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Exploring the Challenges When Implementing Universal Accessibility in White Water-based Adventure Tourism

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Abstract

Implementing the universal accessibility concept in white water adventure tourism requires more in low-resource settings than in destinations in developed countries. The literature points to misconceptions of access-need population groups and concern for safety among water-based sports. A case study of Victoria Falls-Zimbabwe was employed to explore the challenges when implementing universal accessibility in white water-based adventure tourism. Snowball and convenience sampling techniques were employed. In-depth interviews were administered among adventure tourism operators and guides who are informants whose views have been missing in existing debates. Data was analysed using the thematic analysis framework. The key findings revealed eight challenges which include limited universal accessibility equipment, costs of adapting the facilities, challenges of hiking up and down the gorges, an absence of a harmonised policy framework for facilitating universal access, exclusively priced adventure products, an over-emphasis on the perception of risk and the under marketing of white water-based adventure tourism services to access-need market segments.

Keywords: Universal accessibility, People with Disabilities (PwDs), White Water Based Adventure (WWBA), challenges, Zimbabwe

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Introduction

The United Nations Convention on Rights of Persons with Disabilities [UNCRPD] (2006) enshrines socio-medical guidelines towards the inclusion of persons with disabilities (PwDs) in physical environments and transportation, among other facilities and services provided to the public. Including everyone, regardless of health condition, impairment, and socio-economic background, in tourism has become a global concern (Lekgau et al., 2024; Reinius, et al., 2023; World Tourism Organisation, 2020). According to Makuyana (2020), universal accessibility did not emerge from tourism studies but it is a term borrowed from universal design in the architectural field. It evolved as part of disability studies and later became popular in tourism with the advent of the disability tourism concept (Buhalis & Darcy, 2010). Universal accessibility in tourism intends to afford everyone a choice and opportunity to participate in tourism while reducing restrictions on underprivileged groups in society (Scheyvens & Biddulph, 2018). The importance of PwDs having moments of leisure is emphasised in literature (Migliaccio, 2018). Thus, the need for greater involvement of people with disabilities in tourism emerges, as a crucial point for a truly inclusive society (Migliaccio, 2019). In this study, universal accessibility refers to disability inclusion as the World Health Survey noted that PwDs comprise about 15% of the world population (The World Bank, 2018). There is a need to reckon the potential contribution of access-need tourism markets to national economies (Chikuta et al., 2021; Darcy et al., 2020; Makuyana et al., 2020) as the demand for adventure tourism-based products is increasing year after year (Chauke, et al., 2024). Nonetheless, the access-needs market segments indicate their constant dissatisfaction when visiting African tourism destinations, pointing to ignorance of human resources on disability inclusion and limited universally accessible infrastructure and culture (attitudes and behaviours) (Makuyana & du Plessis, 2023). White water-based adventure tourism is not an exception. Extreme sports like recreational scuba diving are opening up for PwDs through adaptive scuba diving for therapeutic and escapism (Lucrezi & Makuyana, 2023). White water-based adventure (WWBA) is however an under-researched field within the context of developing countries, which have low-resource settings and a high prevalence of disability.

WWBA refers to water-based adventure activities in rivers and streams, both artificial and natural (Lester, 2012). The core features of whitewater are turbulence, terrain, and water violence (Lester, 2012). WWBA activities continue to attract many participants, who are 'adrenaline junks' (Higham, 2005). The WWBA activities include rafting, kayaking, play-boating, canoeing, speed-boating, wakeboarding, river-boarding, surfing, and slalom (Lester, 2012). Whitewater rafting and kayaking are the most undertaken activities for commercial WWBA (Samat et al., 2014). Notable studies have postulated that regardless of body shape, size, and ability, tourists have the same motives to participate in tourism (Cheng et al., 2016; Academic Network of European Disability Experts, 2019). PwDs desire to participate in more challenging adventure tourism activities (Lucrezi & Makuyana, 2023). Nevertheless, little is known about the industry, with few academic studies having been conducted in the area (McKay, 2016). Statistics of PwDs in in-land WWBA resultantly remain unclear in most African countries. However, the article

focuses on the implementation of universal accessibility in WWBA tourism on the Zambezi River, Victoria Falls, to manage the scoping study. The study, therefore, sought to answer the main research question: "What are the challenges when implementing universal accessibility in white water-based adventure tourism at Victoria Falls for people with mobility disabilities?" The article's structure presents the literature review that positions the discussion, and the method used in pursuing the empirical research. Results and discussion inform the implications and conclusion accordingly.

Literature review

White water rafting is a group activity where participants between four and eight propel and steer an inflatable floating raft using single-bladed paddles (McKay, 2015). In a commercial setting, the bulk of the steering and the propulsion are usually done by paid river guides (McKay, 2014). In the white water river rafting business, an outfitter (service provider) supplies personnel and equipment to transport adventure enthusiasts down a river on a raft (Howard, 2009). The inflatable rafts or cataracts characterise the activity that carries people and equipment down a river. Whitewater rafting is greatly associated with danger, making it part of adventure tourism, which is defined by its association with physical risk to life and limbs (Fletcher, 2010). Compared to its land-based counterparts, WWBA is riskier and health or life-threatening (Page et al., 2005). Nevertheless, most white-water rafting incidents are minor, involving only cuts and bruises (Kay, 2015). However, in some rare cases, serious incidents requiring hospitalisation for more than 48 hours and death can occur (Page et al., 2005). Participants or tourists consuming the activity can drown, experience near-drowning incidents (usually during raft flips or raft falls), become hypothermic, get struck by rocks and paddles, or become infected with waterborne diseases (Kay, 2015).

Understanding disability and impairments

Disability is a complex phenomenon characterised by various medical, traditional/cultural, and social views that give context and interpretation of categories and the profoundness of impairment in an environmental setting (Makuyana, 2022). Experiences of disabilities are diverse and emerge from interactions of environmental factors and the presence of impairments. They also vary among individuals, causes, and extremities and result when an obstacle challenges one's level of functioning (Darcy et al., 2020). Therefore, impairments arise from various deficiencies acquired from birth, accidents, incidents, illnesses, and health conditions (World Health Organization International Classification of Function, 2017). Impairments include visual, mobility, hearing, mental health and multiple, while disability in various fields is sometimes viewed from social and personal identity (Vehmas & Watson, 2016). It can, also be argued that impairments are paternal or maternal, born or acquired later in life, while disabilities result from societal or environmental constructs (Darcy, 2010; ICF, 2017; Vehmas & Watson, 2016). Throughout this study, particular attention shall be given to the mild-physical disabilities category, which includes people with no legs/with one leg, wheelchair users and people using klatches without paying attention to causes. In this case, disability is any condition that restrains people with mobility disabilities or those facing mobility challenges from participating in WWBA tourism activities. It is worth noting that everyone and anyone can be or may be considered to have some form of temporary disability at one or more points in life.

Universal accessibility and WWBA

Vashishth & Jhamb (2021) believe that non-disabled people think PwDs lack the capabilities to live like any other human being on earth who participates in socio-economic activities like adventure tourism. According to Lieberman (2023), universal accessibility is feasible in WWBA. However, it remains unknown if the industry in low-resource settings within socio-economic turbulence is ready or perceives the feasibility to invest towards making accessible tourism a reality in all activities (Lieberman, 2023). Therefore, it is necessary to probe the challenges experienced by the stakeholders in Victoria Falls when they facilitate co-production and co-consumption of WWBA while embedding universal accessibility in the activities. The European Commission on Accessibility Report (2015) identify a lack of knowledge about disability, accessibility, how to make infrastructural and organisational culture more accessible, and a lack of staff skills and knowledge to engage with access-need customers as the main challenges in implementing WWBA. WTO (2019) indicates that the final key barrier to improving the tourism industry's accessible offerings relates to staff knowledge and information. Reinius et al. (2023) corroborate this view by pointing out the lack of knowledge about people with mobility disabilities' motives, expectations and needs; and how to connect with them as the main challenges. There is a considerable lack of understanding regarding the demand characteristics for accessible tourism and how to market nature-based experiences and activities (Reinius et al., 2023). It is, therefore, important for tourism education providers to train WWBA workforce on the skills in universal accessibility of tourism (Makuyana & du Plessis, 2023). The European Commission's (2015) survey asserts that accessibility is not seen as a business opportunity as it is associated with high costs with little return. The cost is argued to emanate from low customer volumes as there are not so many clients with total accessibility needs to justify a complete adaptation (Lucrezi & Makuyana, 2023). ECA (2015) highlights the example of Hérault (France) suppliers who noted that adapting facilities and acquiring accessible equipment for people with mobility impairments requires higher maintenance costs while increasing only marginally the number of tourists with disabilities. Such is contrary to TravAbility (2018) and WTO (2020), who regard accessibility as business and socio-economic empowerment and the facilities as usable by anyone.

Adventure tourism is heavily dependent on terrain, and it has remained an ongoing challenge for both public authorities and private actors to transform various visitor-related environments to meet the needs of persons with disabilities (Reinius et al., 2023). The challenge is attributed to a lack of harmonised policy frameworks on disability that guide and inform policymakers, investors, and policy implementation processes (Reinius et al., 2023). In addition, adventure tour operators have limited control

and access to areas of land or water where particular adventure activities can be carried out at a skill level appropriate for the access-need clients under conditions and costs which allow them to assemble marketable commercial products (Buckey, 2010). Most adventure tour enterprises do not own the areas concerned but must obtain permission to use them from landholders or land management agencies (Godtman, 2021). The land management agencies, expect some financial return and will generally impose conditions to limit impacts and potential liabilities. At the same time, efforts to adapt may be marred by the sensitivity to alterations or adulteration of the natural environment by environmentalists (Buckley, 2010). It is, therefore, essential to have an integrated collaborative stakeholder approach for the universal accessibility goals in WWBA to be achieved. Based on the observations discussed above, one can conclude that the challenges when implementing universal accessibility in WWBA are varied and are characterised by a complex interplay between equipment-based, financial-related, knowledge-based, structural, intrapersonal and interpersonal barriers.

Theoretical underpinnings

To strike a balance in investigating the value-co-creation among participants' immediate states of mind in intrinsic and challenging activities, seminary scholars like Csikszentmihalyi (1975) propounded a concept of flow. Flow is based on the psychological state that occurs when an individual perceives a balance of challenge, enjoyment/satisfaction and skill (Csikszentmihalyi, 1975). This will determine how positively the subjective experience is evaluated based on perceived flow indicators such as positive effect, concentration, involvement, and intrinsic motivation like self-fulfilment and challenging self-boundaries. Taking the essence of Csikszentmihalyi's (1975) flow theory, satisfactory flow experiences emerge from intrinsically motivating outdoor adventure activities, like white-water rafting and rock climbing. Despite a plethora of industrial practices, predecessor research on the theory of flow primarily focused on the quantitative methodology, which speaks to established international scales for outdoor adventure settings, leaving out an evaluation of the implementation of universal accessibility based on the heterogeneity of access-need categories in low-resources settings, which can contribute to the theoretical innovation of the flow model. Due to methodological challenges with sampling adventure recreationists and everyday activities, especially with the limited marketing of the destination as accessible-to-access-needs market, the study engaged selected industry-role players in empirical research to explore the challenges of universal accessibility using the worldview of the flow theory.

Context of study: The Zambezi River

Zimbabwe shares Victoria Falls with Zambia, one of the World's Seven Natural Wonders along the Zambezi River. The Zambezi Waterway exists in the fourth-biggest basin in Africa after the Congo River, Nile River, and Niger River basins. Covering 1.37 million km^2, the Zambezi River roots its source in northern Zambia at about 1,450 meters above sea level (Baipai et al, 2020). The Zambezi River, Victoria Falls area, was selected because it is the mainstream of Zimbabwe's tourism and the main white-water facility in the country that hosts several white-water adventure activities. Activities like white-water rafting and swimming at the Devil's Cataract are seasonal, occurring during the low water flow period (Tichaawa & Mhlanga, 2015; Dube & Nhamo, 2021). The Victoria Falls Rainforest and the Zambezi National Park which house the WWBA section of the river, are the most visited parks by both domestic and foreign visitors in Zimbabwe contributing over 56% of all national parks' entries in Zimbabwe in the year 2022 (ZTA, 2023). Figure 1 below depicts the catchment area map indicating the scope of the study.

Figure 1: The Zambezi River White Water Rafting Map
Source: Magwaza and Kajongwe (2021)

According to the International Scale of River Difficulty (2005), the Zambezi River is graded V-VI regarding white-water difficulty. This grading class means that the river, though difficult to navigate and negotiate regarding hurdles presented in white water-based adventure activities, is ideal for white water adventure tourism (Prideaux & Cooper, 2009). This, therefore, raises

the need to explore how barriers can be evened out, in order to promote universal accessibility (Buhalis, 2012). However, based on the authors' knowledge, the current status quo shows that efforts to promote universal accessibility remain in their infant stages, as little has been done to promote universal accessibility in WWBA activities in the area. Extant white water-based adventure tourism research has paid little attention to how this can be made possible in Zimbabwe (Magwaza & Kajongwe, 2021). Subsequently, WWBA tourism has remained exclusive to the so-called 'able-bodied' only and efforts to make tourism accessible to all seem to remain mere academic talk. To this end, this study sought to explore the challenges when implementing universal accessibility in Whitewater-based adventure tourism at Victoria Falls focusing on people with mobility disabilities.

Methods

A qualitative research methodology was followed in this study. Studies relating to universal accessibility in tourism have focused primarily on the consumer or the tourist's perspective (Godtman et al., 2019). In addition, they will primarily be concerned with the preferences and concerns of PwDs and investigate their motivations when selecting accessible tourism facilities and services. This study, nevertheless, investigates from the service providers' viewpoint as this dimension remains relatively under-researched (Reinius et al., 2023). Thus, the study focused on key informants stationed at Victoria Falls including Adventure Tour Operators, the Destination Management Organisation (the Zimbabwe Tourism Authority) and the WWBA guides. These were selected as they are directly involved in the provision, implementation or regulation of WWBA tourism services at Victoria Falls. Based on a limited population, a case study approach was employed to allow purposive and snowballing sampling techniques in recruiting participants as they know each other and they are among the few from the supply side in Victoria Falls resort town, with in-depth knowledge of WWBA. In addition, the tourism proprietors who specifically offer WWBA tourism activities as products were recruited for their product knowledge. Informed consent was obtained after potential participants had read the introductory information about the study and signed to confirm their willingness to participate in the study. After the interviews, the interviewer asked the interviewee to nominate and facilitate introductions to other potential interviewees with comprehensive knowledge of WWBA in Victoria Falls. This snowballing technique was mostly applied to identifying the tour guides. The data collection happened between March and May 2020, and data were collected through administering a semi-structured face-to-face interview guide, which consisted of a mixture of closed and open-ended questions. The questions were predominantly aligned on unearthing the challenges being faced in implementing WWBA at Victoria Falls. The interviews allowed the researchers to elicit in-depth accounts from the participants (Barbour, 2014). Time for the interviews varied from between 25 minutes to around 60 minutes for the longest interviews. Both the time and place for the interviews were prior arranged and scheduled in favour of the participants' convenience. The interviews took place at the interviewees' organization of employment and all the necessary COVID-19 prevention protocols were observed during the interviews. The interviews were conducted with the following representatives:

Table 1: Representatives interviewed at Victoria Falls

Number	Organization	Number of interviewees	Interview venue
1	Zimbabwe Tourism Authority Victoria falls	2	Interviewees' work place
2	Adventure Tour Operators	10	
3	Zambezi Rivers WWBA guides	13	
	Total	**25**	

When conducting the interviews, audio recording devices were used to capture all comments. Data were transcribed from all the recordings and this was done individually for each of the interviews. The transcribed data was then analysed using the thematic content analysis. Thematic analysis was used as it allowed for results to be shaped by the respondents themselves, which is necessary for inductive analysis (Wilson, 2006).

Results and discussion

Demographic information of the respondents

The results show that the proportion of male respondents outnumbered their female counterparts, 88% to 12%, as indicated in Table 2.

Table 2: Demographic characteristics of respondents

Characteristic	Frequency (N=25)	Percentage	Characteristic	Frequency (N=25)	Percentage
Gender			**Marital status**		
Male	22	88	Single	4	16
Female	3	12	Married	13	52
			Widowed	1	4
			Divorced/Separated	6	24
Age (Years)			Rather not reveal	1	4
20-24	-	-			
25-29	3	12	**Education**		
30-34	5	20	Secondary/high school education	13	52
35-39	4	16	Technical/vocational qualification	6	24
40-44	4	16	Undergraduate degree	5	20
45-49	6	24	Master's degree	1	4
50-54	3	12	PhD	-	-

This disproportional representation reflects the male dominance of the Adventure Tourism industry. These results resonate with earlier observations by Kay (2015) where it was noted that the white water rafting profession is male-dominated. Similar observations were noted in other adventure tourism contexts like the tour guiding profession (Hurombo, 2022) were the male gender was also dominant. This skewed picture in favour of men may be explained by the fact that due to the high adrenalin and

danger posed by most adventure activities, there are work tasks that females generally find more challenging to complete due to physiological differences from males. When viewing figures for female-to-male employment ratios, it is apparent that the adventure tourism industry is not balanced. The interviewees were between 25-54 years of age and 30-49 years, taking about 76% of the total respondents and rendering them in the middle to old age category, thereby strengthening the maturity in responses. Most of the respondents were married, 52%, as opposed to 16% single, 24 % divorced or separated and 4% widowed. This potentially indicates a preference for stability within the profession. Of the respondents, the majority, 52%, had only secondary or high school education, 24% per cent had a diploma or vocational training certificate qualifications while had only secondary or high school education and 20% held an undergraduate degree. Study results showed that most respondents lack higher education but are formally employed in the sector. This attest to the need for more on the job or in-house training and skills development opportunities for staff in the sector. Lack of knowledge and skills among staff were also noted during the study's literature analysis to be the primary barrier to universal accessibility in WWBA (UNWTO, 2019). In contrast Kay (2015) observed that white water rafting is a skilled industry, which demands that employees hold a wide range of skills which include first aid, river guiding and swift water training.

Universal accessibility challenges when implementing white water-based adventure at Victoria Falls

While it is clear that the concept of flow guides positive subjective experiences, the analysis of interview results elicited eight themes. These are *'*limited universal accessibility equipment', 'costs of adapting', 'challenges of hiking up and down the gorges', 'the complexity of making people with disabilities comfortable', 'an absence of a harmonised policy framework for facilitating universal access', 'highly priced adventure products', 'an over-emphasis on the perception of risk' and 'under the marketing of WWBA services to PwDs*'*.

Limited universal accessibility equipment

One central challenge adventure tourism operators face is a lack of accessibility-enhancing equipment that enhances accessibility. The identified equipment includes well cabs, ramps, lifts, and other tailor-designed equipment that caters to tourists with reduced mobility in WWBA. Some respondents had this to say: "Limited equipment to enable disabled people access to our activities is a major setback. It is important that you are doing this study; hopefully, the study will recommend the way forward in this regard…." (Interviewee, 3). "We need ramps, lifts or conveyors that connect the base of the gorge and its top for easy access to those facing movement problems up and down the gorge. If we had those, then we would not need this study…." (Interviewee, 5). Another interviewee said: "…just this well cab so far, but it is not sufficient for the market because we have such customers (PwDs) arriving at the airport almost every day. I pray that we find all the required resources and equipment to accommodate them in our rafting, kayaking and other activities in the water… (Interviewee, 11). An analysis of the above findings indicates that adventure tourism operators lack adequate equipment to allow universal accessibility. These findings validate earlier observations by Booth et al. (2012), who pointed out that available equipment in most resorts falls beyond the level of requirements for persons with mobility disabilities and in this case study, the focus is on physical disabilities. This shows that the service providers are not equipped enough to accommodate PwDs in their adventure tourism services and should explore strategies to broaden the scope and usability of their facilities and equipment by PwDs.

Costs of adapting facilities and services

The costs associated with adapting their facilities and services to cater for the needs of the physically disadvantaged market segment present challenges to most Adventure Tourism Operators. The following quotes illustrate this sentiment: How can we spend so much money on a little market? What is the logic? Let one organisation major in that, and the rest do what they already did… (Interviewee, 2). It is the feasibility of the market that weakens our hands. Besides, we usually do not host any client with disabilities … (Interviewee, 10). These sentiments resonate with earlier observations by the European Commission on Accessibility (2015), which highlighted that instead of tourism operators seeing the business opportunity in adaptive accessible WWBA tourism, they are much more concerned with the costs of making the initial moves as opposed to considering the long-term benefits it bears. Interestingly, Lieberman (2023) shows many destinations offering adaptive WWBA tourism in the global North and South countries. However, the responses pointed to cost-centric views and attitudes on disability among industry role players in Victoria Falls, who were reluctant to engage suppliers. They noted that the resources needed to adapt facilities and acquire accessible equipment for people with mobility impairments require higher maintenance. Avoiding these costs is believed would save them costs. This confirms the findings of several other researchers who indicated that most operators do not acknowledge the viability of the disabilities market, especially in developing countries (Chikuta et al., 2021; Makuyana et al., 2020; Lucrezi & Makuyana, 2023). However, such impedes the applicability of the concept of flow due to a lack of pro-inclusive business practices.

Challenges of hiking up and down the gorges

According to the concept of flow, challenges are part of the positive subjective experiences the client seeks as being driven by intrinsic motivation. However, the respondents seem to uphold an over-sympathy attitude that furthers exclusivity by justifying that hiking up and down the gorges presents a major hurdle for PwDs at Victoria Falls. Findings indicate that hiking up and down the gorges is why most PwDs decide not to participate in WWBA. Some interviewees had this to say: "The route downward from the top to the base of the gorge (put-in point) is dense with slippery rocks" (Interviewee, 2). "On both the put-in and take-out points, a major adventure lies on the steep slope that presents extreme danger to those who manoeuvre it. The slope is about

111 metres from the top to the base of the gorge, which takes around 30-45 minutes' walk for an average person" (Interviewee, 5). "…hell is unleashed when we get to the point of hiking down the gorge as it presents challenges to our guides and the clients. Things seem to stabilise once at the base of the gorge, but climbing up again as soon as we finish the trip is another battle that usually chases away most of our clients…" (Interviewee, 20). "It is a real blander that we must admit we made. We terraced the route to improve and enhance the easy movement of people down the gorge, but little did we know that there would be increased access requirements for other clients not accommodated by the terraces…" (Interviewee, 7). Thus, some structural challenges impede the smooth movements of PwDs tourists up and down the gorge. This is predominantly due to the slippery slope and the terracing that has been done on the routes, which affects the use of assistive mobile devices like wheelchairs. These findings seem to corroborate earlier findings by Booth et al. (2012) who noted that most raft and kayak rivers and water bodies are not easily accessible. Nonetheless, one can also argue that the findings serve to confirm an overwhelming historical tendency to develop facilities and infrastructure with the able-bodied population in mind and to treat accessible facilities as an afterthought (Oliver & Barnes, 2012). This is especially true in light of the terracing of the routes, which overlooked the access needs for PwDs where access ramps could have also been installed.

The complexities of making people with disabilities comfortable

Findings from the study also highlight that the complexity and difficulty in making people with disabilities comfortable is a headache for adventure tourism providers. Respondents unanimously agreed that although making people with disabilities comfortable is considered critical, it is hard to achieve this goal, emanating from the complexity of the group of tourists themselves, their differences in impairments and disabilities, access needs and even other issues internal to the tourists with limited mobility themselves. Comments to illustrate this include: "… one difficult thing to keep asking the tourist many questions without upsetting them, yet doing most of the things in the same fear can also result in upsetting them…" (Interviewee, 16). "I always do my level best, but most of the time never reach the goal of making them comfortable …" (Interviewee, 21). "He was upset, and God knows why… and I was at a loss to find the reason. From my analysis later, I concluded it was fear and anxiety that made it difficult for me and the rafting guides to make them comfortable." (Interviewee, 13). "I would rather encourage serious training of managers, guides and staff in general to have better results…" (Interviewee, 4). Some of the above sentiments express the emotional challenges faced by operators as they try to make tourists with physical disabilities comfortable. Previous studies, for example (Daruwalla & Darcy, 2005), have emphasised the attitudinal barriers more, especially the negative views that fully able-bodied persons or the society, at large have towards PwDs, leading to poor accessibility. In addition, what the respondents regard as challenges is what the adventurous client with disabilities would seek. Such assertion is rooted in Moneta and Csikszentmihalyi (1996), who found that violations of the flow model can result from differences based on the degree of inherent challenge (achievement preferences vs. casual-social). In addition to the challenge-skill game, risk perception (as a challenge) balanced with perceived competence has been theorised to promote optimal experiences during various stages of outdoor adventures (Martin & Priest, 1986). Nonetheless, the current study findings suggest that sometimes tourists with limited mobility are susceptible and may perceive the tour guide services negatively. The statements above also confirm arguments from the literature that, at times, access barriers can be internal or external to one's being (Lester, 2012). It, therefore, implies skills development among staff to empower them to handle clients with disabilities from a professional lens across the industry.

An absence of a harmonised policy framework

Analysis of the interviews also unearthed the lack of a harmonised policy framework as another essential theme or challenge hampering the realisation of the universal access goals. One interviewee commented the following to illustrate the theme: "There is no alignment between policies that govern adventure tourism activities and land and water management policies" (Interviewee, 1). Another respondent said: "…that is as a result of the Act of God, we did not create the gorge, nor did we create the rocks, bends and so forth. Since, as much as we try to improve accessibility, the natural design is nothing we can temper. Besides, conservationists and environmentalists are always looking, and if any tempering (with the environment) happens, their penalties and laws will take pre-eminence…" (Interviewee, 6). In addition, another respondent commented that: "We always miss the big picture here. This issue needs strong collaboration among all stakeholders and across tourism-related industries, which is what we lack. Lack of collaboration is our asthma, our cancer……. If we only could put our heads and hands together…I mean inter-industry stakeholders… we could be the most accessible destination in the world. We must compromise and reach a consensus for the customers and Ubuntu (humanity)…" (Interviewee, 4). These findings seem to resonate with earlier observations by scholars, for example, Kay (2012) who posited that there needs to be a balance between legislation, implementation, enforcement and self-regulation between government and the adventure tourism industry enterprises. Buckley (2010) also noted that altering the environment or tempering it to improve accessibility would attract severe penalties and even fines from the landowners and resource managers, among other responsible authorities. However, a contrast emerges from Lucrezi & Makuyana (2023), who noted remarks of the leader of the Handicapped Scuba Diving Association in South Africa (HSASA)-one of the largest organisations in adaptive diving tourism in South Africa. Lucrezi & Makuyana (2023) noted that it is not about changing the natural environment as persons with disabilities and persons without should enjoy the same offerings alike; however, critical aspects of being considered include sharing information on time, engaging for reasonable accommodation and usage of adaptive skills among staff.

Highly priced adventure products

Another challenge that emerged from the analysis of results was related to the highly priced adventure products, which seem to scare away potential clients from PwDs from participating in this extreme adventure activity. This is not new, as tourism is believed to be exclusive to the elite; so likewise, adventure tourism is in the process of being inclusive in various dimensions like race and disability, among others (Lucrezi & Makuyana, 2023). Some of the respondents had this to say to validate the theme: "…just pricing the rafting, jet boating, canoeing activities high scare them (PwDs) away…. who would opt for a more expensive activity?" (Interviewee, 11). "It is an available option on our accessibility basket for those facing mobility challenges, but whenever we tell the clients about the cost of helicopter enhanced access, they back down most of the times…" (Interviewee, 21). According to the concept of flow, Priest & Bunting (1993) showed from an evaluation of a rowing class that after people encountered their first high speed, average perceptions of risk and competence were close to each other and classified as adventurous. Therefore, such concurs with the responses pointed to the provision of helicopter access to the put-in points and off the take-out point as a widely agreed-upon strategy for improving accessibility; the facility is seldom used by operators on WWBA owing to the residual costs associated with it, as illustrated by the preceding responses. However, such responses question the extent to which the service providers even reach adaptive white-water-based tourists with the money and time to engage in these activities to experience the flow.

An over-emphasis on the perception of risk

WWBA providers also showed that they usually over-emphasise the issue of risk when doing business in WWBA. During the interviews, they revealed that over-emphasizing risk and safety issues reduced conformations from PwDs. In line with this observation, one adventure tour operator said, "…he was the only one in a wheelchair among a seventeen-person group. They all booked kayaking and rafting for two consecutive days, and he also wanted to go. I explained to him about the potential hazards and risks the activities are exposed to, and he switched to a full day game drive and a full day Chobe Day Trip for the two days when his counterparts were doing the WWBA…" (Interviewee, 4). "…once everyone is on the trip, they are exposed to some dangers/adventure…." (Interviewee, 5). "…that proves us incompetent because it paints a picture to the clients that they are unsafe with us…." (Interviewee, 9). This brought to light the realisation that accessibility challenges are mainly faced with mobility from the top of the gorge to its base for the put-in point and vice versa at the take-out point at the end of the trip. Once everyone is on board, they face almost the same requirements and experiences among people with disabilities and those without disabilities. This is merely because most tourists with mobility disabilities; are affected by the lower limbs, and the activities usually require using the upper limbs to navigate the river. Therefore, if all the tourists face the same level of danger when in the river, it is thus essential for the adventure tourism providers not to instil a greater sense of fear and risk in PwDs than those without disabilities. Mckay (2012) argues that in adventure tourism, it may be that while perceptions of risk are high, actual risk is low. Hence, what is regarded as dangerous by service providers who do not understand disability using the socio-medical lens for adrenaline activities; can fail to realise the satisfaction in adventures regardless of the presence of impairment, as explained in the concept of flow. Csikszentmihalyi (1975, 1990) described the flow experience in dimensions including the balance between challenge and ability, which depends on the challenge/skill balance.

Under marketing of WWBA products and services to PwDs

Another theme that emerged from the analysis of results was 'under marketing', and this also contributes to the limited participation in WWBA by tourists with limited mobility. It was noted from the responses that operators are not making enough effort to promote universal access to WWBA products optimally. Comments to illustrate this theme include: "The fact that PwDs are eliminated from promotional material paints the picture that it might not be the right activity for them, and therefore, they end up shunning the activities. Marketing material covering WWBA has to feature PwDs to show that the activity is all-inclusive" (Interviewee, 12). "…we should market that we can offer the activities with reduced access limitations. We can maybe do that by taking people with mobility challenges, shooting and producing a promo video to prove to anyone else out there that the activities are doable regardless of the level of ability…" (Interviewee, 19). To some extent, these findings validate earlier observations by Lester (2012) and Wiharjokusumo (2018) that service providers of WWBA struggle to market their products to the right market segment. Just like in South Africa organisations in Victoria Falls have not tapped into the access-need markets due to ignorance and lack of know-how to co-create marketing messages using the appropriate communicable formats and channels/mediums within the market environments (Makuyana et al., 2020).

Conclusions and implications

The article explored the challenges when implementing universal accessibility in WWBA tourism, and Victoria Falls was used to ground the argument on empirical evidence. Therefore, eight themes that point to challenges when implementing universal accessibility for white water-based adventure were noted. These include limited equipment, costs of adapting the services to accommodate PwDs, the structural challenges of hiking up and down the gorges, the complexity of making people with disabilities comfortable and an absence of harmonised policy framework for facilitating universal access. The other challenges involve highly-priced adventure products, an over-emphasis on the perception of risk and under the marketing of services to PwDs. The findings nurture the assertion that challenges in implementing universal accessibility emerge from ignorance of disability and interpretation of universal accessibility among industry players. The limited understanding informs attitudes and perceptions that consider persons with mobility disabilities as out of context in policy, planning, strategies and budgets. This leads to an exclusive form of WWBA. Training and skills development is therefore critical for the sustainable management and

practice of adaptative or inclusive WWBA tourism. Training plays a positive role in addressing attitudes and behaviours among the human capital/staff and should equip employees with skills to handle clients with disabilities from a professional lens across the industry for improved interpersonal relationships. Such training can be costly for operators, a reason why skills among staff are limited. This creates a need for organisations responsible for training professionals for whitewater-based activities to play their role in enabling human capital to have competencies for adaptive whitewater-based adventures.

It also implies the need for white-water-based adventure tourism to collaborate with the accessible tourism research community in aspects that include product development/innovation, markets and strategies informed by research evidence. WWBA operators also need to embrace a suite of marketing strategies in order to market their services to potential clients. Furthermore, the need to alleviate ignorance on universal accessibility among the custodians or landowners who guard and manage the environments used for providing and consuming adventure in sustainable frameworks is telling. Hence, there is a need to have dialogues among disability organisations, training providers, local authorities, accessible tourism researchers and the private sector for avenues for harmonised policy developments (reviews) and stakeholder collaboration to promote universal accessibility in WWBA. Thus there is a need for integrative mainstream policy frameworks that govern adventure tourism activities, land and water management policies. The study's limitation is that it focuses only on the suppliers' perspectives of WWBA activities and services, namely Adventure Tour Operators, WWBA tour guides, and the Destination Management Organization. Future research on universal accessibility to WWBA should also tap into the viewpoints of tourists with limited mobility, and organisations for PwDs. This will aid in further understanding the disability-inclusive value co-creation in white water-based adventure tourism on both supply and demand sides.

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