Wildlife Volunteer Tourism: Scientific and Educational Contributions in South Africa

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Abstract: Wildlife volunteer tourism has evolved into a popular form of sustainable tourism in South Africa. This form of tourism can exhibit both positive and negative impacts on a host destination. However, limited research has examined the potential contributions of wildlife volunteer tourism in South Africa. This paper focuses on filling this theoretical gap by investigating the scientific and educational contributions of wildlife volunteer tourism in South Africa. An exploratory qualitative approach was followed, where seven managers of volunteer tourism organisations were interviewed in August and September 2022. Thematic analysis was used to analyse the data. From the results, it is clear that wildlife volunteer tourism makes significant scientific and educational contributions. However, funding remains a challenge. The results provided an increased understanding of wildlife volunteer tourism in South Africa, and is valuable to managers, and contributes to the current discourse on volunteer tourism as an emerging market segment.

Key words: Wildlife Volunteer Tourism, Scientific Contributions, Educational Contributions, Funding

1. Introduction

According to McGehee (2014), an estimated 1.6 million people participate in volunteer tourism (VT) projects annually. VT, is a type of travel that combines traditional tourism with volunteer work (Wearing, 2001). Volunteer tourism offers people the opportunity to contribute their time, skills, and efforts to various projects or initiatives aimed at addressing social, environmental, or community needs (McGehee, 2014; Wearing, 2001). Wildlife volunteer tourism (WVT) allows one to travel to a destination and volunteer in activities related to wildlife conservation, such as education and research, to name a few (Ong, Lockstone-Binney, King & Smith, 2014; Knollenberg, McGehee, Boley & Clemmons, 2014; Wearing & McGehee, 2013). These activities are possible through collaboration and support from various stakeholders (Benali & Ren, 2019; Grimm and Needham, 2012). According to the International Unions for Conservation of Nature (2023), an estimate of 42,000 species are currently threatened with extinction. This has led to more people becoming environmentally conscious and starting to participate in WVT (Apps, Dimmock & Huveneers, 2018). Additionally, this has also resulted in more WVT projects that focus on conservation, education and science (Brightsmith, 2008).

South Africa is a popular destination for WVT due to the diverse culture, unique biodiversity, diverse ecosystems, and extensive conservation efforts. South Africa offers various programs that enable volunteers to contribute to local communities and participate in conservation efforts, making a positive impact on both people and the environment (Volunteerworld.com, 2023; Lucrezi, Cilliers & Van Der Merwe, 2022; Alexander, 2012a). Increased research into the realm of VT has been conducted focussing on a variety of elements, such as the profile, expectations, motivations, satisfaction, and attitude of volunteers, and the business model canvas, challenges, and impact of VT, to name a few (Cilliers & Hermann, 2023; Lucrezi & Cilliers, 2022; Lucrezi et al., 2022; Boluk, Kline & Stroobach, 2017; Van Tonder, Hoogendoorn & Block, 2017; Alexander, 2012a; Akintola, 2011; Benson & Seibert, 2009; Sin, 2009; Stoddart & Rogerson, 2004). These studies provide essential theoretical background on VT as such promote the discourse on the topic. With that said, however, limited research has been conducted on the contributions of WVT, specifically examining the scientific and educational contributions in South Africa (Cilliers, Lucrezi & Van Der Merwe, 2022; Rogerson & Slater, 2014; Alexander, 2012a; Alexander, 2012b). This study’s goal is to investigate the scientific and educational contributions of WVT in South Africa. This research is guided by the following research question: How does WVT organisations contribute to science and education in South Africa? Following on this introduction, the paper will present the literature review. Afterwards, the research methodology that were used to collect and analyse the data will be indicated. The results and discussion will then be presented, and finally the study will be concluded.

2. Literature Review

WVT plays host to a variety of potential benefits, for the volunteers, local community, science and conservation management, to name a few (Cilliers et al., 2022; Bernstein & Woosnam, 2019). It is however important to note that the benefits of WVT can vary depending on the quality and sustainability of the programs, the involvement...
and empowerment of local communities, and the responsible practices employed by the WVT organisations (Pompurová, Marčeková, Šebová, Sokolová & Žofaj, 2018). It is crucial to approach WVT with a critical mindset, ensuring that the projects and organisations chosen prioritise the well-being of local communities and the environment, promote sustainability, and create long-term positive impacts (Pompurová et al., 2018).

2.1 Scientific Contributions

WVT may contribute to scientific research and discovery by providing participants the opportunity to assist scientists and researchers in collecting data and information (Mostafanezhad, 2013; Wearing & McGehee, 2013). It is known that volunteers are motivated to participate in scientific activities, such as data collection, sample gathering, surveying, monitoring, or even assisting with laboratory work (Keese, 2011; Goffredo, Pensa, Neri, Orlandi, Gagliardi, Velardi, Piccinetti & Zaccanti, 2010). There is also an increase in the number of people who contribute to conservation through participating in citizen science or donating funds towards conservation and research activities (Cerrano, Milanese & Ponti, 2017; Bear, 2016). WVT organisations engaged in scientific research can contribute to the completion of studies, publication of articles, and the creation of research databases (Roques, Jacobson and McCleery, 2018; Coglan & Gooch, 2011; Brightsmith, Stronza & Holle, 2008). Scientific research conducted by WVT organisations has the potential to open doors for collaboration and partnerships with various institutions and organisations (Rees, Rodwell, Attrill, Austen & Mangi, 2010). This can impact conservation management policies, which can contribute to conservation, protection and management of wildlife and the environment (Roques et al., 2018; Schmeller, Henry, Julliard, Gruber, Clobert, Dziocz, Lengyel, Nowicki, Dári, Budrys, Kull, Tali, Bauch, Settele, Van Swaay, Kobler, Babij, Papastergiadou & Henle, 2008).

2.2 Educational Contributions

WVT activities have the potential to increase education and understanding of conservation and the environment through various means, including social media, personal interaction, and personal experiences (Cilliers & Hermann, 2023; Roques et al., 2018). These efforts empower individuals to become informed advocates for sustainable practices, and environmental stewardship in their communities and beyond (Roques et al., 2018; Gray, Meeker, Ravensbergen, Kipp and Faulkner, 2017). The aforementioned may result in local communities becoming stewards and taking ownership of their natural environment, and an increase of people participating in conservation (Roques et al., 2018; Khoshkam & Marzuki, 2011). WVT enhances the local community and the volunteers’ education and skills, and positively change their attitude and behaviour towards conservation (Apps et al., 2018; Goldberg, Birtles, Marshall, Curnock, Case & Beeden, 2018; Wearing, 2001). This results in them being motivated to contribute and support conservation and the protection of wildlife and ecosystems, enhance their education, increase the education of others, and continue to participate in scientific activities (Apps et al., 2018; Goldberg et al., 2018; Anderson, Chapman, Escontrela & Gough, 2017; Lück, 2016).

2.3 Funding as a Challenge

Cilliers and Hermann (2023) found that limited funding is received by WVT organisations from public sector institutions. WVT organisations are thus dependant on self-generated funding such as the funds received from the volunteers, and alternative sources, such as social media and fundraising (Cilliers and Hermann, 2023; Lyons, Hanley, Wearing and Neil, 2012). These funds are primarily used to cover the projects and operating expenses (Bath-Rosenfeld, 2014). Solutions to overcome the funding issue may be to charge higher prices, being transparent with the funding, and indicating how the funds are used towards protection and conservation of wildlife and the environment (Bath-Rosenfeld, 2014; Coren & Gray, 2012). Additionally, WVT organisations can ensure that the volunteers are satisfied, which can lead to return and new volunteers, and positive word of mouth (Chua, Meng, Ryu & Han, 2021; Sharma & Sahni, 2017; Ding & Tseng, 2015). WVT organisations can also continue to contribute to science and education, creating partnership with institutions and organisations, which can result in enhanced financial support (Trave, Brunnschweiler, Sheaves, Diedrich & Barnett, 2017; Zeppel & Muloin, 2008; Zeppel, 2008).

3. Methodology

An exploratory qualitative approach was used to explore the scientific and educational contributions of WVT in South Africa. Expert judgemental sampling was used to interview managers at seven different WVT organisations in South Africa in August and September 2022 (when saturation was achieved). Data on the demographic profile, and the scientific and educational contributions were collected through semi-structured interviews (developed...
based on previous research; Cilliers, 2022; Alexander, Kim & Kim, 2015; Rattan, Eagles & Mair, 2012). A consent form accompanied the interview schedule, and the participants had to give consent before they could participate in the study. The interviews were in English, 30 minutes on average and were recorded for transcription purposes. The demographic data were analysed using Microsoft Excel, and the contributions were analysed using thematic analysis (Nieuwenhuis, 2019; Creswell & Creswell, 2018). The recordings were transcribed verbatim and entered into Atlas.ti for analysis. Meaningful analytic units were applied through inductive open coding and in vivo coding. The codes that shared commonality were grouped into themes. The results were interpreted and reported with quotes from the participants.

4. Results and Discussion

4.1 Demographic Profile of Participants

From the results, it can be seen that WVT has essential scientific and educational contributions. However, funding remains a challenge that these WVT organisations are facing. This section provides a discussion on the demographic profile, and scientific and educational contributions of WVT.

Table 1: Demographic profile of participants

<table>
<thead>
<tr>
<th>Wildlife volunteer organisation</th>
<th>WVO1</th>
<th>WVO2</th>
<th>WVO3</th>
<th>WVO4</th>
<th>WVO5</th>
<th>WVO6</th>
<th>WVO7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of WVT project</td>
<td>18</td>
<td>20</td>
<td>4</td>
<td>17</td>
<td>1</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Years worked at organisation</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Method of employment</td>
<td>Appointed</td>
<td>Volunteered</td>
<td>Founder</td>
<td>Appointed</td>
<td>Founder</td>
<td>Volunteered</td>
<td>Appointed</td>
</tr>
<tr>
<td>Previous VT experience</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Country of origin</td>
<td>South Africa</td>
<td>Australia</td>
<td>South Africa</td>
<td>South Africa</td>
<td>United Kingdom</td>
<td>United Kingdom</td>
<td>South Africa</td>
</tr>
<tr>
<td>Age of participant</td>
<td>39</td>
<td>28</td>
<td>67</td>
<td>29</td>
<td>70</td>
<td>49</td>
<td>33</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Education</td>
<td>Diploma / Degree</td>
<td>High School</td>
<td>Diploma / Degree</td>
<td>Diploma / Degree</td>
<td>High School</td>
<td>Postgraduate</td>
<td>Diploma / Degree</td>
</tr>
</tbody>
</table>

From Table 1, it can be seen that the WVT projects included in the sample have been in existence for an average of 14 years, with the youngest being one and the oldest being 24 years old. The managers had been working at the WVT organisations for an average of five years, were appointed and did not previously participated in VT themselves. The majority of the managers originated from South Africa and had a university qualifications. There were similar proportion of male to female managers, and their aged ranged between late twenties to seventies.

WVT organisations have the ability to contribute to science through creation of partnership and enhancing knowledge, and contributing to education through educating students in schools, the general public and the volunteers. However, funding remains a challenge for these WVT organisations.

4.2 Scientific Contributions

WVT organisations can create partnership through research and data collection, which can result in collaboration opportunities with a variety of organisations and institutions across the globe. This is confirmed in previous research (Hammerton, Dimmock, Hahn, Dalton & Smith, 2012; Rees et al., 2010). Collaboration can allow WVT organisations to participate in joint research projects, share their data with others, participate in publications, and obtain funding (Rees et al., 2010; Cater and Cater, 2007; Pattengill-Semmens & Semmens, 2003). It allows volunteers to have an opportunity to practice what they learnt in class, and enhance their own research skills and experience. Previous research has found that WVT organisations that contribute to science, enhances learning opportunities, allows volunteers to share their experiences, and increase network building (Rees et al., 2010; Cater and Cater, 2007; Pattengill-Semmens & Semmens, 2003). WVT can identify issues and new trends with wildlife and in the environment, which can be used to improve the WVT programme, educate the public and contribute to policies and procedures. This is confirmed in previous research (Roques et al., 2018; Coghlan & Gooch, 2011; Brightsmith et al., 2008). The scientific research conducted by the WVT organisations...
can impact management, legislation and codes of conduct (Roques et al., 2018; Jansujwicz, Calhoun & Lilieholm, 2013). The following quotes were captured by the participants pertaining to this contribution:

“We on the ground in the field can carry out the research and [the researchers] can analyse it for us” (WVO4).

“[Researchers] will come through and do the studies, they will do the write ups and we mainly facilitate the research” (WVO1).

“[We] collate and collect a lot of information that can be useful for a variety of things” (WVO2).

“[Research allows us to] better inform people and improve the programme” (WVO5).

4.3 Educational Contributions

WVT organisations has the opportunity to educate students in schools about wildlife, environment and conservation. This will allow them to learn from a young age to preserve wildlife and the environment. WVT organisations can also educate the general public through interacting with them, talking at a variety of events, and through social media. Previous research has found that WVT organisations can educate people on wildlife conservation through increasing their understanding, motivating them to protect and conserve, and raising awareness of conservation related issues (Roques et al., 2018; Gray et al., 2017; Branchini, Meschini, Covi, Piccinetti, Zaccanti & Goffredo, 2015). The volunteers participating in the WVT programmes also enhance their knowledge about wildlife conservation. This is confirmed in previous research (Johnson, Hannah, Acton, Popovici, Karanth and Weinthal, 2014; Jansujwicz et al., 2013), and can lead to volunteers becoming wildlife and conservation ambassadors (Johnson et al., 2014; Jansujwicz et al., 2013). Resulting in them sharing the information with their friends and family, and educating their peers on conservation related matters. According to Dillette, Douglas, Martin and O’Neil (2017) and Weaver (2015), volunteers can promote responsible behaviour, inspire positive change in others, and share their knowledge with others. This has the potential to enhance wildlife preservation. The following quotes were captured by the participants pertaining to this contribution:

Wildlife conservation should be a subject in school... to teach them to care for our wildlife and make sure they know what wildlife is, because a lot of them have no clue” (WVO5).

“[Educate the public from] both from a pest perspective that these animals are not necessarily pests, but also a pet perspective” (WVO2).

“[We use social media to] show them first-hand what happens and what is the best way to go about it” (WVO4).

“[Giving the volunteers hands on experience] allows you to get more people involved and educating them in a more efficient way” (WVO2).

4.4 Funding as a Challenge

On the other hand, funding is one of the biggest challenges that WVT organisations face. WVT organisations need funding to continue with their daily tasks, conserve wildlife and the environment, and contribute to science and educations. This is confirmed in previous research (Bath-Rosenfeld, 2014; Lyons et al., 2012). WVT organisations can overcome this challenge by explaining what the funds are used for, ensuring volunteer are satisfied, and continue to contribute to science and education (Chua et al., 2021; Trave et al., 2017; Bath-Rosenfeld, 2014; Coren & Gray, 2012). The following quotes were captured by the participants pertaining to this contribution:

“There isn’t a lot of government funding available, unless you’re dealing specifically with endangered animals” (WVO2).

“When there are only seasonal volunteers or no volunteers, it is very difficult to maintain [your wildlife volunteer organisation], and there is no funding for which you can apply for, apart from donations or donors” (WVO3).
5. Managerial Implications and Recommendations

From the results (see Figure 1), it is evident that wildlife volunteer tourism organisations in South Africa can have essential scientific and educational contributions. This is done through creation of partnership and generating new knowledge. As well as educating students at schools, the general public through a variety of platforms, and the volunteers by including them in a variety of project activities. However, wildlife volunteer tourism organisations in South Africa are challenged with obtaining the necessary funding. It is therefore essential that WVT organisations continue to incorporate science into their projects, and collaborate with organisations and institutions from across the globe. This will ensure that they recruit appropriate human resources to assist with research where funding is not available, and continue to enhance their knowledge. WVT can also continue to educate people in schools, general public and the volunteers. This will raise awareness, increase the knowledge and skills of people, and potentially enhance the preservation of wildlife. WVT organisations should be honest and transparent about their funds, and ensure that the volunteers are satisfied. This will motivate more volunteers to donate funding, return and volunteer again, spread positive word of mouth, and encourage others to volunteer. These aspects can potentially result in increased funding for the WVT organisations, which can lead to the sustainable development of WVT in South Africa.

![Figure 1: Contributions of wildlife volunteer tourism in South Africa](image)

6. Conclusions

This study investigated the scientific and educational contributions of WVT organisations in South Africa. From the results it can be seen that WVT organisations can make significant scientific and educational contributions, but funding is a major challenge. Science, collaboration, education, transparency and satisfaction are ways to overcome the funding challenge. The results can be used by academics and practitioners to improve the WVT projects, and ensure that there is an increase in scientific and educational contributions. Additional research on WVT can increase the knowledge of WVT and the contributions that it makes. The following contributions are made by this study. This study fills the gap in literature with identifying and discussing the scientific and educational contributions that WVT organisations in South Africa are making. The study includes opinions from WVT organisation managers at different WVT organisations in South Africa. Essential recommendations are made for management and future research regarding the sustainable development of WVT. The following limitations were faced during the research. Although data saturation was achieved, data were only collected from seven WVT organisations. Additional data may have strengthened the data collected. The researchers were only able to collect data through Microsoft Teams and not face to face. Face to face data collection could have
enhanced the quality of the data. The subjectivity of the researchers may have affected the way that the final data were analysed and interpreted.

References


