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Eskelinen, Otto, Garrod, Brian , Sthapit, Erosee  and Suni, Jarno (2025) Motivations for domestic overnight travel by Finnish disc golfers: a serious-leisure perspective. *Leisure Studies*, 44 (1). pp. 15-30. ISSN 0261-4367

DOI: <https://doi.org/10.1080/02614367.2023.2280029>

Publisher: Taylor & Francis (Routledge)

Version: Published Version

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To cite this article: Otto Eskelinen, Brian Garrod, Eroze Sthapit & Jarno Suni (13 Nov 2023): Motivations for domestic overnight travel by Finnish disc golfers: a serious-leisure perspective, Leisure Studies, DOI: [10.1080/02614367.2023.2280029](https://doi.org/10.1080/02614367.2023.2280029)

To link to this article: <https://doi.org/10.1080/02614367.2023.2280029>



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Published online: 13 Nov 2023.



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Motivations for domestic overnight travel by Finnish disc golfers: a serious-leisure perspective

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ABSTRACT

This study examines the domestic overnight travel motivations of Finnish disc golfers, with a specific focus on the concept of serious leisure. Data gathered from 989 Finnish disc golfers were divided into clusters based on the serious leisure inventory and measure model. The results indicate that disc golfers are generally interested in travelling domestically to participate in disc golf, and that they tend to share common push and pull motives. Preferences for general destination attributes and specific disc-golf-related destination attributes tend not to vary significantly between the clusters. Although the relationship is not strictly hierarchical, disc golfers who are more serious tend to report higher mean values than their more-casual counterparts. Disc golfers travelling to play their sport expect well-maintained and versatile courses and tend to prefer courses they have not previously visited. Factors related to the quality of courses are significantly more influential in disc-golfers' motivations to travel than those associated with the destination in general, such as accommodation or nightlife. This knowledge is vital to inform marketers as participation in this relatively new sport continues to grow.

ARTICLE HISTORY

Received 30 May 2023



Accepted 30 October 2023

KEYWORDS

Serious leisure; disc golf; destination attributes; motivation; Finland

1. Introduction

Disc golf, sometimes known as frisbee golf, resembles traditional golf played with flying discs instead of clubs and balls, and raised baskets instead of holes (PDGA, 2023b). The Professional Disc Golf Association (PDGA, 2023b) describes the sport as being accessible to everybody: it being easy to learn and requiring only basic equipment. Most public courses have been built adjacent to or within existing recreational parks, and are free of charge (Oldakowski & McEwen, 2013). Disc golf has been growing rapidly in popularity in recent years, particularly in Finland. As with many small specialist sports, calculating the total number of participants is difficult (Woods, 2019), but the number of active members of the PDGA can be used as a guide. In 2011, the number of active

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PDGA members was just over 13,000 worldwide. Following a surge in new membership during the COVID-19 pandemic, membership grew to 109,862 (PDGA, 2023a). The largest country by number of players is the USA, followed by Finland with just over 4,300 members (PDGA, 2023a). The number of disc-golf courses globally has also seen rapid growth. There were 10,103 courses worldwide in 2021 (PDGA, 2023c). Most were in the USA, but Finland ranked second with 720 courses (PDGA, 2023c).

The Finnish Disc Golf Association (FDGA) was founded in 1998, at a time when the sport was growing rapidly in Finland due to the rapid increase in the number of courses being opened. A typical Finnish disc-golf course is free-to-play, having been commissioned by the municipality and maintained either by the municipality or a local disc-golf club. Some, however, are associated with ski centres and spas. The FDGA estimates that the number of adults interested in disc golf is around 700,000 (Suomen Frisbeegolfliitto, 2021). Based on annual participation statistics, 263,000 Finns play disc golf at least once a year, while 49,500 play it on a weekly basis (Aarresola et al., 2019). Many Finnish regional tourism organisations promote disc golf on their websites to attract domestic visitors (Spin18, 2021). Many pay-to-play disc golf courses have recently begun to organise competitions, conduct regular maintenance, and offer multiple course layouts, disc stores and foodservice outlets.

Disc-golf courses are mainly built for the use of local people, but many are visited by non-locals. Travel related to disc golf has yet, however, to be studied in depth, particularly with regard to disc-golf travellers' motivations and preferences. Their interests tend to be highly specialist, meaning that their needs and preferences remain poorly understood (Suni, 2017). Such knowledge is, however, vital to create and promote successful tourism experiences for disc golfers. Golf disc travellers are likely to be day visitors as well as tourists, the latter being distinguished by spending at least one night away from home (UNWTO, 2023). The purpose of this study is to examine the motivations for domestic overnight travel by Finnish disc golfers. The three research questions of this study are, therefore:

- What are the general characteristics of disc golf-related travel in Finland?
- How do the serious leisure qualities affect Finnish disc golfers' travel behaviour, destination preferences and motives to participate in domestic disc golf travel?
- What type of push and pull motivations are affecting disc golf-related travel behaviour in Finland?

Finland has been chosen as the context for the study due to the popularity of disc golf there, its large number of courses and its relatively diffuse population distribution, which increases the need to stay overnight when travelling to play disc golf. Disc golf, like many other sports, can be played casually, but it is also possible to compete very seriously in the sport, and even to build a career based on playing it. The conceptual frameworks used to underpin this work will therefore be that of serious leisure (Stebbins, 1982, 1992, 2001, 2007), which will be applied using the serious leisure inventory and measure (SLIM) model (Gould et al., 2008). The SLIM model has been successfully used to explore the needs and preferences of participants in other specialist leisure contexts such as surfing (Barbieri & Sotomayor, 2013), motorcycling (Frash & Blose, 2019) and chess (Gould et al., 2011). By understanding disc golf as a serious-leisure pursuit, detailed and insightful marketing knowledge can be generated to support the future development of disc golf-travel.

2. Literature Review

Disc golf is a relatively new phenomenon and, as such, no previous study has examined the travel motivations and preferences of those who travel to participate in it. Previous studies of travel motivations and preferences in different contexts do, of course, exist. This paper proceeds on the basis that by combining and applying theoretical frameworks of serious leisure and push-pull

motivations, a better understanding of leisure-activity-based travelling can be gained. The few studies on disc golf have focused on injuries (Nelson et al., 2015; Rahbek & Nielsen, 2016), environmental issues related to the sport (Leung et al., 2013; Trendafilova & Waller, 2011), social media and sport communities (Woods, 2019, 2021), sport sub-cultures (Trendafilova & Waller, 2011), and the geographical diffusion of disc-golf courses (Oldakowski & McEwen, 2013). Conducting a literature search under the alternative name for disc golf, ‘frisbee golf’, found no studies focusing on the travel dimension, although one paper has been published on the commercial development of the sport using this name (Zhang, 2022).

2.1. *Serious leisure, its characteristics and link to tourism*

According to Stebbins (2007, p. 5), serious leisure is the ‘the systematic pursuit of an amateur, hobbyist, or volunteer core activity that people find so substantial, interesting and fulfilling that, in the typical case, they launch themselves on a (leisure) career centered on acquiring and expressing a combination of its special skills, knowledge and experience’. Stebbins (2011) identified six different characteristics linked to serious leisure: perseverance, leisure career, significant effort, durable outcomes, unique ethos, and identification with the pursuit. These form the basis for the SLIM model (Gould et al., 2008), which has been used in a wide variety of contexts in which serious leisure takes place (Lee et al., 2023). Some investigated the role of travel within serious-leisure pursuits, but these are limited in number and scope. Barbieri and Sotomayor (2013), for example, examined the motivations of serious surfers and the implications for the further development of surf tourism. Serious surfers were more likely to have previous surf-travel experience, indicating that travelling to surf in different places is one way in which they advance in their leisure career. They also tended to travel more frequently than casual surfers. Tourism-related factors, such as ‘destination appeal’ and ‘access and infrastructure’, tended not, however, motivate them to travel to a particular surf spot: they were almost exclusively interested in surfing conditions and facilities (Barbieri & Sotomayor, 2013).

2.2. *Motivations, sport tourism and special-interest tourism*

Serious leisure and tourism are often studied in situations where the theoretical framework or frameworks come from leisure studies and the tourism provides the context, such as wine tourism (Brown & Smith, 2010), adventure tourism (Kane & Zink, 2004), yoga tourism (Liu et al., 2022) or sport tourism (Green & Jones, 2005). However, the seriousness applied to the leisure activity can be an important motivating force for travelling (Suni, 2017), both in terms of push and pull motivations.

According to Dann (1981), a motivation is a reason for an individual to pursue a certain goal, complete a purchase, or travel to a certain destination. It is generally agreed that a wide range of motivational factors exist, and that these are likely to give different impacts upon different people, travelling to different places, in different ways, for different reasons (Pearce & Lee, 2005). Studies have traditionally grouped leisure-travel motivations into push and pull factors (Dann, 1981; Klenosky, 2002).

Push factors are inner motivations that compel a person to travel. When someone realises that they have a need for something, a motive for action is created (Crompton, 1979). In addition, Dann (1977) states that push factors are the primary source of motivation for an individual to travel and found two distinctive types of push factors affecting travel intentions: anomie and ego-enhancement. Anomie is described as an escape from ordinary day-to-day life, while ego-enhancement means that individuals travel and see value in how this action helps portray themselves to others in a positive or superior light. Kim and Ritchie (2012), meanwhile, identified five push factors in the context of golf tourism: business opportunity, benefits, learning/challenging, escape/relax, and social interaction/kinship.

Pull motivations, meanwhile, are motives for travel created by a potential destination. If a destination has attributes that are desirable to tourists, they can be pulled in its direction (Crompton, 1979). Destination attributes, meanwhile, are the distinctive features of a destination that have potential to attract visitors. Tourists tend to consider destinations as a whole and rather than multiple different service providers (Caber et al., 2012). Preferred destination attributes differ according to tourist segment. Regardless of the reason for travel, however, tourists need infrastructure and accessibility, and tend to react positively to high level of service quality, hospitality, and facilities (Alegre & Garau, 2010; Pizam et al., 1978). If tourists' expectations are met, or even exceeded, they will derive satisfaction from their trip. Accommodation services, local transportation, hygiene, customer care, availability of services, and price level are destination attributes that have been found to have a positive influence on tourist satisfaction (Bowen & Clarke, 2002).

Disc-golf tourism can be characterised as a form of sport tourism, which involves people travelling with the main intention either of spectating or participation in sport (Tassiopoulos & Haydam, 2007). Compared to leisure tourists, sport tourists usually have more specialised knowledge and use it in different ways to search for information about the destination offer (Higham, 2005). Destinations are often selected according to the sport-related rather than tourism-related attributes (Filo et al., 2011). This is not to suggest, however, that sports-related motivations will always dominate (Robinson & Gammon, 2004).

Sports tourism could also be described as a particular mode of special-interest (or 'niche') tourism (Hall & Weiler, 1992; Lee & Scott, 2013; Trauer, 2006). To this extent, it is worth noting that a number of studies have sought to distinguish special-interest tourists from general tourists in terms of their motivations, preferences, behaviours, and so on (e.g. Pulido-Fernández et al., 2019; Soleimani et al., 2019). At the same time, Trauer (2006) relates the concepts of serious leisure and special-interest tourism closely, indicating that special-interest tourism may be predicated on the intention to participate in activities that require high levels of enduring involvement. Participants can, therefore, end up following a well-defined leisure-career path.

3. Methods

3.1. 3.1 survey instrument and data collection

An online questionnaire was used for data collection, consisting of eight sections based on the SLIM model (Gould et al., 2008): demographics, disc-golf background, reasons to participate in disc golf, serious leisure characteristics, disc-golf-travel background, travel push motivations and destination-related pull motivations. The SLIM model represents a consistent and repeatable way to study leisure participants and enable serious participants to be distinguished from casual participants (Gould et al., 2011). This original model was based on 18 dimensions summarised into two main groups: seriousness and durable benefits. Some studies, meanwhile, have adopted a reduced version of the SLIM, with only one statement per dimension (known as 'short SLIM', see Gould et al., 2011). Lee et al. (2023) found that of the 34 studies that had employed SLIM, 13 expressly stated they used the short form. SLIM-items are measured on a five-point Likert scale. The evidence suggests that the short SLIM variant is acceptable when the researcher is interested primarily in investigating higher constructs such as seriousness and durable benefits. It can also be helpful when there is reason to suspect that the long-form survey could discourage respondents from completing it. The long-form version, meanwhile, may be preferable when the researchers wish to consider lower-level factors, such as career progression, effort, and perseverance. Given the aims of this paper, which are to examine the travel-related characteristics of more serious and more casual disc golfers, the short SLIM was adopted in this study (see Table 1). In terms of motivations, push motivation statements were adopted from Dann (1977), Crompton (1979), Green and Jones (2005), and Kim and Ritchie (2012). Pull motivation statements were adopted from Kim and Ritchie (2012). Additional motivational statements related specifically to disc-golf related were also created for this study.

Table 1. Serious leisure qualities, dimensions, and survey statements.

Quality	Dimension	Statement
Perseverance	Perseverance	I overcome difficulties in disc golf by being persistent.
Significant effort	Significant effort	I practice frequently to be better at disc golf.
Career	Career progress	I see that I have improved in disc golf since I started playing.
	Career contingencies	Some events related to my personal disc golf hobby have affected my disc golf involvement.
Durable outcomes	Personal enrichment	Disc golf has added richness to my life.
	Self-actualisation	I make full use of my talent when playing disc golf.
	Self-express abilities	I am able to present my skills and abilities while playing disc golf.
	Self-expression as an individual	I can express myself through disc golf.
	Self-image	Disc golf has improved the way I think of myself.
	Self-grat-satisfaction	My disc golf experiences have been very rewarding.
	Self-grat-enjoy	I enjoy playing disc golf.
	Recreation	I feel renewed after playing disc golf.
	Financial return	I have benefitted financially by playing disc golf.
	Group attraction	I like to spend time with other disc golfers.
	Group accomplishments	The accomplishment of my disc golf group are important to me.
Unique ethos	Group maintenance	The feeling of cohesion in my disc golf group is important to me.
	Unique ethos	I share the same type of thoughts with other disc golfers.
	Identity	People familiar to me understand that disc golf is a part of who I am.

Source: Gould et al. (2011).

The data were collected between December 2020 and January 2021, using a survey questionnaire written in Finnish. The inclusion criteria were that respondents should (a) be resident in Finland and (b) consider themselves to be disc golfers. The survey was disseminated by Spin18, a company that produces ‘Discmania’ discs, introduced the ‘DiscGolfPark’ concept and maintains the Frisbeegolfraadat.fi website. This provides information about all disc golf courses in Finland and serves as a portal for visitors to search for course information, leave reviews and read news related to disc golf. Spin18 published a news article about this study, which included the link to the survey. The article was advertised on Facebook with a budget of 100€. Two discount codes worth of 50€ for InnovaStore Europe website were raffled among the respondents. The survey link was also shared in the largest Facebook group of Finnish disc golfers.

3.2. Data analysis

Once gathered, the data were divided into clusters based on the SLIM variables: *perseverance*, *effort*, *career*, *lasting benefits*, *unique ethos*, and *identity*. K-means cluster analysis was used to create clusters, with centre points based on the variable means. Iteration was performed until the clusters no longer changed their consistency (Han et al., 2011).

One-way ANOVA was then used to examine differences between the cluster means. Post-hoc tests were also conducted to examine which clusters’ mean scores differed significantly when compared with mean scores of the other clusters (Chen et al., 2018). The Bonferroni *post-hoc* test was used to examine whether the differences between studied clusters were significant (Hayes, 2021).

Some of the research questions were designed to examine whether the serious-leisure background of a participant had any relationship with previous disc-golf travel on their part and with their overall attitude towards travelling to play disc golf. The chi-square statistic was used to test for these relationships.

4. Results

4.1. Demographic profile of respondents, participation in disc golf and travel behaviour

A total of 989 valid responses were received. Most respondents were male (87.8%), and the largest age group was 18–29 year-olds (34.7%). In 2021, around 93% of PGDA members were male and the largest age group was 30–39 years old, followed by 20–29 years old (PDGA, 2023a). This suggests that the gender and age profile of the sample may be taken to be reasonably representative. Regarding participation in disc golf, 95.6% of respondents played at least once a week, while 32.45% had been playing between 6 and 10 years, followed by 4–5 years (23%), 2–3 years (22.2%) and 1 year or less (14.3%). Only 8.1% had been playing for over 10 years. Just under half (44.1%) were members of disc-golf-related associations, while 27.1% had the PDGA and FDGA licences necessary to compete in organised competitions. Most (81.3%) were not, however, actively competing at the time of the survey. The four most popular reasons to play disc golf were to *spend time with friends*, for *relaxation*, as a form of *exercise*, and for *getting to know new courses*. The lowest mean score was for competing, which suggests that competitive participation does not play a major role in Finnish disc-golf participation.

In terms of willingness to travel, 95% of respondents stated they were willing or very willing to take domestic overnight trips with the main objective of playing disc golf, while 58% said they were willing or very willing to travel to watch a tournament. Only 19.4% stated that they were not willing or not at all willing to participate in overnight trips to watch a disc-golf tournament. Two-thirds (67%) had made at least one overnight disc-golf trip, while 31% did not have a domestic disc-golf travel history but stated that they would be willing to participate in the future. Only 2.1% stated that they had neither a history of nor future intentions to travel to participate in disc golf.

4.2. Push and pull motivations for domestic overnight travel

Questions on push and pull motivations were asked of those who had travelled to participate in disc golf and those who had not yet travelled for that purpose but were willing to do so ($n = 968$). The motivation statements (which are listed in Appendices A and B) were measured using a five-point Likert scale. The strongest push motivations were to become *familiarised with new courses* ($m = 4.65$) and to achieve greater *variation in playing* ($m = 4.23$) the sport. To *spend time with friends* ($m = 4.22$) was the third most popular, with *relaxation* ($m = 4.02$) fourth. The results suggest that competing was not considered to be a potential push factor in general, only for those interested in participating in competitions: mostly those respondents who had the PDGA licence gave a relatively high mean score for competing ($m = 3.98$).

Pull motivations were studied in two groups: those related to general destination attributes and course-related attributes. The former are those that can be relevant in any type of travel, while course-related attributes relate only to participation in disc golf. The four most important course-related destination factors were, in order: *well-maintained courses* ($m = 4.45$), *versatile courses* ($m = 4.31$), *multiple courses* ($m = 4.16$) and *full-length courses* ($m = 4.12$). The least-influential course-related pull factor was the course being revered or known for hosting pro-level tournaments.

Course-related pull factors received consistently higher mean scores than destination-related pull factors, none of which had mean scores higher than four. The three most highly valued general destination attributes were beautiful nature ($m = 3.93$), restaurant services ($m = 3.61$) and travelling being possible on a small budget ($m = 3.41$). Visiting night life ($m = 2.04$) was the least important destination attribute. Indeed, most disc-golf travellers are not interested in participating in activities other than disc golf when travelling.

Table 2. Serious leisure cluster centres.

Serious leisure qualities	Cluster centres				
	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Perseverance	4	3	3	2	3
Effort	5	3	4	2	3
Career	4.72	4.41	4.45	3.58	4.24
Lasting benefits	3.99	3.59	3.45	2.62	3.11
Unique ethos	4	4	4	2	3
Identity	4	4	3	2	3
Size of the clusters	271	186	249	107	176

4.3. Serious leisure clusters

Five clusters were created using K-means cluster analysis (Table 2). The clusters were created using SLIM items, and the location of the cluster centres and push motivations of each cluster helped in naming them.

Cluster 1 was named ‘Serious Disc Golfers’ as it consisted of respondents with the highest scores and the highest grand average ($m = 4.29$). Only *lasting benefits* was valued lower than 4, and then only just ($m = 3.99$). This group contained 27% of all respondents. **Cluster 2**, ‘Social Disc Golfers’, consisted of respondents who set a high value on the social aspects of disc golf: *identity* and *unique ethos*. This was the third largest cluster, comprising 19% of the sample. Cluster centres for *perseverance* and *effort*, which are descriptive of skill-related aspects of disc golf, were centred only at 3.00. The grand average of the Social Disc Golfer cluster centres was 3.67. **Cluster 3** was named ‘Hobbyists’ and was the second largest cluster, with 25% of the sample. The centre average for this cluster ($m = 3.65$) was not significantly different compared to the Social Disc Golfers cluster. Respondents within this cluster tend to value *effort* higher than Social Disc Golfers but give lower values to characteristics covering the social aspects of disc golf. The name ‘Hobbyists’ refers to the notion that the respondents of this cluster are mostly interested in the self-development aspects of disc golf. **Cluster 4**, ‘Occasional Disc Golfers’ comprised respondents with the lowest scores and was the smallest, representing 11% of the sample. The cluster centre average was only 2.37. The only cluster centre valued over 3.00 was *career*. **Cluster 5** was named ‘Casual Disc Golfers’, as it occupied the middle ground between Serious Disc Golfers, Social Disc Golfers and Hobbyists on the one hand, and Occasional Disc Golfers on the other. The cluster centre average was 3.23 and no cluster centre score was below 3.00. It was the second smallest cluster with 18% of the sample.

4.4. Domestic overnight travel behaviours by cluster

Table 3 sets out the results, which show that while there was a high willingness in all clusters to engage in domestic overnight travel to participate in disc golf (mean scores > 4.00), there were significant differences among the clusters ($p < 0.001$). Serious Disc Golfers were the most likely to travel domestically overnight to participate in disc golf, while Occasional Disc Golfers were the least. Regarding travelling to watch disc-golf competitions, the mean scores were lower (< 4.00), but the same pattern emerged regarding the clusters most and least likely to engage in such activity.

Table 3. Cluster mean values for willingness to take domestic overnight trips.

Willingness to do overnight trips	Serious (1)		Social (2)		Hobbyists (3)		Occasional (4)		Casual (5)		F-test	p-value
	Mean	S. D	Mean	S. D	Mean	S. D	Mean	S. D	Mean	S. D		
To play disc golf	4.92 ^{3,4,5}	0.281	4.82 ^{4,5}	0.515	4.73 ^{1,4,5}	0.573	4.26 ^{1,2,3,5}	1.013	4.56 ^{1,2,3,4}	0.656	29.236	0.000
To watch disc golf	3.99 ^{3,4,5}	1.059	3.8 ^{4,5}	1.091	3.63 ^{1,4}	1.091	2.88 ^{1,2,3,5}	1.399	3.34 ^{1,2,4}	1.208	22.030	0.000

The mean values are measured with a 5-point Likert scale. Superscript numbers tell which clusters have differences between each other. (Bonferroni Test for post-hoc analysis, $\alpha = 0.05$).

Table 4. Previous disc-golf travel-related experience and travel intentions.

Statement	Serious leisure clusters					Total	Chi-Square Value	Sig.
	Serious (1)	Social (2)	Hobbyists (3)	Occasional (4)	Casual (5)			
I have made at least one disc golf trip	202	143	145	59	113	662	68.056	0.00.
	74.5%	76.9%	58.2%	55.1%	64.2%	66.9%		
I have not made disc golf trips, but would like to participate in disc golf-related travel in the future	68	39	102	37	60	306		
	25.1%	21.0%	41.0%	34.6%	34.1%	30.9%		
I have not made disc golf trips and I am not interested in disc golf travel in the future.	1	4	2	11	3	21		
	0.4%	2.2%	0.8%	10.3%	1.7%	2.1%		
Total	271	186	249	107	176	989		
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

Table 5. Annual trips to participate in disc golf by cluster.

Annual disc golf trips	Serious leisure clusters					Total
	Serious (1)	Social (2)	Hobbyists (3)	Occasional (4)	Casual (5)	
No annual trips	0	0	1	1	2	4
	0.0%	0.0%	0.7%	1.7%	1.8%	0.6%
1–2 annual trips	56	55	66	31	57	265
	27.7%	38.5%	45.5%	52.5%	50.4%	40.0%
3–4 annual trips	57	35	44	19	31	186
	28.2%	24.5%	30.3%	32.2%	27.4%	28.1%
5–10 annual trips	77	46	28	7	20	178
	38.1%	32.2%	19.3%	11.9%	17.7%	26.9%
Over 10 annual trips	12	7	6	1	3	29
	5.9%	4.9%	4.1%	1.7%	2.7%	4.4%
Total	202	143	145	59	113	662

χ^2 (16, $N = 662$) = 46.82, $p < .001$.

Table 6. Accommodation used by cluster.

Accommodation	Serious (1)	Social (2)	Hobbyists (3)	Occasional (4)	Casual (5)	χ^2 , df, p
Hotel	60.9%	65.7%	53.8%	47.5%	54.0%	8.7, 4, $p = 0.07$
Spa	29.2%	26.6%	23.4%	20.3%	20.4%	4.26, 4, $p = 0.37$
Hostel/guesthouse	28.2%	31.5%	18.6%	20.3%	15.9%	13.1, 4, $p = 0.01$
Camping area	27.2%	37.1%	21.4%	32.2%	20.4%	12.88, 4, $p = 0.01$
Tent	14.9%	11.2%	11.7%	13.6%	8.8%	2.771, 4, $p = 0.60$
Airbnb or other rented accommodation	37.6%	39.2%	32.4%	16.9%	29.2%	11.86, 4, $p = 0.02$
With friends or family	66.3%	56.6%	56.6%	35.6%	59.3%	18.25, 4, $p < 0.001$
Owned accommodation, such as a summer cottage	37.1%	30.1%	24.8%	28.8%	29.2%	6.5, 4, $p = 0.165$

χ^2 = Pearson's chi-square value, df = degrees of freedom, p = p-value.

Regarding their previous travel experience, Serious and Social Disc Golfers were significantly more likely to have already undertaken at least one trip, while those in the other clusters were significantly more likely to express an interest in doing so in the future (Table 4). Occasional Disc Golfers were, however, significantly more likely not to have travelled domestically overnight to participate in disc golf and would not be interested in doing so in the future.

The survey question about the number of trips previously made to play disc golf was only asked of people with a previous history in travel related to disc golf ($n = 662$). The results (Table 5) reveal significant ($p < 0.001$) differences in annual travel activity between the clusters. Serious Disc Golfers were the most active cluster, with 72.2% of respondents taking more than two overnight disc-golf trips annually. The least active were Occasional Disc Golfers, of whom only 45.8% travelled this much.

The question about the accommodation used on disc-golf trips was only asked of respondents with a previous history of disc-golf-related travel ($n = 662$). There were some significant differences ($p < 0.05$) in the types of accommodation used between the clusters, namely for use of hostel/guesthouse, camping area, Airbnb, or other rented accommodation, or staying with friends or family. The differences lie mainly in Occasional disc-golfers having stayed less frequently at Airbnb accommodation or with friends or family than other groups. Hobbyists and Casual disc-golfers have less frequently used hostel/guesthouse accommodation or stayed at camping areas (Table 6).

4.5. Push and pull travel motivations by cluster

Push motivations by cluster are shown in Table 7. These suggest that although there are some small variations between specific clusters, two push motivations are important for all groups: to *familiarise themselves with new courses* and to *have a variation in the sport*. This is true even of the Occasional cluster, who might have been expected to put less emphasis on travelling to try out new courses. Only the Serious cluster, however, considered it important to travel to find courses that will help them to *increase their skills*.

Meanwhile, *travelling to find a better course* was not rated highly by any cluster. Other motivations tended to be more important, such as to *spend time with friends* or *relaxing*. *Variety* and *trying out new courses* were more important than finding more-challenging courses, even for the Serious cluster. *Spending time with friends* was relatively important for all groups apart from Serious Disc Golfers, highlighting the social nature of the game. It is not possible to discern from this data, however, whether this sociability extends to playing with family members, as the test for this item was not significant ($p > 0.05$). The least influential push factors for all groups were *travelling to compete* and *travelling to see a competition*. Travel, it would seem, is generally associated with playing the game for fun (Table 8).

In terms of pull motivations related to the destination, *beautiful nature at the destination* was scored significantly ($p < 0.001$) high by every cluster, although the mean score for the Occasional

Table 7. Cluster mean values: reasons for participating in disc-golf travel (push motivations).

Reasons to do disc golf -related travel	Serious (1)		Social (2)		Hobbyists (3)		Occasional (4)		Casual (5)		F-test	p-value
	Mean	S. D	Mean	S. D	Mean	S. D	Mean	S. D	Mean	S. D		
To achieve greater variation in playing the sport	4.40 ^{4,5}	0.793	4.37 ^{4,5}	0.759	4.27 ^{4,5}	0.767	3.79 ^{1,2,3}	1.065	4.23 ^{1,2,3}	0.838	15.109	<0.001
To relax	4.27 ^{3,4,5}	0.881	4.25 ^{3,4,5}	0.788	3.85 ^{1,2}	0.950	3.60 ^{1,2}	1.041	4.02 ^{1,2}	0.930	17.078	<0.001
To spend time with friends	4.47 ^{3,4,5}	0.812	4.43 ^{3,4,5}	0.774	4.14 ^{1,2,4}	0.893	3.71 ^{1,2,3}	1.247	4.22 ^{1,2}	0.956	16.921	<0.001
To spend time with family	2.85	1.502	2.81	1.448	2.59	1.364	2.69	1.551	2.77	1.453	1.548	0.186
To spend time with other disc golfers	3.44 ^{2,3,4,5}	1.109	3.07 ^{1,3,4,5}	1.185	2.74 ^{1,2,4,5}	1.107	2.06 ^{1,2,3}	0.960	2.86 ^{1,2,3}	1.195	44.811	<0.001
To improve my skills	4.19 ^{2,3,4,5}	0.946	3.32 ^{1,3,4}	1.013	3.93 ^{1,2,4,5}	0.925	2.85 ^{1,2,3,5}	1.114	3.66 ^{1,3,4,5}	1.082	51.961	<0.001
To familiarise myself with new courses	4.78 ^{4,5}	0.548	4.64 ⁴	0.630	4.70 ⁴	0.596	4.28 ^{1,2,3,5}	0.891	4.65 ^{1,4}	0.655	11.801	<0.001
To play better courses than the ones close to me	3.74 ^{4,5}	1.285	3.49	1.091	3.54 ⁴	1.107	3.14 ^{1,3}	1.278	3.51 ¹	1.197	5.617	<0.001
To compete	3.03 ^{2,3,4,5}	1.646	2.49 ^{1,4,5}	1.489	2.23 ^{1,4,5}	1.445	1.50 ^{1,2,3}	0.984	2.35 ^{1,2,3}	1.526	30.498	<0.001
To watch a competition	2.73 ^{3,4,5}	1.234	2.51 ⁴	1.225	2.41 ^{1,4}	1.216	1.80 ^{1,2,3}	1.022	2.41 ¹	1.221	13.174	<0.001

The mean values are measured with a five-point Likert scale. Superscript numbers tell which clusters have differences between each other. (Bonferroni Test for post-hoc analysis, $\alpha = 0.05$).

Table 8. Cluster mean values: reasons for participating in disc-golf travel (destination-related pull motivations).

Pull motivation statements	Serious (1)		Social disc golfers (2)		Hobbyists (3)		Occasional (4)		Casual (5)		F-test	p-value
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Beautiful nature at the destination	4.03 ⁴	0.95	4.00	0.78	3.91	0.81	3.70	1.02	3.84	0.89	3.29	0.011
Possibility of accommodation in a hotel	2.99	1.21	3.01	1.16	2.89	1.20	2.82	1.23	2.90	1.18	0.69	0.596
Possibility of accommodation in a spa	2.26	1.21	2.12	1.12	2.10	1.10	1.94	1.20	2.20	1.14	1.69	0.151
Possibility of accommodation in a hostel or guesthouse	2.81 ^{4,5}	1.18	2.71	1.10	2.64	1.15	2.39	1.23	2.43 ¹	1.14	4.52	0.001
Possibility of accommodate in an AirBnB or other rented accommodation	2.94 ⁴	1.29	2.85 ⁴	1.23	2.76 ⁴	1.25	2.16 ^{1,2,3,5}	1.22	2.61 ⁴	1.25	7.91	<0.001
Possibility of accommodate at a camping area	2.82 ^{2,3,4}	1.25	2.47 ¹	1.25	2.47 ¹	1.22	2.38 ¹	1.28	2.50	1.25	4.13	0.003
Possibility of accommodation in a tent	2.30 ²	1.28	1.91 ¹	1.18	2.17	1.25	1.97	1.24	2.06	1.24	3.38	0.009
My summer cottage is in the area	2.11	1.39	1.85 ⁵	1.15	2.09	1.28	1.91	1.32	2.26 ²	1.32	2.67	0.031
Possibility of accommodation for free, (e.g. with friends or family)	3.35 ^{2,4,5}	1.26	2.83 ¹	1.35	3.08 ⁴	1.28	2.59 ^{1,3}	1.46	2.91 ¹	1.33	8.23	<0.001
The destination has restaurant services	3.71	1.03	3.65	1.04	3.57	1.00	3.42	1.11	3.57	1.03	1.76	0.136
The destination facilitates local night life	1.99	1.23	2.10	1.27	2.11	1.21	1.99	1.31	1.99	1.21	0.61	0.654
There are other visitable locations, e.g. for sightseeing	2.74	1.15	2.68	1.08	2.68	1.13	2.85	1.28	2.85	1.15	0.65	0.626
There are other activity possibilities	2.63	1.18	2.59	1.04	2.57	1.06	2.75	1.18	2.75	1.11	0.73	0.570
The destination can be travelled to with a small budget	3.61 ^{2,5}	1.11	3.26 ¹	1.12	3.47	1.06	3.20	1.16	3.20 ¹	1.11	4.85	0.001
The destination provides something to do for the whole family	2.60	1.41	2.48	1.37	2.40	1.36	2.61	1.46	2.61	1.39	0.94	0.440

The mean values are measured with a 5-point Likert scale. Superscript numbers tell which clusters have differences between each other. (Bonferroni Test for post-hoc analysis, $\alpha = 0.05$).

cluster was significantly lower than that of the Serious cluster ($p < 0.001$). Due to the wording of the question, however, it cannot be known whether the respondents' values relate to the natural environment of the destination or to the scenery of the course itself (Table 9).

Most of the clusters also placed a significantly ($p < 0.001$) high value on the destination being one that *can be travelled to with a small budget*. Given that travel costs are often strongly related to distance, this might be taken to suggest that disc golfers generally prefer to take shorter trips. Most groups did, nevertheless, value different accommodation services as being somewhat important. All valued *accommodation in a hotel* highly. While *accommodation in a camping area* received a relatively low score by most clusters, those in the Serious cluster related it significantly higher than Social, Occasional and Casual Disc Golfers. While disc golfers value low-budget travel, they still prefer hotel accommodation over camping. The availability of local *night life* received the second lowest mean values in all the clusters. Being able to visit attractions was also seen as more important by some clusters than others, but this result was not statistically significant ($p > 0.05$).

Regarding motives specific to disc golf, respondents tended to give these variables higher scores than for general destination pull motivations. Their responses were also more homogenous, with a generally lower standard deviation for these variables. This suggests that disc-golf travellers are more interested in the quality of the disc-golf facilities on offer than in broader destination attributes such as accommodation and things to do.

The highest-scoring course-related attribute for every cluster was that *courses are well-maintained*. The score was significantly lower for the Occasional cluster than for all the others

Table 9. Cluster mean values: reasons for participating in disc-golf travel (disc-golf-related pull motivations).

Pull motivation statements: Disc golf related	Serious (1)		Social disc golfers (2)		Hobbyists (3)		Occasional (4)		Casual (5)		F-test value p-value	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.		
Possible to play multiple courses	4.25 ⁴	0.806	4.21 ⁴	0.787	4.21 ⁴	0.735	3.89 ^{1,2,3}	1.035	4.03	0.813	5.036	0.001
Fewer users than in my home courses	2.99	1.241	2.86 ⁵	1.204	3.11	1.179	3.07	1.145	3.23 ²	1.084	2.486	0.042
The course is well-maintained	4.55 ⁴	0.630	4.46	0.600	4.44	0.615	4.29 ¹	0.695	4.39	0.670	3.471	0.008
The course is challenging for me	3.99 ^{2,3,4,5}	0.849	3.65 ^{1,4}	0.884	3.76 ^{1,4}	0.731	3.31 ^{1,2,3,5}	0.921	3.65 ^{1,4}	0.846	13.165	<0.001
The course is full-length	4.35 ^{2,4,5}	0.861	4.04 ¹	1.007	4.15 ⁴	0.896	3.80 ^{1,3}	1.148	3.99 ¹	0.931	7.944	<0.001
The course has received good reviews	3.84 ⁴	0.964	3.80	0.852	3.86 ⁴	0.805	3.49 ^{1,3,5}	0.984	3.86 ⁴	0.805	3.610	0.006
The course has been promoted in social media	3.64 ⁴	1.059	3.58 ⁴	0.924	3.54 ⁴	0.936	3.00 ^{1,2,3,5}	1.114	3.40 ⁴	0.975	8.294	<0.001
The surrounding nature at the course is beautiful	3.93	0.904	3.82	0.842	3.8	0.731	3.67	0.97	3.83	0.865	1.878	0.112
The course is versatile and demands different shot-types	4.48 ^{2,4,5}	0.699	4.23 ¹	0.861	4.39 ⁴	0.608	4.03 ^{1,3}	0.864	4.19 ¹	0.702	9.559	<0.001
The course is revered, as in known for hosting pro tour or Finnish nationals	3.28 ^{2,4,5}	1.132	2.96 ^{1,4}	1.184	3.11 ⁴	1.092	2.36 ^{1,2,3,5}	1.134	2.89 ^{1,4}	1.169	12.557	<0.001

The mean values are measured with a 5-point Likert scale. Superscript numbers tell which clusters have differences between each other. (Bonferroni Test for post-hoc analysis, $\alpha = 0.05$).

($p=0.008$) but still their most important course-related attribute. All clusters also set a high value on the course being *versatile and demanding different shot types*, although this was significantly higher for Serious Disc Golfers and Hobbyists than the other three clusters ($p < 0.001$). Being able to *play multiple courses* at the same destination was also ranked in the top three desirable course attributes by all clusters. Casual Disc Golfers did, however, give this attribute a significantly lower mean score than the other clusters ($p = 0.001$).

Serious Disc Golfers were significantly more interested in *challenging* courses, and Occasional Disc Golfers significantly less so ($p < 0.001$). The course being *promoted in the social media* was significantly less important for Occasional Disc Golfers than for any other cluster ($p < 0.001$).

Finally, the course-related attributes with the lowest mean scores across all clusters were there being *fewer users* than at their home course and that the *course is revered* (for example, its being known for hosting Pro Tour or other pro-level tournament). These attributes received the lowest two mean scores in all clusters except Occasional Disc Golfers, where they were in the lowest three. The tendency for disc golfers not to value there being *fewer users* at the course suggests that disc-golf travel does not generally arise out of necessity – i.e. that the travellers' home courses are congested – but due to the other pull motivations noted.

5. Discussion

The results presented above accord with those of previous studies that have used the SLIM model to identify clusters of leisure participants with common motivations and preferences situated along a serious – casual continuum (Lee et al., 2023). While the SLIM model has less often been used to investigate the travel motivations and preferences of participants in serious-leisure pursuits, several

comparator studies exist, most of which have found that serious leisure participants have stronger travel intentions than the more casual counterparts (e.g. Suni, 2017; Turunen, 2019), and this general pattern is what was found in the present study. An exception is the study of travel by surfers (Barbieri & Sotomayor, 2013), which failed to identify a strong correlation between serious leisure and surf-travel behaviour, suggesting that a different type of segmentation which is not related to seriousness could be better to analyse their motivations. There are some indications that further differentiation is required in the present study for respondents' travel motivations to be more fully understood. The results found, for example, that respondents from every cluster had little interest in travelling to play in a disc-golf competition, except for those who held a PDGA licence to compete (27% of the total). The proportion of PDGA licence holders was highest with the Serious Disc Golfers (11% of total respondents), followed by Social Disc Golfers (7%), Hobbyists (5%), Casual (3%), and Occasional Disc Golfers (1%).

The results also suggest that the vast majority of Finnish disc golfers have a previous history of domestic overnight travel and are also willing to do this in the future. Disc golfers in general could therefore be described as having a strong disposition for domestic overnight travel. This could be because disc golf is highly dependent upon location, requiring the use of purpose-built courses. There are some indications from previous studies to support this view. Barbieri and Sotomayor (2013), for example, suggest that surfing is a location-dependent activity and travel might be obligatory to surf on a certain type of waves. Surfers require more challenging waves to tackle if they are to progress in their leisure careers. Pokémon Go might also be said to be location dependent, in that more-serious participants need to travel to find the specific Pokémons they need to progress in the game (Williams & Slak-Valek, 2019). Disc golf and other sports, such as golf, tennis, football, are also location-dependent since they require a course, court or pitch on which to play them seriously.

Respondents in this study also tended to react more positively to pull factors related to the sport than destination-related pull factors. The main travel experience comes from the playing the game and other aspects of travel, such as accommodation might be seen as facilitatory elements. A similar conclusion was reached by Barbieri and Sotomayor (2013), who recommend developing areas with high surfing appeal but low infrastructure to emphasise surf-related aspects of the destination.

6. Conclusions

6.1. Theoretical implications

Clustering respondents according to the serious-leisure characteristics revealed five different disc-golfer types, each with their own distinctive characteristics. This is not unusual for studies that have used the SLIM model to examine the motivations and behaviours of special-interest tourists. This study is notable, however, in that there is only limited differentiation in the travel motivations between clusters. While there are some significant differences between the Serious and Occasional clusters, most of the respondents fit into in-between groups where such distinctions are not as sharp. As such, it can be argued that while the SLIM model has provided an appropriate basis upon which to distinguish between different clusters of disc golfers in terms of their motivations to travel domestically to participate in the game, the analysis does not allow for distinctions to be made, particularly between the three intermediate groups: Social Disc Golfers, Hobbyists and Casual Disc Golfers.

6.2. Managerial implications

In terms of managerial implications for private- and public-sector organisations offering disc golf as a domestic tourism activity, this study found that Finnish disc golfers tend to be active travellers, who are seeking variation and new experiences. They travel to play disc golf casually and the main push motivation is to spend quality time with friends. They tend to take relatively short trips, during which they play multiple courses in an area.

In addition, there is little variation among the various clusters with respect of what type of disc-golf destinations they preferred. Customising a niche market offer can be costly and this finding suggests that the gain from doing so may be marginal. The most efficient marketing strategy will probably therefore be to use similar marketing and service design for all of the clusters. Those offering well-maintained full-length courses with versatile holes, multiple layouts, and tee pads or basket positions that visitors can choose for themselves, have the greatest potential to attract disc-golf tourists from all clusters.

Another commonality in motivations across all clusters is that destination attributes such as accommodation and the availability of other activities such as nightlife, are seen as merely facilitatory. Marketing activity should therefore focus most on the disc-golf facilities available at the destination. Those seeking to develop or adapt courses to appeal to disc-golf tourists should therefore obtain specialist advice and consult widely before finalising their plans. This could include ensuring that the courses provide the variety of challenge disc golfers are looking for to progress their leisure career. Suni (2017) makes a similar suggestion about areas that wish to provide for hunting tourists. Sotomayor and Barbieri (2016), meanwhile, recommend that surf destinations plan their marketing according to whichever group, be it serious or casual, they consider has the greater development potential.

Lastly, since disc-golf tourists prefer to play multiple courses during their trip, they may consider regions as destinations, rather than single locations or courses. Organisations in places wishing to attract disc-golf tourists should therefore collaborate and market themselves as a disc-golf travel destination. For example, the South-West region of Finland has a high density of courses that has potential to be marketed as a disc-golf travel destination.

6.3. Limitations and future research

As no previous research exists on disc golf-related travel, this study serves as a baseline for future research. The generalisability of the results is limited because of the use of a convenience sample. In addition, this study was limited to the domestic overnight travel intentions of active disc golfers. Further research is needed to assess how far the conclusions drawn here can be extended to other countries and to international travel. The study also focused on respondents who self-identified as disc golfers, rather than on general tourists who might be persuaded to try the sport. Future studies should examine the suitability of this sport for general-interest tourism and whether disc golf holds any potential for domestic tourists who may not even know about disc golf. Further studies are therefore needed to explore the accessibility of Finnish disc-golf travel to general tourists, including potential barriers.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendices

Appendix A. Push motivation statements

Push motivation statement	All respondents		PDGA licence holders (N = 268)	Others (N = 700)
	Mean value	Standard deviation	Mean value	Mean value
to familiarise myself with new courses	4.65	0.655	4.56	4.68
to achieve variation in the sport	4.23	0.838	4.21	4.24
to spend time with friends	4.22	0.956	4.16	4.24
to relax	4.02	0.930	4.12	3.98
to improve my skills	3.66	1.082	3.72	3.64
to play better courses	3.51	1.197	3.41	3.55
to spend time with other disc golfers	2.86	1.195	3.42	2.64
to spend time with family	2.77	1.453	2.80	2.76
to watch a competition	2.41	1.221	2.78	2.27
to compete	2.35	1.526	4.16	1.66

Appendix B. Pull motivation statements

Pull motivation/Destination attribute	All respondents (N = 968)	
	Mean value	Standard deviation
Beautiful nature at the destination	3.93	0.887
The destination has restaurant services	3.61	1.032
The destination can be visited with a small budget	3.41	1.113
Possibility of accommodation with friends or family	3.03	1.326
Possibility of accommodation in a hotel	2.93	1.181
Possibility of accommodate in Airbnb or other rented accommodation	2.74	1.251
The destination has other visitable locations like sights	2.73	1.147
Possibility of accommodation in a hostel/guesthouse	2.64	1.143
There are other activity possibilities at the destination	2.63	1.114
Possibility of accommodate in a camping area	2.56	1.25
The destination provides something to do for the whole family	2.52	1.385
Possibility of accommodate in a spa	2.15	1.143
Possibility of accommodate in a tent	2.12	1.243
My summer cottage is located at the destination	2.06	1.322
The destination facilitates visits to night life	2.04	1.211