV emphasizes the significance of novelty-seeking and social factors in promoting skiing among Chinese skiers. Additionally, the services and amenities provided by ski resorts played a crucial role in facilitating the destination's success. This suggests that destination management can effectively employ targeted marketing strategies to highlight these attributes. The Chinese ski market, characterized by novelty-seeking behaviour, represents a rapidly growing segment that actively pursues unique and exhilarating skiing and winter sports

experiences. This group is motivated by a strong desire for adventure, seeking new and exciting challenges, and exploring emerging ski destinations. Understanding this group's unique characteristics and facilitators can provide valuable insights into the dynamic changes in China's skiing industry. To effectively target the novelty-seeking ski group in China, marketing efforts should combine adventure, exclusivity, and social engagement elements. Ski resorts can attract and retain this active demographic by leveraging social media, offering unique packages, enhancing on-site experiences, organizing exclusive events, and partnering with travel agencies. These strategies satisfy their customers' desire for new and distinctive experiences and build a loyal customer base that can drive growth and increase visibility in the highly competitive ski industry.

Declining Market

The results of this study provide critical insights for developing strategies to address the ski market decline in Vancouver. The findings suggest that to increase participation among Vancouver skiers; practitioners should focus on mitigating intrapersonal constraints and enhancing factors that encourage participation. Therefore, each group must develop tailored strategies to boost their engagement levels. Implementing more instructional sessions and engaging introductory activities could be effective to address intrapersonal constraints—such as lack of confidence, concerns about the dangers of skiing, and fear of accidents. These initiatives aim to improve skill development among non-skiers and low-frequency skiers and to enhance their understanding of basic downhill skiing techniques. Although it may be difficult to completely dispel negative perceptions associated with downhill skiing, such as its perceived risks and likelihood of injury, an individual's decision to participate is likely influenced by the perceived personal benefits and positive emotions.

While people with disabilities represent a minority group among our participants, one Canadian individual highlighted a shared desire to partake in skiing activities. However, he expressed frustration over the lack of available coaches or experienced instructors catering to individuals with disabilities. This underscores the importance of inclusive practices within ski resort services to accommodate the needs of disabled individuals. Consequently, ski resorts should provide specialized instruction tailored to the unique requirements of disabled skiers. By offering trained coaches or experienced instructors proficient in adapting skiing techniques for individuals with disabilities, ski resorts can foster a more inclusive environment and ensure that all individuals, regardless of ability, have the opportunity to participate in skiing activities. Furthermore, Canadian individuals prioritized affordability when it comes to skiing, often seeking ways to reduce the cost of their skiing experiences or take advantage of promotional offers. Price-conscious Canadian skiers are mindful of the expenses associated with skiing, including lift tickets, equipment rentals, accommodations, and other related expenses. They actively seek opportunities to save money on these costs through discounted lift ticket packages, special promotions, or budget-friendly accommodation options.

Several critical elements should be considered in developing marketing strategies aimed at skiers who seek a sense of escape. Firstly, it is imperative to underscore the potential of skiing as an activity that offers relief from everyday stress, utilizing imagery and messaging that conveys the tranquillity and sense of freedom inherent in the experience. Our study found that the sense of escape was an important facilitator for skiers. Additionally, marketing efforts should highlight scenic, less populated ski destinations, appealing to individuals searching for an authentic retreat from the demands of urban living. Incorporating comprehensive vacation packages that combine skiing with relaxation amenities, such as spa services or après-ski

experiences, can further enhance the perception of skiing as a complete escape. Furthermore, positioning skiing as an opportunity for personal growth and engagement with nature may resonate with those who view leisure activities as a means for self-development and enrichment. Lastly, promoting off-peak skiing sessions, such as those available during weekdays or early mornings, can attract individuals who value an undisturbed, immersive experience. Collectively, these strategies position skiing as an ideal activity for those seeking an escape that offers relaxation, personal growth, and a reprieve from the stresses of daily life.

Limitations and Future Research Directions

This research only utilized one city from each of China and Canada to identify emerging and declining markets' constraints, facilitators, and negotiation strategies. Thus, a more comprehensive and widened view of these markets can potentially expose more behavioural characteristics to consider based on the part of the location. Second, some challenges arose during the COVID-19 pandemic, affecting both cultural groups. For example, several structural elements, including assessments of slope quality, snow quality, and weather conditions, were excluded from this study due to their frequent and unpredictable changes. During the data collection, the pandemic likely reduced skiing participation in Beijing and Vancouver, complicating participants' recall and leading to significant variations in the structural constraints discussed in Chapters II and III. Moreover, as discussed in Chapter IV, the Chinese government's rigorous self-isolation policies led to more significant structural constraints for Chinese consumers. Future research should explore structural variables that may better predict skiing behaviour. Furthermore, individuals who do not ski may have a limited understanding of the specific conditions and factors related to downhill skiing due to their lack of firsthand experience. Additionally, structural components can vary, even among experienced skiers who

frequent multiple ski slopes. Future research should address these limitations by investigating additional variables that could enhance understanding of ski consumer behaviour.

Notably, some of the constraints discussed in this dissertation are inherently temporary. Following the hierarchical constraints model by Crawford et al. (1991), these factors are not expected to be the most influential determinants of skiing participation, which our study supports. One explanation is the challenge of classifying constraints as intrapersonal or structural (Carroll & Alexandris, 1997). Financial and environmental constraints might be considered structural and intrapersonal for those who have never skied. Another explanation is that constraints may not always lead to non-participation, as seen in our study where low- and high-frequency skiers perceived constraints but overcame them to continue skiing. According to Alexandris et al. (2017), participants with the highest loyalty, representing the most intense and enduring psychological attachment, continued to ski despite time and expense constraints (structural). This indicates that loyal skiers effectively overcome various constraints to maintain their involvement. Chapters II and III of the quantitative study did not explore skiers' negotiation strategies, which remains an important area for future research.

In Chapter IV, many of the constraints experienced by participants were linked to their temporary circumstances, such as the COVID-19 isolation policy affecting participants in Beijing or issues like newcomer settlement, financial difficulties, or having children too young to ski for participants in Vancouver. For instance, constraints like having young children who cannot yet ski will diminish as the family progresses to a new life stage (Li & Stodolska, 2007). Additionally, our study offers evidence for the temporal nature of constraints, confirming Li and Stodolska's past study (2007). It can be suggested that some constraints may arise predictably or unpredictably during specific transitional periods in life (e.g., pandemics, settlement, or

accidents) and that some individuals may choose to temporarily compromise their current quality of life by imposing leisure constraints today to enhance their future quality of life and reduce future constraints. For example, in Chapter IV, although individuals with disabilities represented a minority of our participants, one Canadian individual expressed a strong desire to engage in skiing activities but was frustrated by the lack of available coaches or experienced instructors for people with disabilities. This finding emphasizes the importance of inclusive practices within ski resort services to accommodate the needs of disabled individuals. Historically, most leisure research has viewed constraints as factors to be avoided. Our study, however, suggests that, under certain conditions, temporary versus permanent constraints present a valuable area of exploration. These topics are crucial for future scholars investigating the concepts of leisure constraints and constraint negotiation.

The objective of Chapter IV was not to identify a broad and exhaustive list of constraints, facilitators, and the negotiation strategies employed but rather to conduct a detailed and nuanced analysis of the topic. This approach distinguishes our study from previous quantitative research, which has primarily focused on developing scales and testing leisure negotiation theories. However, we do not consider this a limitation of our study, as Chapter IV, grounded in the interpretive paradigm, inherently differs from studies aimed at making broad generalizations. Nonetheless, we acknowledge that the study could have benefited from a deeper exploration of additional constraints and facilitators that may have been encountered by participants in both emerging and declining markets.

Furthermore, this dissertation encountered additional challenges and limitations during the data collection process in Chapter IV. The initial objective of the interviews was to explore the negotiation strategies individuals used to overcome constraints and to compare these

strategies between the two countries. However, the negotiation process and strategies were highly complex and challenging for individuals to articulate during the interviews. Participants employed not only negotiation strategies but also facilitators to overcome constraints. Moreover, cultural differences significantly influenced the constraints perceived by individuals. In the emerging market, the limited availability of ski resources made it difficult for individuals to apply behavioural strategies, leading Beijing residents to apply more cognitive strategies than Vancouver participants.

A further consideration is how participation is considered. Vallerand and Losier (1999) suggest that the choice of behaviour, its complexity, intensity, behavioural intentions, task perseverance, and subsequent performance are all interconnected with behavioural outcomes. Thus, the assessment of intentions versus the actual behaviour requires further examination. Godin (1994) noted that intention does not always accurately predict actual behaviour. A study incorporating indicators of real-life behaviour, such as participation rates, the use of loyalty to specific programs, would have significant implications for both theory and practice. This study specifically examined intensity (frequency and ski level) as the dependent variable in Chapters II and III and thus, actual participation and use rates could illuminate further constraints, facilitators and negotiations influencing behaviour. Future research should focus on developing a more comprehensive dependent variable that includes complexity, intensity, and behavioural intentions to understand ski participation better.

Conclusion

Globalization has extended the bounds of development, shifting the emphasis away from developed markets and toward developing markets, as well as away from predominantly Western economies and other economies, such as the Asian market (Nuttavuthisit, 2019). These rapid

changes within the multicultural realm, as well as worldwide influences, are changing the modern Asian market landscape (Nuttavuthisit, 2019). Disruptive innovations and technology diffusion coexist with some traditional customs, resulting in the ongoing re-negotiation and reconstruction of Asian consumption and marketing (Nuttavuthisit, 2019). This dynamic has encouraged broadening the scope of consumer and marketing research by incorporating other viewpoints and behaviours, thus promoting more expansive ways of knowledge generation, as examined in this dissertation.

Furthermore, different social and cultural drivers influence consumer behaviour, so sports marketers must adjust to the new reality by launching different marketing strategies in different regions to tailor their campaigns to meet the needs and desires of different cultures and customers. While some research compares sports participation behaviour across nations, there is a lack of substantial research on the skiing side of consumer behaviour and the effects of constraints and facilitators between China and Canada (Deng et al., 2005). The present study significantly contributes to the literature by investigating the relationship between constraints, facilitators, and negotiation in downhill skiing participation in two countries, thereby shedding light on comparing traditional and declining markets and new and emerging markets through a consumer behaviour lens. This lens requires further interrogation and understanding of how people negotiate their situation to determine why people engage in an activity or not.

References

- Alexandris, K., & Carroll, B. (1997). Demographic differences in the perception of constraints on recreational sport participation: Results from a study in Greece. *Leisure Studies*, 16(2), 107–125. <https://doi.org/10.1080/026143697375449>
- Alexandris, K., Du, J., Funk, D., & Theodorakis, N. D. (2017). Leisure constraints and the psychological continuum model: A study among recreational mountain skiers. *Leisure Studies*, 36(5), 670–683. <https://doi.org/10.1080/02614367.2016.1263871>
- Alexandris, K., Funk, D. C., & Pritchard, M. (2011). The impact of constraints on motivation, activity attachment, and skier intentions to continue. *Journal of Leisure Research*, 43(1), 56–79.
- Alexandris, K., Kouthouris, C., & Girgolas, G. (2007). Investigating the relationships among motivation, negotiation, and alpine skiing participation. *Journal of Leisure Research*, 39(4), 648–667.
- Chun, S. B., Halpenny, E. A., Jeon, J. Y., & Lee, C. W. (2025). Leisure constraints and negotiation among Canadian and South Korean Mountain hikers: An extension of motivations with the constraints-effect-mitigation model. *Leisure Sciences*, 47(1), 150–177. <https://doi.org/10.1080/01490400.2022.2069614>
- Deng, J., Walker, G. J., & Swinnerton, G. S. (2005). A comparison of attitudes toward appropriate use of national parks between Chinese in Canada and Anglo-Canadians. *World Leisure Journal*, 47(3), 28–41.
- Faullant, R., Matzler, K., & Füller, J. (2008). The impact of satisfaction and image on loyalty: The case of alpine ski resorts. *Managing Service Quality: An International Journal*, 18(2), 163–178. <https://doi.org/10.1108/09604520810859210>

- Füller, J., & Matzler, K. (2008). Customer delight and market segmentation: Applying the three-factor theory of customer satisfaction on lifestyle groups. *Tourism Management*, 29(1), 116–126. <https://doi.org/10.1016/j.tourman.2007.03.021>
- Gilbert, D., & Hudson, S. (2000). Tourism demand constraints: A skiing participation. *Annals of Tourism Research*, 27(4), 906–925. [https://doi.org/10.1016/S0160-7383\(99\)00110-3](https://doi.org/10.1016/S0160-7383(99)00110-3)
- Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences*, 23(3), 145–163. <https://doi.org/10.1080/014904001316896846>
- Hudson, S., & Gilbert, D. (2000). Tourism Constraints: The neglected dimension in consumer behaviour research. *Journal of Travel & Tourism Marketing*, 8(4), 69–78. https://doi.org/10.1300/J073v08n04_05
- Humagain, P., & Singleton, P. A. (2023). Reprint of: Exploring tourists' motivations, constraints, and negotiations regarding outdoor recreation trips during COVID-19 through a focus group study. *Journal of Outdoor Recreation and Tourism*, 41, 100626–100626. <https://doi.org/10.1016/j.jort.2023.100626>
- Hungenberg, E., Gray, D., Gould, J., & Stotlar, D. (2016). An examination of motives underlying active sport tourist behaviour: A market segmentation approach. *Journal of Sport & Tourism*, 20(2), 81–101. <https://doi.org/10.1080/14775085.2016.1189845>
- Jackson, E. L., & Rucks, V. C. (1995). Negotiation of leisure constraints by junior-high and high-school students: An exploratory study. *Journal of Leisure Research*, 27(1), 85–105.
- Jackson, E. L., Crawford, D. W., & Godbey, G. (1993). Negotiation of leisure constraints. *Leisure Sciences*, 15(1), 1–11. <https://doi.org/10.1080/01490409309513182>

Kay, T., & Jackson, G. (1991). Leisure despite constraint: the impact of leisure constraints on leisure participation. *Journal of Leisure Research*, 23(4), 301–313.

<https://doi.org/10.1080/00222216.1991.11969862>

Li, H., Nite, C., Weiller-Abels, K., & Nauright, J. (2020). The development of women's professional ice hockey in China: Leveraging international competition to change institutionalized gender norms. *Sport in Society*, 23(3), 523–538.

Li, M. Z., & Stodolska, M. (2007). Working for a dream and living for the future: Leisure constraints and negotiation strategies among Chinese international graduate students. *Leisure/Loisir*, 31(1), 105–132.

Nuttavuthisit, K. (2019). *Qualitative Consumer and Marketing Research: The Asian Perspectives and Practices* (1st ed. 2019.). Springer Nature. <https://doi.org/10.1007/978-981-13-6142-5>

Peng, Y., Yin, P., & Matzler, K. (2022). Analysis of destination images in the emerging ski market: The case study in the host city of the 2022 Beijing Winter Olympic Games. *Sustainability*, 14(1), 555-573. <https://doi.org/10.3390/su14010555>

Son, J. S., Chen, G., Liechty, T., Janke, M. C., West, S. T., Wong, J. D., & Naar, J. J. (2024). The role of facilitators in the constraint negotiation of leisure-time physical activity. *Leisure Sciences*, 46(2), 123–142. <https://doi.org/10.1080/01490400.2021.1919253>

Szromek, A. R., Zemla, M., & Hadzik, A. (2012). Multidimensional segmentation of polish ski resorts visitors. *Journal of Tourism Challenges and Trends* 5(1), 41–55.

Tjørve, E., Lien, G., & Flognfeldt, T. (2018). Properties of first-time vs. repeat visitors: Lessons for marketing Norwegian ski resorts. *Current Issues in Tourism*, 21(1), 78–102. <https://doi.org/10.1080/13683500.2015.1062472>

- Vallerand, R. J., & Losier, G. F. (1999). An integrative analysis of intrinsic and extrinsic motivation in sport. *Journal of Applied Sport Psychology, 11*(1), 142–169.
<https://doi.org/10.1080/10413209908402956>
- Wang, X., Zhang, J. J., Song, G., & Wan, X. (2020). Push and pull factors influencing the winter sport tourists in China: The Case of Leisure Skiers. *SAGE Open, 10*(2), 1–12, 2158244020938739. <https://doi.org/10.1177/2158244020938739>
- Wilhelm Stanis, S. A., Schneider, I. E., & Russell, K. C. (2009). Leisure time physical activity of park visitors: retesting constraint models in adoption and maintenance stages. *Leisure Sciences, 31*(3), 287–304. <https://doi.org/10.1080/01490400902837886>
- Williams, P. W., & Basford, R. (1992). Segmenting downhill skiing's latent demand markets. *The American Behavioral Scientist (Beverly Hills), 36*(2), 222–235.
<https://doi.org/10.1177/000276429203600208>
- Williams, P., & Fidgeon, P. R. (2000). Addressing participation constraint: A case study of potential skiers. *Tourism Management, 21*(4), 379–393. [https://doi.org/10.1016/S0261-5177\(99\)00083-7](https://doi.org/10.1016/S0261-5177(99)00083-7)

Appendix A: Ethic Approval**Université d'Ottawa**

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

H-10-21-7401 - ANN2-7401 - Certificat d'approbation éthique renouvelé / Certificate of Ethics Approval Renewed*(English message follows)*

Cher/Chère YIQI YANG,

Merci d'avoir soumis une demande de renouvellement pour le projet de recherche intitulé «Examining the Relationship Between Constraints and Facilitators in Skiing Participation: A Cross-Cultural Study».

Veillez trouver ci-joint le certificat d'approbation éthique renouvelé, valide jusqu'au 08-11-2024.

Recherche financée : Veuillez faire suivre une copie du certificat renouvelé au [Service de gestion de la recherche](#).

Si vous avez des questions, n'hésitez pas à communiquer avec le Bureau d'éthique à ethique@uottawa.ca ou en composant le 613-562-5387.

Vous pouvez voir votre demande en vous connectant à votre compte [eReviews](#).

Cordialement,

Coordonateur / Coordinator
Coordonnateur de l'éthique*Ceci est une réponse automatisée, merci de ne pas répondre à ce courriel.*

Dear YIQI YANG,

Thank you for submitting a renewal request for your research project titled "Examining the Relationship Between Constraints and Facilitators in Skiing Participation: A Cross-Cultural Study".

Please find attached the renewed certificate of ethics approval, valid until 08-11-2024.

Funded research: A reminder that you must provide a copy of this certificate to [Research Management Services](#).

If you have any questions, please contact the Ethics Office at ethics@uottawa.ca or by telephone at 613-562-5387.

You can view your project at any time by logging into [eReviews](#).

Best regards,

Coordonateur / Coordinator
Ethics Coordinator*This is an automated message. Please do not reply directly to this email.***Attachement(s) / Attachment(s)**[approvalLetter1694099824177.pdf](#)550, rue Cumberland, pièce 154 550 Cumberland Street, Room 154
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada613-562-5387 • 613-562-5338 • ethique@uOttawa.ca / ethics@uOttawa.ca
www.recherche.uottawa.ca/deontologie | www.recherche.uottawa.ca/ethics

Appendix B: Online Survey (Article One)

Part 1. Downhill Skiing Participation

Q1. How do you self-identify as a downhill skiing participant (check one):

- A non-participant
- A former participant
- A current participant

Q2. Have you ever participated in downhill skiing?

Yes → will automatically go to Q4

No If no, why not? Please briefly describe in the box below

→ will automatically go to Q6

Q3. How do you self-identify your level of skiing participation?

- Beginner
- Intermediate
- Excellent

Q4. Thinking about your last season, how frequently did you participate in downhill skiing?
(choose one)

- Less than 1 day
- 1-2 days
- 3-10 days
- 11 days or more

Part 2. Constraining factors

Q5. What factors may constrain you to participate (more) in downhill skiing in the next year?

Indicate how much do you agree with each statement:

Non-participants read the statements as follows: “I will not participate in downhill skiing in the next year because....”

Former participants read the statements as follows: “I will not participate in downhill skiing in the next year because....”

Current participants read the statements as follows: “I will not participate in downhill skiing or participate less in the next year because....”

Strongl y	Disagre e	Somewh at Disagree	Neither agree nor	Somewh at Agree	Agre e	Strongl y agree
--------------	--------------	--------------------------	-------------------------	-----------------------	-----------	-----------------------

		Disagre e	2	3	disagre e	5	6	7
1	I (still) do not know how to participate in skiing	1	2	3	4	5	6	7
2	Skiing is too difficult to learn	1	2	3	4	5	6	7
3	I do not feel confident	1	2	3	4	5	6	7
4	Skiing makes me feel embarrassed	1	2	3	4	5	6	7
5	Skiing is too physically demanding	1	2	3	4	5	6	7
6	Skiing is too dangerous	1	2	3	4	5	6	7
7	Skiing leads to injuries	1	2	3	4	5	6	7
8	Downhill skiing environment is unsafe	1	2	3	4	5	6	7
9	Skiing is too expensive	1	2	3	4	5	6	7
10	Financially I cannot afford to participate in skiing	1	2	3	4	5	6	7
11	Skiing is not part of my culture	1	2	3	4	5	6	7
12	My family does not like skiing	1	2	3	4	5	6	7

Are there any other reasons you can think of why you do not, or will not participate in downhill skiing the coming season? Briefly describe in the box below:

Part 3. Facilitators

Q6. What factors (may) facilitate you to participate in downhill skiing in the coming season?

Indicate how much do you agree with each statement:

Non-participants read the statements as follows: "I would consider taking up downhill skiing because..."

Former participants read the statements as follows: "I would consider participate in downhill skiing again because..."

Current participants read the statements as follows: "I would consider participating in downhill skiing more because..."

Strongl y Disagre e	Disagre e	Somewh at Disagree	Neither agree nor disagre e	Somewh at Agree	Agree	Strongly Agree
------------------------------	--------------	--------------------------	---	-----------------------	-------	-------------------

1	Downhill skiing helps me to release tension	1	2	3	4	5	6	7
2	Downhill skiing is more worthwhile than spending time on other leisure activities	1	2	3	4	5	6	7
3	Downhill skiing is exciting	1	2	3	4	5	6	7
4	Downhill skiing increases my feeling of self-worth	1	2	3	4	5	6	7
5	Downhill skiing is fun for me	1	2	3	4	5	6	7
6	I want to spend time with family	1	2	3	4	5	6	7
7	Downhill skiing is part of my culture	1	2	3	4	5	6	7

Part 4. Please tell us a bit about yourself

Q7. Gender: Female Male Other

Q8. Age: 18-24 25-34 35-54 55 and older

Q9. Occupation:

- Student
- Full time employed
- Part time employed
- Currently not employed
- Other (specify): _____

Q10. Annual Household Income after Tax:

- Less than \$20,000 \$20,000 to \$29,999 \$ 30,000 to \$49,999
- \$ 50,000 to \$79,999 \$ 80000 to 100,000 \$ 100,001 or more
- Prefer not to answer

Q11. Household status:

- Single without children Married/partner without children
- Single with children Married/partner with children

Q12. Education level:

- Diploma or less. College diploma
- Some college education College / Trade school degree
- Some university education University Degree

Interview Invitation

Thank you for your contribution to the research project! Now, you are invited to participate the individual interview phase for further understanding your skiing related experiences. The interview will be lasted approximately 20-40 minutes. The interview will be video, or audio recorded. You will be given the option to enter your name and Wechat address.

Your name and the contact information you have provided will be kept confidential and then destroyed once the research has completed.

PLEASE ENTER YOUR EMAIL HEAR TO PARTICIPAT IN

Name: _____

Wechat Number: _____

Appendix C: Consent Form (Article One)

Examining the Relationship Between Constraints, Facilitators in Downhill Skiing Participation: A Cross-Cultural Study

Invitation to Participate: You are invited to participate in a research study entitled *Examining the Relationship Between Constraints, Facilitators in Downhill Skiing Participation: A Cross-Cultural Study* conducted by Yiqi Yang as part of her doctoral dissertation, under the supervision of Dr. Eric MacIntosh of University of Ottawa, Canada.

Purpose of the Study: The general purpose of the study is to understand the relationship between constraints and facilitators in downhill skiing participation.

Participation: The length of time for the completion of the survey is 10 to 15 minutes. Participants will have approximately 12 weeks to submit the survey. Participants must be 18 years or older. The decision to complete and return this survey will be interpreted as an indication of your consent to participate. Participants do not have to answer any questions that they do not want to answer. We would appreciate to receive your answer before February 1st, 2022. The survey is in Chinese only.

Benefits: This is one of the few studies of Chinese consumers' perspectives on downhill skiing consumer behaviour using a quantitative research approach. It provides some insights of the problems that the ski industry is facing and allows to offer recommendations for marketing activities that would be applicable for both non-skiers and skiers, thereby shedding light on the process of helping the ski industry to (1) attract new participants, (2) prevent current participants from dropping out, (3) and increase their participation rates.

Confidentiality and Anonymity: Personal information will remain strictly confidential and will be solely used for the purposes of this research. It will be separated from the survey and entered into separate data base. At no point in time, can participants be identified with the survey. It will be used to contact you if you are willing to participate study three, and for sending you a reminder to fill out the survey a second time.

Conservation of data: The only people who will have access to the research data are the principal researcher Yiqi Yang and Dr. Eric MacIntosh (supervisor). The answers of participants to open-ended questions may be used verbatim in presentations and publications but participants will not be identified. The data collected will be kept in a secure manner on a password-protected computer. All physical and electronic data will be stored and conserved by the professor and the principal investigator in a locked cabinet in the office on campus. The data will be destroyed after five years.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you may withdraw from the study at any time and/or refuse to answer any questions. If you choose to withdraw, all data gathered until the time of withdrawal will be destroyed and not used for any research purpose.

If you have any questions or require more information about the study itself, you may contact the researcher.

Appendix D: Online Survey (Article Two)

Part 1. Downhill Skiing Participation

Q1. How do you self-identify as a downhill skiing participant (check one):

- A non-participant
- A former participant
- A current participant

Q2. Have you ever participated in downhill skiing?

Yes → will automatically go to Q4

No If no, why not? Please briefly describe in the box below

→ will automatically go to Q6

Q3. How do you self-identify your level of skiing participation?

- Beginner
- Intermediate
- Excellent

Q4. Thinking about your last season, how frequently did you participate in downhill skiing?
(choose one)

- Less than 1 day
- 1-2 days
- 3-10 days
- 11 days or more

Part 2. Constraining factors

Q5. What factors may constrain you to participate (more) in downhill skiing in the next year?
Indicate how much do you agree with each statement:

Non-participants read the statements as follows: “I will not participate in downhill skiing in the next year because....”

Former participants read the statements as follows: “I will not participate in downhill skiing in the next year because....”

Current participants read the statements as follows: “I will not participate in downhill skiing or participate less in the next year because....”

Strongl y	Disagre e	Somewh at	Neither agree	Somewh at	Agre e	Strongl y
--------------	--------------	--------------	------------------	--------------	-----------	--------------

		Disagree		Disagree	nor disagree	Agree		agree
1	I (still) do not know how to participate in skiing	1	2	3	4	5	6	7
2	Skiing is too difficult to learn	1	2	3	4	5	6	7
3	I do not feel confident	1	2	3	4	5	6	7
4	Skiing makes me feel embarrassed	1	2	3	4	5	6	7
5	Skiing is too physically demanding	1	2	3	4	5	6	7
6	Skiing is too dangerous	1	2	3	4	5	6	7
7	Skiing leads to injuries	1	2	3	4	5	6	7
8	Downhill skiing environment is unsafe	1	2	3	4	5	6	7
9	Skiing is too expensive	1	2	3	4	5	6	7
10	Financially I cannot afford to participate in skiing	1	2	3	4	5	6	7
11	Skiing is not part of my culture	1	2	3	4	5	6	7
12	My family does not like skiing	1	2	3	4	5	6	7

Are there any other reasons you can think of why you do not, or will not participate in downhill skiing the coming season? Briefly describe in the box below:

Part 3. Facilitators

Q6. What factors (may) facilitate you to participate in downhill skiing in the coming season? Indicate how much do you agree with each statement:

Non-participants read the statements as follows: “I would consider taking up downhill skiing because...”

Former participants read the statements as follows: “I would consider participate in downhill skiing again because...”

Current participants read the statements as follows: “I would consider participating in downhill skiing more because...”

	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree	
1	Downhill skiing helps me to release tension	1	2	3	4	5	6	7

2	Downhill skiing is more worthwhile than spending time on other leisure activities	1	2	3	4	5	6	7
3	Downhill skiing is exciting	1	2	3	4	5	6	7
4	Downhill skiing increases my feeling of self-worth	1	2	3	4	5	6	7
5	Downhill skiing is fun for me	1	2	3	4	5	6	7
6	I want to spend time with family	1	2	3	4	5	6	7
7	Downhill skiing is part of my culture	1	2	3	4	5	6	7

Part 4. Please tell us a bit about yourself

Q7. Gender: Female Male Other

Q8. Age: 18-24 25-34 35-54 55 and older

Q9. Occupation:

- Student
- Full time employed
- Part time employed
- Currently not employed
- Other (specify): _____

Q10. Annual Household Income after Tax:

- Less than \$20,000 \$20,000 to \$29,999 \$ 30,000 to \$49,999
- \$ 50,000 to \$79,999 \$ 80000 to 100,000 \$ 100,001 or more
- Prefer not to answer

Q11. Household status:

- Single without children Married/partner without children
- Single with children Married/partner with children

Q12. Education level:

- Diploma or less. College diploma
- Some college education College / Trade school degree
- Some university education University Degree

Interview Invitation

Thank you for your contribution to the research project! Now, you are invited to participate the individual interview phase for further understanding your skiing experiences. The interview will be lasted approximately 20-40 minutes. The interview will be video, or audio recorded. You will be given the option to enter your name and Email address. Your name and the contact information you have provided will be kept confidential and then destroyed once the research has completed.

PLEASE ENTER YOUR EMAIL HEAR TO PARTICIPAT IN

Name: _____

Email:

Appendix E: Consent Form (Article Two)

Examining the Relationship Between Constraints, Facilitators in Downhill Skiing Participation: A Cross-Cultural Study

Invitation to Participate: You are invited to participate in a research study entitled *Examining the Relationship Between Constraints, Facilitators in Downhill Skiing Participation: A Cross-Cultural Study* conducted by Yiqi Yang as part of her doctoral dissertation, under the supervision of Dr. Eric MacIntosh of University of Ottawa, Canada.

Purpose of the Study: The general purpose of the study is to understand the relationship between constraints and facilitators in downhill skiing participation.

Participation: The length of time for the completion of the survey is 10 to 15 minutes. Participants will have approximately 12 weeks to submit the survey. Participants must be 18 years or older. The decision to complete and return this survey will be interpreted as an indication of your consent to participate. Participants do not have to answer any questions that they do not want to answer. We would appreciate to receive your answer before February 1st, 2022. The survey is in Chinese only.

Benefits: This is one of the few studies of Canadian consumers' perspectives on downhill skiing consumer behaviour using a quantitative research approach. It provides some insights of the problems that the ski industry is facing and allows to offer recommendations for marketing activities that would be applicable for both non-skiers and skiers, thereby shedding light on the process of helping the ski industry to (1) attract new participants, (2) prevent current participants from dropping out, (3) and increase their participation rates.

Confidentiality and Anonymity: Personal information will remain strictly confidential and will be solely used for the purposes of this research. It will be separated from the survey and entered into separate data base. At no point in time, can participants be identified with the survey. It will be used to contact you if you are willing to participate study three, and for sending you a reminder to fill out the survey a second time.

Conservation of data: The only people who will have access to the research data are the principal researcher Yiqi Yang and Dr. Eric MacIntosh (supervisor). The answers of participants to open-ended questions may be used verbatim in presentations and publications but participants will not be identified. The data collected will be kept in a secure manner on a password-protected computer. All physical and electronic data will be stored and conserved by the professor and the principal investigator in a locked cabinet in the office on campus. The data will be destroyed after five years.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you may withdraw from the study at any time and/or refuse to answer any questions. If you choose to withdraw, all data gathered until the time of withdrawal will be destroyed and not used for any research purpose.

If you have any questions or require more information about the study itself, you may contact the researcher.

Appendix F: Interview Guide (Article Three)

1. Do you, or have you ever participated in sports?
 - a. If no, why not? What is keeping you from playing sports?
 - b. If yes, which sports? Why these particular sports?
2. Do you, or have you ever participated in outdoor sports?
 - a. If no, why not? What is keeping you from playing sports?
 - b. If yes, which sports? Why these particular sports?
3. Do you, or have you ever participated in downhill skiing?
 - a. If no, why not? What is keeping you from playing downhill skiing?
 - b. If yes, how often do you participate in? How many times during a season would you participate if the season you skied the most?
4. Why did you become involved in downhill skiing?
5. How did you become involved in downhill skiing (significant others, location, programs, ...)
6. How do you feel about downhill skiing?
7. Do you like skiing?
8. Why do you not want to ski more?
9. How do you feel when you ski?
10. How do you feel when you think about downhill skiing?
11. How do you feel when you think about skiers?
12. Have you tried to find any information about skiing before? Where did you look for information?
13. Have you ever taken lessons?
 - a. if yes, can you tell a little about your experience?
 - b. if not, why do not take ski lessons? Do you know how much money per ski lessons?
14. What other factors prevent you from skiing?
15. Have your friends or family members invited you to ski with them before?
16. If you go to ski resorts, what kind of transportation do you prefer?
17. Have ever tried other kind of transportation?
18. Before you go skiing, what kind of information would you look for?
19. Do you know how much money you need to spend when you ski?
20. Do you know how much money it is to buy ski equipment?
21. What is the difference between skiing and the other sports you like?
22. What factors would motivate you to want to go ski?
23. Which ski resort do you prefer? Why?

Appendix G: Consent Form (Article Three)

Examining the Relationship Between Constraints and Facilitators in Skiing Participation: A Cross-Cultural Study

Invitation to Participate: I am invited to participate in a research study entitled *Examining the Relationship Between Constraints, Facilitators in Downhill Skiing Participation: A Cross-Cultural Study* conducted by Yiqi Yang as part of her doctoral dissertation, under the supervision of Dr. Eric MacIntosh of University of Ottawa, Canada.

Purpose of the Study: This study will explore the factors affecting skiing participation of Chinese and Canadians consumers through a qualitative approach. It aims to identify the differences amongst new (China) and mature (Canada) markets to determine both similarities and differences amongst consumer behaviour. Further, this study will explore why and how constraints and facilitators influence skiing participation, and what kind of strategy skiers are using to negotiate their decisions to ski or not.

Participation: I am under no obligation to participate and if I choose to participate, I may withdraw from the study at any time and/or refuse to answer any questions. If I choose to withdraw, all data gathered until the time of withdrawal will be destroyed and not used for any research purposes. The interview will be lasted approximately 20-40 minutes. The interview will be video, or audio recorded. The survey will be conducted in Chinese for Chinese participants, and English for Canadian participants.

Risks: My participation in this study will entail that I volunteer personal information, and this may cause me to feel potential risks or inconveniences. I have received assurance from the researchers that every effort will be made to minimize these risks (e.g., option to refuse to answer, option to withdraw, identities will not be revealed).

Benefits: This study will explore the factors affecting skiing participation of Chinese and Canadians consumers through a qualitative approach. It aims to identify the differences amongst new (China) and mature (Canada) markets to determine both similarities and differences amongst consumer behaviour. Further, this study will explore why and how constraints and facilitators influence skiing participation, and what kind of strategy skiers are using to negotiate their decisions to ski or not. Finally, this study will develop a framework for understanding skiing participation process based on the dialogue between the conceptual understanding and empirical insights.

Compensation: To thank for your contribution to the research project, you will be given the \$20 cash prize for the interview; The prize is open to participants who conducted interview.

Confidentiality and Privacy: I have received assurance from the researchers that the information I will share will remain strictly confidential. I understand that the contents will be used only for the research purpose, and that my identity will be protected.

Conservation of data: The electronic data, researchers' notes, consent form will be kept in a secure manner. The only people who will have access to the research data are the principal

researcher Yiqi Yang and Dr. Eric MacIntosh (supervisor). The interview will be used verbatim in presentations and publications, but participants will not be identified. The data collected will be kept in a secure manner on a password-protected computer. All physical and electronic data will be stored and conserved by the professor and the principal investigator in a locked cabinet in the office on campus. The data will be destroyed after five years.

Voluntary Participation: I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be removed from the dataset and not used in the study.

If I have any questions about the study, I may contact the researcher or their supervisor. If I have any questions regarding the ethical conduct of this study, I may contact the Office of Research Ethics and Integrity via email (ethics@uottawa.ca) or telephone (613-562-5387).

It is recommended that I (keep/print/save) a copy of this consent form for my records.

Acceptance: By selecting the statement below, I agree to participate in this research study by audio/video-recording.

- I want to participate by audio-recording.
- I want to participate by video-recording.
- No, I do not want to participate.

By signing my name below, I agree to participate in this research study.

Participant's name: _____ Date: _____

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____