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EXPLORATION AND DESCRIPTION OF CERTIFIED AND NON-CERTIFIED ROCK CLIMBERS' ATTITUDES, PERCEIVED SOCIAL PRESSURES AND CONTROL OVER CERTIFICATION

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ABSTRACT

The current lack of knowledge of certification by South African rock climbers often leads to unclear career paths and untrained and illegal guiding that can ultimately prove fatal. This study explored recreational and certified rock climbers' attitudes regarding certification, social pressure to obtain certification and the extent of control over certification. A qualitative design was used to interview a total of 28 participants; 11 participants were Mountaineering Development and Training Trust (MDT) certified and five participants were South African Qualifications Authority (SAQA) qualified. The remaining 12 participants had no formal training and were non-certified. Data were collected in-person through semi-structured one-on-one interviews. The theory of planned behaviour was used as a theoretical framework to analyse the perceptions of rock climbers of certification in South Africa. The findings showed that the perceptions of non-certified rock climbers might be based on incorrect information. This may lead to certification being considered unnecessary when social pressure is not present. Furthermore, participants argued that only professional guides need proper training; in contrast, instructors teaching climbing did not need the same qualification. Ultimately, a change in the attitude of rock climbers towards the need for training could result in an internationally recognised South African rock-climbing industry with higher safety standards and fewer accidents.

Keywords: Adventure; Certification; Recreation; Rock climbing; Theory of planned behaviour

INTRODUCTION

Rock climbing is a growing industry in South Africa (SA) but, unfortunately, research in this field is lacking (Graham *et al.,* 2020). Evidence of this growth can be seen in the Cederberg area, where an estimated 700 rock climbers contributed about US$1 million to the local economy in 2015, with a projected growth of 20% per annum in the number of climbers in the area (Job, 2015). However, rock climbing remains an adventure activity, and despite the sport being relatively safe, accidents do occur. In the last decade, 46 climbing accidents were recorded in SA, of which seven were critical and seven were fatal (Mountain Club of South Africa, 2020). International studies have identified inadequate attentiveness and technical skills (Lack *et al.,* 2012), incorrect use of equipment, and poor judgement (Schussman *et al.,* 1990)

as some of the causes of rock-climbing accidents. Rock climbers with less experience were also more likely to be injured than more experienced climbers (Schussman *et al.,* 1990). In line with this, Attarian (2002) found that over half of the participants in his study lacked training and instruction in crucial technical safety skills for rock climbing. Gaining training, appropriate knowledge and experience may assist rock climbers in reducing rock climbing-related risks to an acceptable level (Attarian, 2002). A lack of attention from the climbing community in SA to the importance of training and knowledge acquisition, along with the predicted growth of rock climbing in SA, may result in an increase in the number of accidents. Rock-climbing certification and qualifications are available in SA and it may be prudent for the climbing community to look at promoting these existing training opportunities to assist less experienced climbers to climb more safely.

Despite the benefits of rock-climbing training, different opinions persist. Online rock-climbing forums and media provide valuable insight into rock climbers' perceptions in this regard. Comments from a climbing forum stated that "you should learn the basics from an instructor or someone who teaches standards" (Climb ZA, 2020). Some rock climbers are aware of the importance of training, for example, one climber wrote: "From a guide/instructor you'll also learn a bunch of techniques that may one day save your life" (Climb ZA, 2020). Yet, perceptions regarding training differ, as reflected in an argument on the climbing forum in which one rock climber stated that "doing a course with an instructor is a very wise thing to do" and received a contradicting response saying "Go to a gym, climb and learn, that is what 99% of everyone does. Taking a guided course is expensive and entirely unnecessary" (Climb ZA, 2020). From the contrasting views presented in the online climbing forums, it seems that some rock climbers have a negative perception towards formal rock-climbing training, as reflected by statements such as "outdoor climbing is a skill that I am convinced should be learned not taught" and "courses have their place, but guides tend to be over cautious" (Climb ZA, 2020).

Differences in opinions regarding rock-climbing training could possibly be explained by the theory of planned behaviour (TPB), which considers a person's intent to engage in specific behaviour. According to the TPB, intention to perform behaviour is determined by (1) the person's attitudes towards the behaviour, (2) the subjective norms a person believes significant others have concerning the behaviour, and (3) an individual's perception of whether the behaviour can be performed (Ajzen, 1991; Walker *et al.*, 2006). Consequently, if the climbing community is to promote the importance of existing training or qualifications, understanding climbers' intention to engage in said training could assist in identifying ways to better structure and promote the training. This may aid in creating and implementing an effective certification and training process, thus strengthening the rock-climbing industry in SA.

Literature review

Certification of individual outdoor instructors has been a topic of debate since the late 1970s and consequently, according to Attarian (2015), there are several advocates for and against the certification of outdoor instructors. Individuals in favour of certification argue that guides are trained to ensure the safety of the public and the environment; it establishes a calibre of excellence and motivates outdoor guides to adhere to higher standards (DeMers, 2012; McGowan, 2012; Priest & Gass, 2017). In contrast, individuals against certification argue that certification does not hold value for individual professionals or the industry at large (Hobbs

2012, Martin *et al.*, 2017). Rice (2010) submits that professionals find it difficult to agree upon which skills need to be included in certification training, while Martin *et al.* (2017) are of the same opinion and raise the question of whether guides are legally responsible for decisions made. Based on the above discussion, even internationally, there is still no consensus on whether rock climbers should undergo certification or not, highlighting the different attitudes and perceptions that exist regarding certification.

Several advocates of certification agree that every outdoor activity is unique and has its own characteristics, thus, each activity should have its own operating procedures and standards for certification (Sheridan, 2004; Harrison & Erpelding, 2012). In the United States of America (USA), certification programmes can be designed by organisations or private vendors who have expertise in a particular adventure activity (Attarian, 2015). Certifications are earned directly from vendors and recognition is granted to individuals who have met the specific predetermined qualifications that were set up by the vendor (Attarian, 2015). In SA, private training providers offer certification programmes, and the training material varies in depth and quality (Van den Berg, 2016). SA does not have a single governing body that regulates rock-climbing training and Zygmont (2014) argued that there were no laws governing the provision of adventure programmes in SA. The South African Mountain Guides Association (SAMGA) could have fulfilled this function; however, SAMGA does not exist anymore and was hardly ever functioning (Friedemann, 2021; Meyer, 2021).

Internationally, the mountain guiding profession is widely regulated by the International Federation of Mountain Guides Associations (IFMGA), which has associations in 24 countries that follow their certification standards (Wozniak & Buchs, 2013; Donahue & Luebben, 2014; Enriquez, 2016). SA is not a member of the IFMGA but has government organisations such as the South African Qualifications Authority (SAQA) and activity-specific training advisory bodies such as the Mountaineering Development and Training Trust (MDT) that are responsible for the professionalisation and standardisation of rock-climbing instructors within the country (Van den Berg, 2016).

SAQA is the oversight body of the National Qualifications Framework (NQF) and was established by the Minister of Education, in consultation with the Minister of Labour (SAQA, 2020). To obtain SAQA qualification as an adventure guide, an individual needs to be registered with a Culture, Arts, Tourism, Hospitality and Sport Sector Education Training Authority (CATHSSETA) provider. SAQA qualifications are unit standard -based and recognised by the SA government for registration as a professional guide with the National Department of Tourism (NDT) in terms of the Tourism Act, Act 3 of 2014 (Donaldson & McKay, 2017; Van den Berg, 2016; SA Outdoor Academy, 2019; Dirty Boots, 2020).

The rock-climbing profession has two distinct avenues: rock-climbing guide and rock-climbing instructor. Instructors are individuals who train and instruct other rock climbers to be safe and professional (Cousquer & Beames, 2013), whereas guides have a legal and moral responsibility to keep paying clients safe while engaging in a mountain-related activity (Beedie, 2003). A clear distinction is made between a guide and an instructor for the purpose of this study. When a guide is mentioned in the study, it refers to a person who acts as a leader of a mountain-related activity with the focus of keeping their paying clients safe. Instructors instruct potential candidates to become guides and, for the purpose of this study, "instructors" refers to

individuals who train and instruct other rock climbers but are not allowed to guide for the purpose of earning an income.

Consequently, various levels and types of guiding qualifications within the SAQA qualifications framework exist. However, only one skills programme is "generic" for all adventure guides. The Generic Adventure Site Guide (GASG) qualification can be obtained through providers such as Adventure Qualifications Network (AQN). The GASG qualification does not teach technical skills. This skills programme focuses on the set of adventure skills, knowledge and abilities applicable to all adventure guiding and is not restricted to one activity (AQN, 2019; Venture Forth, 2022). After completion of the GASG qualification, it is recommended that a person enrols for skills training in a specific adventure activity from a registered CATHSSETA provider. Thereafter, an accredited CATHSSETA assessment provider will assess an aspiring guide under the specific adventure skills programme registered with SAQA.

Another certification body in SA is the MDT, which provides training and assessment courses that are run by individuals approved and accredited by the Trust (MDT Prospectus, 2015). The MDT is a legally constituted body, registered with the master of the Supreme Court in SA and administers the functioning of the MDT National Training Programme (MDT Prospectus, 2015). MDT clearly states that industry role players recognise its certification but is not recognised by the NDT for the purpose of the Tourism Act (MDT Prospectus, 2015). MDT offers two distinct courses for rock climbers in SA: supervisor award courses aimed at supervising different climbing types and courses suitable for individuals working as instructors at climbing gyms and mountaineering centres (Peak High, 2014). Moreover, candidates who are working as instructors are only permitted to run MDT courses and assessments which must conform to the MDT guidelines and requirements (Peak High, 2014). MDT-certified rock climbers may thus not legally guide clients in mountaineering and climbing activities, unless they also have relevant SAQA guiding qualifications.

There seems to be a lack of knowledge about certification among rock climbers in SA. Furthermore, the lack of knowledge around legal certification creates confusion between recreational rock climbers and legally qualified guides (Climb ZA, 2020). Many recreational rock climbers are climbing without proper training or skills, which may result in an increase in mountain-related accidents (Buckley, 2006). Furthermore, some guides and instructors working in the industry do so without the required qualifications. Additionally, recreational rock climbers who may need training and guidance to be safe when climbing are unregulated and all rock climbers have open access to mountain crags, increasing the possible risk of accidents and injury.

AIM OF THE RESEARCH

This research aimed to determine reasons for seeking certification, as well as reasons for not seeking certification in rock climbing, among South African climbers. This was to aid in creating and implementing an effective certification process, thus strengthening the rock-climbing industry in SA.

METHODOLOGY

Research design

The study utilised a qualitative descriptive research design and the TPB was used as a theoretical framework. The TPB is an expectancy-value model based on the assumption that attitudes have a natural impact on behavioural intentions and can be determined by investigating attitudes towards a behaviour, subjective norms and perceived behavioural control (Florenthal & Shoham, 2001; Pierro *et al.*, 2003).

Participants and setting

A total of 28 participants were recruited from the Gauteng and Western Cape provinces through advertisements using a snowball sampling technique. These two provinces were selected due to the high popularity of rock climbing in these provinces, as well as the accessibility of research participants. Five participants were SAQA qualified, 11 participants MDT certified, and the remaining 12 participants had no formal climbing training. For the purpose of the study, participants were classified into three categories: certified, qualified and non-certified participants. The term *certified* refers to rock climbers that underwent the MDT training course (for recreational rock climbers); the term *qualified* is used for participants who completed the SAQA qualification (for commercialised guides) and participants who did not obtain any form of formal training were consequently regarded as *non-certified*. All participants were asked to sign an informed consent letter prior to the interviews, which were conducted at two major climbing gyms in SA. The criteria for participating in the study for certified rock climbers were: (1) must have completed the MDT or SAQA rock-climbing certification, (2) climbed frequently indoors and outdoors, at least twice a week; and (3) did not have any other adventure certification or international certification. The criteria for non-certified rock climbers were: (1) active South African rock climbers with no formal climbing certification; (2) climbed both indoors and outdoors, at least twice a week; and (3) did not have any link to SAQA. Climbers with links to SAQA were excluded from the study because of the possibility of a biased view of the certification process.

Data collection

The main researcher was a master's student and this article was part of a master's qualification. Before data collection, the student was trained to have a rich understanding of the research field. Training was provided on interview skills and eliciting answers from the participants. A trial interview was conducted with the manager of the climbing gym as this allowed the researchers to discuss and interpret the interview questions to ensure usefulness, provide clarity, and ensure relevance for the objectives of the study (Silverman, 2013). Semi-structured one-on-one interviews were conducted in-person to focus attention on each participant individually. Recommendations from previous studies using the TPB as a framework were taken into consideration (Hagger e*t al*., 2002; Pierro *et al.*, 2003; Hrubes *et al*., 2010) to create open-ended questions. Each determining factor of the TPB was analysed and previous research was consulted to address each factor:

a) Attitude

The authors determined what the attitudes of certified and uncertified rock climbers were towards the certification process. Attitudes develop reasonably from the beliefs people h old

about the objective of certification. As the study utilised a qualitative descriptive design, the attitudes of rock climbers were determined by asking questions such as "How do you feel about rock-climbing certification" and "Do you believe that every climber should be certified?".

b) Subjective norm

The referent groups or individuals that can influence an individual to obtain certification can be seen as the climbing community or climbing partners. To completely understand the subjective norm, questions were asked about each participant's climbing community such as "Who does your climbing community consist of?" Thereafter, questions such as "Do you think your social group approves or disapproves of certification?" and "Do you feel social pressure to obtain certification?" were asked.

c) Perceived behavioural control

Questions asked to determine the control a participant had to obtain the required certification in this study included: "What are the potential barriers for most climbers to obtain certification?" and "What are the factors or circumstances that encourage or aid climbers to obtain certification?".

The duration of the interviews varied between 20 and 40 minutes per interview. The interviews were recorded with a digital voice recorder. Thereafter, the main researcher transcribed the recorded interviews, and all recorded interviews were deleted from the recording device to keep the participants anonymous. The participants were also required to complete a biographical questionnaire to find out more about their climbing history and backg round.

Data analysis

The first stage of analysis began immediately after each interview. This entailed the main researcher reflecting on the interview, noting her perception of the interview's success, including whether the participant spoke freely, and whether adequate depth and richness of data was obtained. Additionally, interesting elements and preliminary topics that emerged from the interview were identified, as well as similarities and differences between interviews. Thereafter, the interviews were transcribed verbatim by the lead researcher and checked for accuracy by the rest of the research team. Confidentiality of the participants was ensured by allocating the following abbreviations during the data analysis process: C for certified rock climbers and NC for non-certified rock climbers, as well as by chronological numbering according to the sequence of the interviews. Next, the main researcher read attentively through the transcribed interviews to get a "feel" for, and better understanding of the context of the interviews. This process, called microscopic examination, helped with identifying words or terminology that might have different meanings to the participants, or to identify different words that might have the same meaning to them (Henderson, 2006). It also forces the researcher to examine the assumptions of the participants and to assure that the meanings of the data are not taken for granted (Henderson, 2006).

The computer programme Atlas.ti, a computer-assisted qualitative data analysis software (CAQDAS) package, was used to organise and manage the data. An inductive content analysis was used to organise the qualitative data. This process includes open coding , the creation of categories, and abstraction (Elo & Kyngäs, 2008). After comparing major categories, different themes were identified and grouped to reflect the data in a conceptual manner. The researchers

involved in the study had limited knowledge, experience and involvement in the field of rock climbing and noted that this may have led to bias towards the importance of adequate training, as opposed to developing skills through experience. However, throughout the data analysis, the research team always kept this bias in mind and ensured that the participants' responses guided the data analysis and interpretation. An independent co-coder analysed the data separately and consensus was reached by the co-coder and the main researcher after discussions on the categories and themes. The three identified themes corresponded to the three determinants of the TPB.

Ethical considerations

Ethical clearance (NWU-00119-18-A1) was granted by the Health Research Ethical Committee of the university affiliated with the study. All data were collected in accordance with the Declaration of Helsinki.

RESULTS AND DISCUSSION

This study explored and described certified and qualified rock climbers' attitudes, perceived social pressures and control over certification. Responses from certified and qualified participants were discussed in conjunction and where relevant, a clear distinction was drawn between the responses of qualified or certified participants. From the information elicited from the participants, three themes emerged: (1) reason for obtaining certification; (2) certification views; and (3) significant others. Eleven sub-themes were identified and are discussed in accordance with each theme.

Theme 1: Reasons for obtaining certification

As illustrated in Table 1, reasons to obtain certification were identified as the first theme after a question was asked about what advantages and disadvantages certification presents. The TPB suggests that attitude is one of the determining factors that influences behaviour. In theory, an attitude will develop from an individual's belief about a certain behaviour (Pierro *et al.,* 2003; Hobbs *et al*., 2013).

Table 1. **THEME 1 – REASONS FOR OBTAINING CERTIFICATION**

Certified participant response	Non-certified participant response
Subtheme 1: Safety	
"Safety, safety, safety. Knowing your equipment knowing its limitations, knowing how to keep yourself safe, first and foremost as the guide."	"…this industry involves a lot of safety so now if you are not certified, how are you going to prove to people that you know everything is safe…"
Subtheme 2: Guide qualifications	
"If you're doing it on a professional basis, you should have a certification."	"If there are people who want to be taken out on weekends, tour guides have to be certified."
Subtheme 3: Liability cover	
"I think it protects one legally if there is ever an incident."	"Who's liable if there's an accident?"

The first subtheme under theme 1 relates to the fact that rock climbers feel that certification contributes towards safety. All the participants in the study mentioned that it is advantageous to have certification and the biggest drive, therefore, is safety concerns. When asked about reasons for obtaining certification, a certified participant (C9) replied, "Safety, safety, safety. Knowing your equipment, knowing its limitations, knowing how to keep yourself safe, first and foremost as the guide". NC2 opined that: "…this industry involves a lot of safety so now if you are not certified, how you are going to prove to people that you know that everything is safe…". Rice (2010) and Prouty *et al.* (2007) proposed that instructors should be able to minimise risks by ensuring safety procedures and preparing participants for what they will experience during the activity. By nature, adventure activities present risks to participants engaging in the activity; however, Buckley (2010) argued that it is the duty of guides and instructors to manage risks closely while simultaneously providing a safe and exciting experience to participants. This highlights the necessity and importance of training for adventure instructors and guides.

All participants strongly expressed that all guides (and not necessarily all climbers) should be qualified; consequently, the second subtheme, *guide qualifications*, emerged (Table 1). Participant C3 said, "If you're doing it on a professional basis, you should have a certification". Similarly, a certified staff member at a climbing gym expressed that "as a gym, we felt the need for our instructors to be certified because they are teaching…". These findings are concurrent with those of Clinch and Filimonau (2017), as participants stated that unqualified guides should be prevented from working with tourists. One of the certified participants explained the difference between the SAQA-qualified guides and the MDT instructors' certification and said,

> "If you have a person who is taking a person guiding and you are being paid for the purpose of taking this person as an entertaining exercise, let's say you have a German tourist and you would take them walking on Table Mountain or you have a businessman in Johannesburg who wants to climb on a Sunday, whatever, you are being paid for the service directly, and the central purpose of the activity is to provide information and entertainment to this person, then the Tourism Act defines you as a tour guide and you have to be registered with the Tourism Department. But in another circumstance, the primary purpose of the activity is to take part in what they call situational or circumstantial learning. So, what circumstantial learning means is, if you are a school teacher, and you take your group of kids on a historical hike, the primary purpose of the activity is teaching, to show the kids the environment of the hike, then that particular activity falls under the Department of Education, not under the Department of Tourism. You are not a tour guide, so that teacher who takes kids on a hike, is not required to be a tour guide, but he does have to show for liability reasons that he had some training and assessment in the skills. And there the MDT is applicable."

With reference to this quote and the example of the school teacher, the learners would be under the leadership of a teacher with MDT certification, and therefore it is the teacher's duty of care to ensure that learners are safe and that the necessary training was obtained. Participant C11 added to that: "…there is a grey area when you are leading on behalf of an organisation, I think the organisation has a duty of care to ensure that the leaders meet some sort of standard ". Duty of care is a responsibility of guides and instructors to ensure that their clients are not harmed

during adventure activities and can include all aspects of safe practice, providing suitable safety equipment and the supervision of activities (Natynczuk, 2014).

In SA, guides face prosecution if they act as a guide without being legally qualified and registered (Van den Berg, 2016; Donaldson & McKay, 2017; SA Outdoor Academy, 2019; Dirty Boots, 2020). Despite the legal requirements for climbing guides, participant C11 said, "Not even 10% of the guides out there are legal". This was a serious concern as these "illegal" guides may not have the appropriate training and there was no way of determining their level of competence and training. However, if, for example, a group of learners are being taken to a mountain crag for recreational climbing, and the person taking them is not acting as a tour guide, a guiding qualification is not legally required as certification or evidence of training may suffice. However, it is important that the level of training or certification is adequate, because, as Wozniak and Buchs (2013) argued, guides with insufficient training will put their clients' lives in danger.

All non-certified participants were in favour of certification. However, non -certified participants seemed to misunderstand the difference between MDT certification and the SAQA qualification. Participant NC6 said, "Get yourself a certificate if you want it for commercial use". Another non-certified participant (NC10) said, "The fact or opportunity to make some money off of doing something you enjoy, and you know because if you make some money so that you can buy more gear…". Most of the non-certified participants mentioned that certification can be beneficial because they can act as guides. It appeared that non -certified participants have a misperception about certification, as they are still not legally qualified to act as guides and gain monetary benefits once certified.

Liability cover emerged as the third subtheme, as certified and non-certified participants showing concerns about legal protection. Participant C7 said, "I think it protects one legally if there is ever an incident". Participant NC6 had the same view and noted, "Who is liable when there is an accident … I don't think clients should go with a non-certified person". Liability issues will continue to manifest themselves as problems (Young & Jamieson , 1999); consequently, it is essential for a company to obtain the appropriate insurance (Buckley, 2010; Edginton *et al.,* 2011). Interestingly, participant C11 explained that:

> "A lot of people don't realise that every single insurance policy in this country has a clause that says if you are violating the law, if you're breaking the law, if you're committing a crime, your insurance policy is null and void. Because if you are not legal, you're breaking the law, or you are committing a crime. And that means your insurer will simply say that the clause was broken … because who is to say that the accident would have happened if you had been appropriately certified."

This is evidence that liability cover means nothing if a person is not legally compliant with the law in SA. Therefore, many unqualified and unregistered climbers acting as guides may experience liability issues if accidents or injuries occur. Williams and Soutar (2005) argued that it is of the utmost importance that adventure operators understand legal liability – it is no longer simply a case of signing indemnity forms and taking out liability insurance. More time should be spent on legal advice as this has an enormous potential impact on adventure operators (Callander & Page, 2003). To be legally compliant, guides and instructors must possess the

required experience and training and good leadership skills (Callander & Page, 2003; Williams & Soutar, 2005).

Based on the above findings, the TPB was used to analyse the reasons for obtaining certification, as well as reasons for not obtaining certification. To obtain certification, the first determining factor, attitudes, is described as a person's evaluation (positive or negative) of the target behaviour (Conner & Sparks, 2005). In previous studies that used the TPB to explain behaviour, attitudes were measured by the liking or disliking of a given behaviour (Norman & Conner, 2005; Donald *et al.*, 2014). In this case, all certified and non-certified participants agreed that certification was beneficial. This suggested that all participants were in favour of rock-climbing certification as it would provide better safety. Unfortunately, they were also under the impression that certification would provide access to guiding , which was not the case. Participants' attitudes about certification might be based on incorrect information and assumptions. This misperception might have caused non-certified participants to argue differently if they knew that a SAQA qualification was necessary to become a legal guide. Hrubes *et al.* (2010) posited that the TPB assumed that attitudes towards a behaviour were derived from beliefs about the behaviour's consequences, and in the case of this study, non-certified participants were under the misguided impression that the consequence of obtaining certification will be monetary gain while guiding. This was inaccurate, as they would not be legally qualified guides because a legal guide in SA is an individual who has obtained the relevant SAQA qualification as stipulated by the NDT (AQN, 2019:2; SAQA, 2020). In conclusion, certification can be beneficial as it will lead to improved safety during climbing, but certification bodies, such as MDT, should also ensure that certified climbers are informed of the limitations of certification and that they are not allowed to act as guides for monetary gain.

Theme 2: Certification views

The participants' views of certification emerged as the second theme (Table 2). The second determining factor of the TPB, perceived behaviour control, is influenced by beliefs about whether a person has access to the necessary resources and opportunities to perform a behaviour (Ajzen, 1991). If individuals believe they have access to resources and recognise opportunities to perform the behaviour, they will likely have a high degree of behavioural control (Conner & Sparks, 2005). To assess the perceived behavioural control that participants had over certification, the barriers to obtaining certification were investigated. During the result analysis, four sub-themes emerged: (1) availability and accessibility; (2) expense; (3) lack of assessors; and (4) ease of process.

Table 2. **THEME 2 – CERTIFICATION VIEWS**

Certified participant response	**Non-certified participant response**
Subtheme 1: Availability and accessibility	
"I think they can definitely up their game a little bit to make it more accessible."	"Maybe just make it more available…"
Subtheme 2: Expense	
"…cost is the biggest one…"	"I know it is quite expensive."
Subtheme 3: Lack of assessors	
"That there are just a few instructors available…"	"…there are only two places you can go.…"
Subtheme 4: Ease process	
"…once you have your logbook and your first aid, it is pretty quick."	"I think it's pretty easy if you know where to go…"

The first subtheme, *availability and accessibility* of certification, was viewed as two of the most common barriers by all participants. Participant NC7 said, "Maybe just make it more available…". Participant (C6) stated, "At the moment it seems to be very uncoordinated … if you look online, it is very scattered around the place. There is no clear answer of what you really need". Ewert *et al*. (2006) claimed that the availability of information on the internet regarding rock climbing has seen significant growth. However, in SA, it was a different case: there was limited information available about the certification process. Participant NC8 said, "…no one really knows about it, besides what you hear from the staff here who have done it ". When asked where he got information regarding certification, participant C12 said , "…Through connections essentially, so I knew other guides and asked how they got certified and then they sent me to this company". From the responses of the participants, it can be deduced that information about certification is not widely accessible and information regarding the process of obtaining certification is not common knowledge amongst the climbing community. One of the non-certified participants mentioned "…I didn't know there was a qualification until I started working here, but as soon as I heard about it, I was, like, I want in!". Other non-certified participants shared this opinion as they also claimed that they would like to be certified. The results of the study agree with that of Clinch and Filimonau (2017) who concluded that participants have a strong desire for accessible training opportunities. It seemed as if non-certified participants would like to obtain certification, but that lack of information was a significant barrier.

The *expensive cost* of certification emerged as the second subtheme. Most of the certified and non-certified participants agreed that the cost of certification was one of the reasons why there are so few rock climbers who were certified, as illustrated by participant C9 who said, "Expense I think is what puts people off … an aspiring guide needs climbing experience across three different geographical regions … the cost of the gear is expensive and the assessments". Participant NC12 mentioned, "Definitely I think if you don't have the funds to do it that's definitely a barrier". This view was also raised by DeMers (2012) and Attarian (2001) who asserted that there were several outdoor leaders who were experienced and had good judgement, nevertheless, they do not have certification because it is expensive and time consuming. Similarly, Donaldson and McKay (2017) stated that legal guiding qualifications in

SA were expensive. In contrast, only one of the qualified participants argued that the cost was reasonable as one can earn a living from the SAQA qualification and guide legally. Participant C11 said, "No one sees I'm earning myself a qualification from which I can earn a living". The cost of the certification might be justifiable if a person can guide legally and gain monetary benefits from it; however, it seemed that once again misperceptions about what opportunities certification can present may influence climbers' attitude about certification. Participants (C2) also noted that the certification process can be time consuming, because "…the logbook obviously takes a while to complete because you actually have to do the effort to go climbing and gain the experience". Similarly, C13 explained that "to get the required 200 days for a climbing guide will take four or five years". From the above it is clear that certification requires an investment of both finances and time, which may prevent rock climbers from pursuing it.

The *lack of assessors* emerged as the next subtheme, as there was limited access to assessors for the certification courses. A certified participant (C1) said, "…It is hard to find somebody to actually certify even level 1…". Participant C5 mentioned that "…people in that position (assessors) are very insistent that it stays a small market and there is a bit of a hold onto that power". One of the certified participants (C11) provided more insight and said, "Accessibility to assessors is a problem, but the problem will be solved by compliance with the law because the moment you get people who are compliant, there is more demand for training and assessment and then it becomes more viable for people to become trainers and assessors". According to the findings, one of the biggest reasons rock climbers were not certified was the country's lack of SAQA and MDT assessors. A possible way to navigate this constraint to certification was mentioned by participant C4 who said, "Getting into the system through peer mentorship, finding someone who is knowledgeable and getting clued up in that way…".

In contrast to the participants featured above, a few said the certification process was easy. This formed the last subtheme. The *ease of the certification process* was explained by participant C6 who said, "It was easy because it was organised for us by the climbing gym". This may have been the case when an employer arranged for their employees to undertake certification. Participant C2 explained that "We are quite fortunate; we have set up a deal with an instructor where he gets a free membership, and we get some staff certified". The gym funded the certification for employees in this case; thus, they might feel that the certification process was easy. For other rock climbers in the community, the process was much more difficult, and these obstacles may be some of the reasons why rock climbers in SA were not certified.

In terms of the TPB, perceived behaviour control is the extent to which a person displays or does not display control over a behaviour (Ajzen, 1991; Francis *et al*., 2004; Latimer & Martin Ginis, 2005). Thus, it can be concluded that non-certified rock climbers may not obtain certification because the benefit of certification is outweighed by the time and financial commitment required. According to Conner and Sparks (2005), behavioural control can serve as actual control over a behaviour when individuals are realistic about their judgements of the difficulty inherent in a certain behaviour. In addition, Ajzen (1991) explained that when a person had the opportunities, resources and intent to perform a behaviour, it was almost guaranteed that the person would display the given behaviour. In this study, the non-certified participants may have displayed very weak intentions to gain certification due to a lack of opportunities (i.e., information, access to trainers and assessors) and resources (i.e., finances).

Theme 3: Significant others

According to the TPB, subjective norms may also affect rock climbers' intention to become certified, and insight into participants' social groups would assist in analysing behaviour intentions (Pierro *et al.*, 2003; Hrubes *et al*., 2010). To find out the climbing community's view about certification, questions were asked about how the climbing community viewed certification. The last theme was thus identified as *significant others* (Table 3).

Table 3. **THEME 3 – SIGNIFICANT OTHERS**

Certified participant response	Non-certified participant response
Subtheme 1: Certification approval	
"I don't know anyone who wouldn't approve of people needing to be certified."	"They would approve. Definitely."
Subtheme 2: Social group	
"I think they pretty much don't care about it."	"I would say climbers in general are not much concerned about much other than just climbing."
Subtheme 3: Clients' attitude	
"It does give people bit more peace of mind."	"…just giving them that peace of mind and because I've been on a few outings guys get really anxious even though nothing's gone wrong."
Subtheme 4: Pressure	
"It was an internal pressure. It was a case of if I want to do this, I want to do it right. And it is also a marketing value. I am a qualified mountain walking and rock-climbing instructor. So, it was very much internally driven."	"No, I don't feel any real pressure. I would not say that there is much peer pressure for people to do it. I think the only instance where it is more pressured is in a working environment where people are required to give courses and advice where they represent the company."

Subtheme 1, *certification approval*, was identified after determining if the community approved or disapproved of certification. Most of the participants said the community would be in favour of rock-climbing certification. Participant CC3 explained the community's perspective by saying, "I think that they would certainly see the need or the value of being certified as a climbing guide". In this case, the word "guide" may just be a matter of mistaken terminology, or it may again show that the climbing community does not understand the legal requirements to act as guides in SA because certified rock climbers are not legally allowed to act as guides. Later, the participant also mentioned that "…they would be highly opposed to the need for certification for recreational climbers". Rock climbing has inherent risks, regardless of whether someone guides climbers for monetary gain or whether one climbs recreationally. As the risks remain the same, it could be argued that even recreational climbers require some form of training. At this stage, rock-climbing certification is aimed at recreational rock climbers, but from the findings, it seems that climbers are opposed to mandatory certification. While the SAQA qualification is aimed at guides who aspire to gain monetary

benefits by taking clients to participate in respective adventure activit ies such as rock climbing, it seemed that the climbing community supported mandatory certification.

The second subtheme, *social pressures*, emerged from asking how the climbing community felt about certification. Social pressure included expectations that affected the entire community (Francis *et al.,* 2004). In this case, obtaining certification could be influenced by social pressure from the climbing community. Responses from the participants were mostly similar and highlighted the lack of social pressure to obtain certification. Participant C3 said, "Climbers, in general, are not much concerned about much other than just climbing". Participant C8 said, "I think they pretty much do not care about it". Participant C12 said, "In terms of my climbing mates they couldn't give a hoot about certification because it doesn't apply to them, they don't need it". Latimer and Martin Ginis (2005) concluded that high social pressure would motivate individuals to engage in a particular behaviour, while Quine *et al.* (2001) similarly concluded that the perceptions of what significant others thought one should do may be more important than one's own beliefs. It could be argued that in this study the opposite was true: a lack of pressure led to the climbing community being unmotivated to obtain certification. The participants in the study were of the opinion that guides should be qualified or certified, but that recreational rock climbers do not need any form of formal training before starting to climb. This contrasts with earlier research by Hughes and Coackley (as cited by Meyers, 2019) that recommended that there should be a greater emphasis on educating climbers, including all levels of recreational climbers and competition climbers, through associations and instructors. Interestingly, despite the lack of social pressure to obtain certification, some experienced intrinsic reasons to do so. Participant C11 said , "No, it was an internal pressure. It was a case of if I want to do this, I want to do it right". Others had similar thoughts and participant C7 said, "…as in my situation a personal desire to be safe and to be responsible".

To analyse the subjective norm fully, insight into *clients' attitudes* (subtheme 3) to certification needed to be gained. Considering the natural risk of adventure activities, clients might assume that instructors have the knowledge to minimise risk and keep them safe (Rice, 2010). The study results reflected this: one certified participant said, "I don't think a public person would just go climb with you if they don't know you're qualified". Rice (2010) also affirmed that the amount of risk that clients were exposed to was related to the knowledge and skills of the instructor operating the activity. It could be assumed from data analysis that clients would like to know that guides were qualified, as participant C7 explained, "I think it would give them a degree of confidence if you (the client) know that they (the guide) actually hold a formal qualification". DeMers (2012) presented similar results and explained that it was important that clients trust the person who is leading them in the wilderness. Participant C11 claimed that "clients assume that if you are advertising, you are legal because to them it's unthinkable that you would guide and not be qualified, so it never occurs [to them] to check it out". This statement illustrates a possible danger as none of the certified participants without the SAQA qualification were legally allowed to take groups of clients outdoors. It is worrying that clients might think that certified rock climbers have the correct qualification to accompany paying clients.

The last determinant of the TPB is a social factor, which refers to the perceived social *pressure* to perform or not to perform a particular behaviour (Ajzen, 1991). Francis *et al.* (2004) affirmed that subjective norms were assumed to have two components which were interconnected: beliefs about how other people who may be in some way important to the person feel; and the positive or negative judgements about each belief. Several stud ies attempting to explain behaviour-related decisions have found that the subjective norm is the strongest indicator of behavioural intentions (Lacy, 1981; Rutter, 2000; Quine *et al.*, 2001). Ajzen and Driver (1991) proposed that an individual's motivation to comply to certain expectations may be related to whether he/she informally believed that their social group thought they should perform the behaviour. The findings of this study suggested that recreational climbers have a low intention to obtain climbing certifications as the perceived social pressure to do so is low.

CONCLUSION AND RECOMMENDATIONS

The study successfully used the TPB framework to explore and describe the perceptions of rock-climbing certification in SA. From a TPB perspective, looking at attitudes, behavioural control and social norms, it can be concluded that recreational rock climbers exhibit low intentions to obtain rock-climbing certification.

Attitudes

According to the TPB, a positive attitude towards a behaviour may lead to stronger intentions to perform that behaviour. In this study, attitudes towards certification were positive because all the participants in the study agreed that certification was beneficial. Three reasons to obtain certification were identified as safety, the need for guides to be qualified, and legal liability. Although attitudes towards obtaining certification were positive, the participants may have been reluctant to obtain it because they did not believe that it was necessary. The participants were of the opinion that only guides should have the SAQA qualification and that instructors do not need the same qualification. Additionally, non-certified rock climbers pointed out that they would like to obtain the certification to be able to guide for monetary gain. This was where a lack of knowledge about certification became evident, as certified rock climbers are not legally allowed to guide for monetary gain. It can be concluded that attitudes towards certification might be misplaced, as both certified and non-certified rock climbers have an incorrect perception of what certification allows individuals to do. Without the SAQA qualification, certification is only applicable to recreational rock climbers. It can thus be deduced that the attitudes of certified and non-certified participants were flawed, as they do not have the correct information about what certification entails and permits a person to do. It can be assumed that attitudes towards certification in SA might be different if participants had the relevant information on certification and qualification requirements in SA.

Behavioural control

Ajzen (1991) explained that the more resources and opportunities a person believes he or she has, and the fewer obstacles they predict, the greater is their perceived control over their behaviour. From the findings of this study, it seems that availability and accessibility of training, expenses, and the lack of assessors are potential barriers that rock climbers face in obtaining certification, negatively affecting their perceived behavioural control. This may also lead to weaker intentions to obtain rock-climbing certification. However, for some rock climbers in this study the certification process was easy, because the employer paid for the

course and had an arrangement with an assessor to assess their staff members. In this case, the reduced obstacles would lead to higher perceived behavioural control, with a higher intention to obtain certification.

Subjective norm

According to several studies, the subjective norm has the greatest influence on behavioural intentions (Lacy, 1981; Rutter, 2000; Quine *et al.*, 2001; Rivis & Sheeran, 2003). In this study, two different views regarding subjective norms and certification emerged. Firstly, rock climbers approved of certification for guides and mentioned that clients might feel more at ease when a guide has formal training. However, they also indicated that the climbing community might not want certification for themselves as recreational rock climbers. Seeing that the participants did not regard certification as a requirement for recreational climbers, it can be argued that, based on the TPB, recreational climbers would have weaker intentions to obtain certification.

It seemed that many of the participants' attitudes and perceptions of behavioural control, as well as subjective norms, were based on misperceptions or a lack of knowledge about climbing certification. The major issue was that certification was seen as a gateway to being a climbing guide, which was not the case, as only the SAQA qualification can lead to a person becoming a legal climbing guide. Additionally, many recreational climbers may not be interested in becoming a climbing guide. Therefore, they may dismiss certification based on their own misperceptions, as they do not see the need or importance. Whether in a recreational or guided context, rock climbing remains an inherently risky activity. Proper training and experience are some ways to limit accidents and injuries. Through certification courses, beginner rock climbers can be taught to be safe and responsible, resulting in fewer risks and accidents. If certification is aimed at recreational rock climbers, it would be beneficial for the industry to market certification courses as a training platform for beginner climbers and recreational rock climbers who want to progress to more advanced forms of climbing. The certification would not provide monetary benefit through allowing one to act as a guide, bu t will ensure that rock climbers are safe; as a result, the industry will be regarded as more professional and regulated.

As Rutter (2000) found, the more positive that respondents' attitudes were towards a behaviour and the greater the social pressure, the more they were inclined to act on the behaviour. The following recommendations, based on the TPB, are made. Firstly, the findings suggest that attitudes towards certification are based on incomplete or misinformation. To address this, the climbing industry should promote access to correct information about the certification process, what certified climbers are allowed to do, as well as the legal implications of guiding without the appropriate SAQA qualification. Secondly, as there seems to be no social pressure on non-certified climbers to obtain certification, the climbing community should embrace that certification can lead to improved climbing safety, and they should create a climbing culture in which certification is valued. It would be beneficial for the climbing industry in SA to view certification courses as favourable for recreational rock climbers and climbers who wish to improve their skills. Furthermore, to urge more rock climbers to be l egally compliant, the perception around rock-climbing training must change. The broader rock-climbing community needs to understand the differences between being certified and obtaining a qualification, as well as the requirements for guiding legally in SA. The increased value placed on certification

will result in the need for more assessors to assess aspiring climbers. Lastly, barriers to obtaining certification should be limited. This could be achieved by promoting access to information about climbing certification, the certification process, traini ng providers and assessors. Additionally, the limited number of assessors should be addressed. Once the climbing community starts to value certification, demand for trainers and assessors will increase, creating opportunities for more assessors to enter the market.

Future studies of rock climbers' behaviour may include exploration of perceived behavioural control, as well as perceived behavioural difficulties, as reviewed by Trafimow *et al.* (2002). This study provided valuable insight into the rock-climbing community and the difficulties of obtaining certification. Future study is recommended of ways to minimise barriers to obtaining certification in SA and how to provide accessible certification courses to the broad rock-climbing community. Norman *et al.* (2000) proposed that participants' past behaviour may directly affect future behaviour over and above the TPB – future studies may also elaborate on the past behaviour of participants.

LIMITATIONS

The study's sample population consisted of only 28 active rock climbers and many of the non-certified participants in the study were employed by climbing gyms in SA. Hence, their views on certification may have differed from those of other rock climbers. Grant *et al.* (2001) declared that literature on rock climbing was limited despite the popularity and growth of the sport – a lack of literature explaining rock climbers' perceptions hindered the ability to compare the findings of this study to earlier research.

Conflict of interest

All authors declare that they have no conflicts of interest.

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