

SPOT SURVEY: insights into medical students' perspectives on the use of wildlife products in traditional medicine in Viet Nam

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INTRODUCTION

Viet Nam has a long history of using wildlife products as ingredients in traditional medicine (TM) to treat illnesses and improve general health (Nguyen and Nguyen, 2008), with a record of such use dating back to the 14th century (Ministry of Health (2017); Nguyen and Nguyen, 2008). TM continues to play a key role in Vietnamese society and is sometimes used as primary treatment, especially in rural areas of the country where there is a lack of affordable Western medicine available. However, more generally, and especially in urban regions, TM is seen as being important to support well-being and general health, and the perceived benefits of the traditional wild animal-derived medicine and tonics are deeply rooted in Vietnamese society (Drury, 2011).

Viet Nam's efforts to curb illegal wildlife trade are compromised by lack of effective law enforcement to deter illegal practices and the embedded societal norms around the use and consumption of threatened fauna species. The enactment of a revised Penal Code in 2018, with increased fines and punishment for the illegal trade and/or possession of threatened wildlife species products, has provided Viet Nam with a regulatory framework to tackle the illegal practices of use and consumption of threatened fauna species.

The use of threatened species products in TM practice, such as pangolin scales, bear bile and rhino horn, and other threatened and/or illegal species products, is found to be increasing with rising urban wealth (Drury, 2011). In Ha Noi and Ho Chi Minh City, TM practitioners are trusted sources of information regarding the ingredients considered to be the most suitable—whether legal or illegal—to promote wellness and treat illness (IPSOS, 2013). There is evidence that TM practitioners play a significant role in the promotion of the purchase and consumption of threatened and/or illegal wildlife products. For example, the latest edition of the national pharmacopoeia published by the Vietnamese Ministry of Health (Ministry of Health, 2017), includes references to several wildlife products in TM including the use of pangolin scales, antler glue and seahorses (Ministry of Health, 2017). Further, TM practitioners are openly advertising illegal wildlife products and their perceived benefits, as was found in the case of bear bile (Willcox *et al.*, 2016). A recent survey into rhino horn use in TM has revealed a consistent interaction of the TM sector in accessing and providing rhino horn to patients and customers (MacMillan *et al.*, 2017).

In order to tackle the supply of and demand for illegal wildlife products in TM practices in Viet Nam, it is critical that the role and the perspective of the TM practitioners in prescribing and offering these kinds of

products to patients is better understood. Through this understanding it becomes possible to develop demand reduction programmes to influence and change the practices of TM professionals towards a zero-tolerance of the use of threatened and/or illegal species products. The development and delivery of these types of targeted behaviour change interventions need to be informed by the knowledge, attitudes and practices (KAP) of the audience involved (TRAFFIC, 2017).

This survey was part of a project funded by WWF-Germany that aimed to reduce the desire and practice of using wildlife products in TM from threatened and/or illegal species, and had a specific focus on impacting young and upcoming professionals in Viet Nam. An online survey was completed by 1,050 students at three medicine universities in Viet Nam. The specific objectives of the survey were to identify the knowledge, attitudes and practices of the medical students towards the use of threatened and/or illegal wildlife species in TM in order to inform the development and delivery of a behaviour change campaign for TM students, in partnership with the National Centre for Health Education and Communication of the Ministry of Health. The survey was also used as a baseline to evaluate the impact of the demand reduction campaign after its delivery. This paper outlines the key findings of the survey and provides recommendations for a Social and Behavioural Change Communications initiative that will change the knowledge, attitudes and practices of those studying to become TM practitioners and lead to a zero-tolerance of the use of threatened species.

METHODOLOGY

The study took place between 1 and 20 December 2017. A total of 1,055 students at two medical universities in Ha Noi and one medical university in Ho Chi Minh City took part. The universities were selected based on their size, regional representation and willingness to take part in the research; both traditional and western medicine practices are taught at medical universities in Viet Nam. Three research co-ordinators (one at each university) were recruited and trained to select the students as well as to ensure the questionnaire was completed. The survey was introduced by the co-ordinator and the link to the online questionnaire was sent to the selected participant. The students used computers or smartphones with internet access to visit the link and fill in the questionnaire. Once the survey reached the desired number of respondents, the link was automatically disabled. Each student who took part in the survey received a mobile phone top-up card to the value of VND50,000 (about USD2) as a token reward for their time and effort.

A structured questionnaire was developed consisting of 34 predominantly scaled and multiple-choice

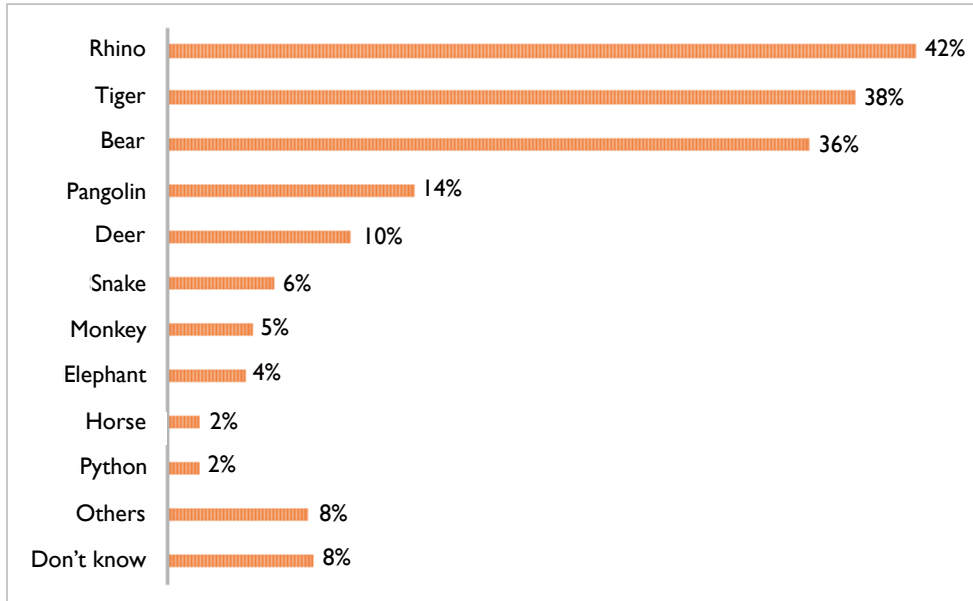


Fig. 1. Results from the question: “What do you think are the most commonly used fauna products in TM?” (n=979. Students could tick one or more species).

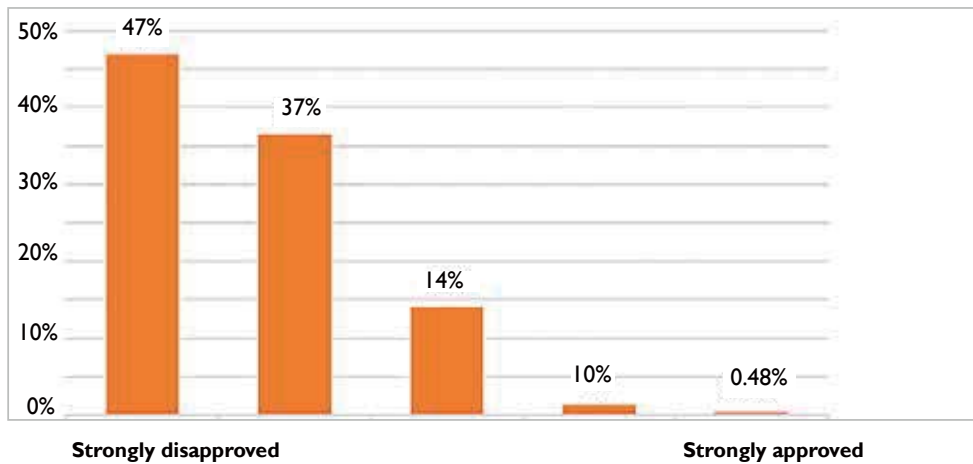


Fig. 2. Responses to the question: “Do you agree with the use of products made from threatened wildlife in TM?” (n=1,047)

Fig. 3. Results of the scenarios (n=1,055)

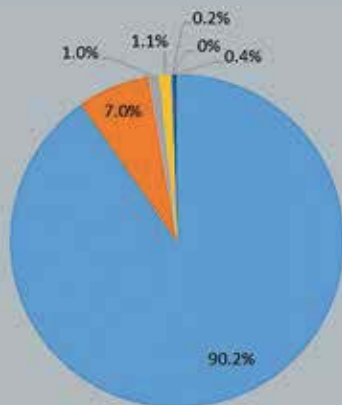


Fig. 3a. No. indicating whether they would use threatened fauna products if they know they could be fined.

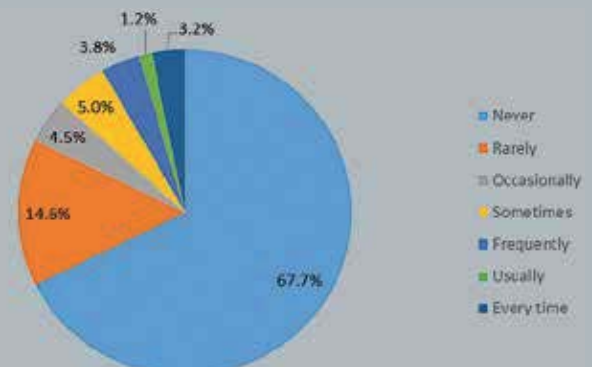


Fig. 3b. No. prepared to use threatened fauna products when patients are family members or friends.

questions in the Vietnamese language, with open-ended options to allow for further exploration of unaddressed dimensions of the question’s theme. The questionnaire included socio-economic questions, and questions on the knowledge around TM practices, on what kind of lectures the students were receiving, and the perceived reputation and status of the TM practices and practitioners in Viet Nam. The questionnaire was developed to elicit unbiased and honest responses from the participants. The word “threatened” was used, without reference to the illegality or the protection of the species by law; the illegality of the use of threatened fauna products for TM was not introduced until the end of the questionnaire.

The online survey software Survey Monkey was used as the questionnaire platform as a cost-effective approach to achieve a large sample size. Moreover, online surveys were generally perceived as more impersonal and anonymous (Blumberg, Cooper and Schindler, 2014), thus allowing for collected responses to reflect better the participants’ opinions. Additionally, Survey Monkey offered a number of innovative features which streamlined the survey management process and improved data quality, including:

- monitoring the flow and length of the questionnaire to ensure that respondents strictly follow the survey procedures;
- requiring participants to answer all the questions;
- allowing one questionnaire response only per electronic device, thus reducing the possibility of one person providing multiple responses;
- flexibility for the participants to take part in the survey at a time convenient within a set deadline.

Throughout the data-collection period, continuous reviews were conducted on submitted responses to ensure that the sample was robust. The sample was assessed against criteria including whether the respondents were on the list of participating TM students and whether their personal details, such as student IDs and date of birth, matched the information provided. Where necessary, a cross-check with the research co-ordinator was made to ensure all valid responses were accounted for.

In total, 1,055 valid survey responses were collected. However, some of these contained answers that were either incomplete or found as outliers (e.g. students had misunderstood the question, based on the answers provided in the open-ended part of the questions). These specific outliers were removed from the analysis for those particular questions, resulting in a reduction in sample size for some of the analysis. The number of responses used in the analysis is identified by “n” for each question.

RESULTS

In this paper a summary of key results of the surveys provide self-reported insights into the knowledge, attitude and practices of the medical students in regards to the use of fauna species products in Ha Noi and Ho Chi Minh City.

Survey results show that rhinos or rhino parts were the most commonly identified fauna products amongst the students for use in TM, accounting for 42% of the valid responses (n=979) (Fig. 1), closely followed by tiger (38%) and bear (36%) products. Other identified species were pangolin, deer, horse and snake. Eight percent of the students could not recall any fauna products used in TM.

More than three quarters of the students were opposed to the use of threatened fauna species products for TM, with 47% reporting that they strongly disapproved and 37% stating that they disagreed with this practice. Fourteen percent of the students were indifferent to the practice of using protected species products and a total of 20 students expressed their approval of the practice, with 15 students agreeing and five students strongly agreeing to such practices (Fig. 2).

To generate insights into the perspectives of the students for future practices of the use of threatened fauna species, different scenarios were presented. When it was pointed out that there were laws and regulations against the use of threatened species in TM (Fig. 3a), 90% of the students (n=1,055) responded that they would never prescribe or recommend using fauna products. However, when the scenario involved family and friends, this number reduced to 68% (Fig. 3b). Thus, more students

Fig. 3 ctd. Results of the scenarios (n=1,055)

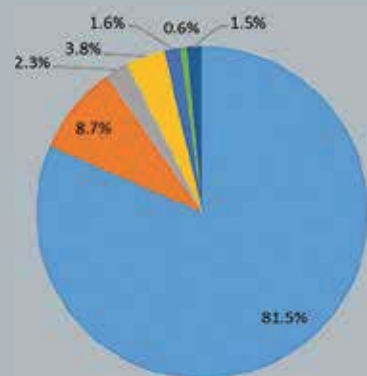


Fig. 3c. No. who would consider using threatened fauna products unprompted by customers.

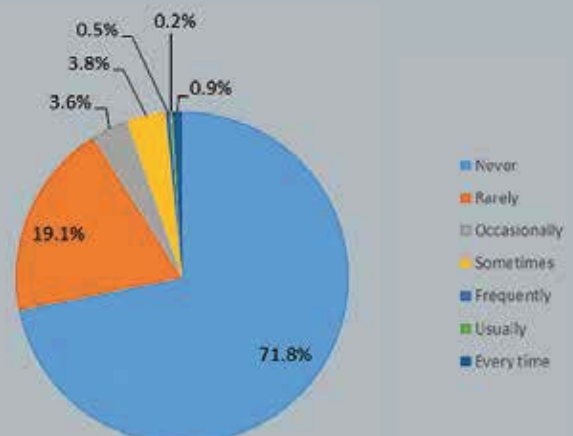


Fig. 3d. No. who would consider using threatened fauna products when customers ask for such products.



A pharmacist with traditional Vietnamese medicine.

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would prescribe or recommend threatened fauna products when it concerned their family and friends.

It was found that 18.5% of the students would consider (rarely, to every time) prescribing threatened wildlife products unprompted by customers or patients (Fig. 3c). This number increased to 28% (rarely, to every time) if customers or patients were to ask the TM practitioner for wildlife products or for their opinion of the benefits of these products (Fig. 3d).

Of the 20 students who endorsed the use of threatened wildlife species for TM, the majority (55%) believed in the perceived effectiveness of these products. Thirty-five percent of this group stated that the effectiveness of these products was well-known and 15% reported that they just followed the advice of other TM practitioners (Fig. 4).

Out of the students who were against the use of threatened wildlife products in TM (n=877), 67% responded that this position was driven by the illegality of the practice. Other reasons also included the unsustainability of the practice (40%), the ineffectiveness of these products in treating patients (31%), and the expense of the wildlife products (13%). Other reasons not to recommend or prescribe wildlife products included the difficulty in obtaining wildlife products (7%), altruism and kindness to the animals (5%), and the availability of alternative treatments both for TM and Western medicine (3%). Interestingly only 3% quoted the lack of scientific evidence on the effectiveness of the wildlife products. In China and Viet Nam the uninformed application of medicine and/or its use not being informed by scientific evidence has been found to be commonplace, even in Western medicine (Mao *et al.*, 2015).

Survey questions were also directed at understanding what content the students received as part of their course. Students were more likely to receive classes on pollution (84%), resource depletion (69%) and environmental health (69%), subjects that do not directly address the use of threatened and/or illegal wildlife products in TM. Only 35% of surveyed students received some content on environmental laws and regulations during their studies.

With respect to the reputation of TM's practitioners, 93% of all medical students recognised the importance of protecting TM practitioners' reputations. Thirty-two per cent of the students considered it "extremely important", 38% regarded it as "very important" and 22% ranked it as "moderately important" (Fig. 5).

When asked about their willingness to take part in wildlife conservation programmes, 57% of the students who disagreed with the use of threatened wildlife products in TM (n=877) showed a high level of willingness to participate in such campaigns ("will participate usually, frequently or every time"). Thirty-eight percent of students in this group responded to such programmes with a medium level of willingness ("will participate occasionally or sometimes"). Five percent of these students were not willing (rarely or never) to participate in such activities. However, in the group of students who supported the use of threatened wildlife products in TM (n=20), the low level of willingness to participate increased to 25% (Fig. 6).

CONCLUSIONS

This research confirms that the use of threatened and/or illegal fauna products is embedded in TM practices and has generated some insight into the knowledge, attitudes and practices of the young and future TM practitioners in Ha Noi and Ho Chi Minh City.

It was found that the main motivations behind the potential deterrent of the use of threatened species were their illegality and the unsustainability of their use. This indicates that future TM practitioners are deterred by the risk of being penalised and therefore improved training on environmental and criminal regulations may prevent TM practitioners from supporting the use of protected wildlife species. Although most of the medical students surveyed reported that they were against the use of protected wildlife species for TM, they can be influenced by friends and family members to prescribe protected wildlife products. The data suggest that maintaining positive relationships with friends and family in

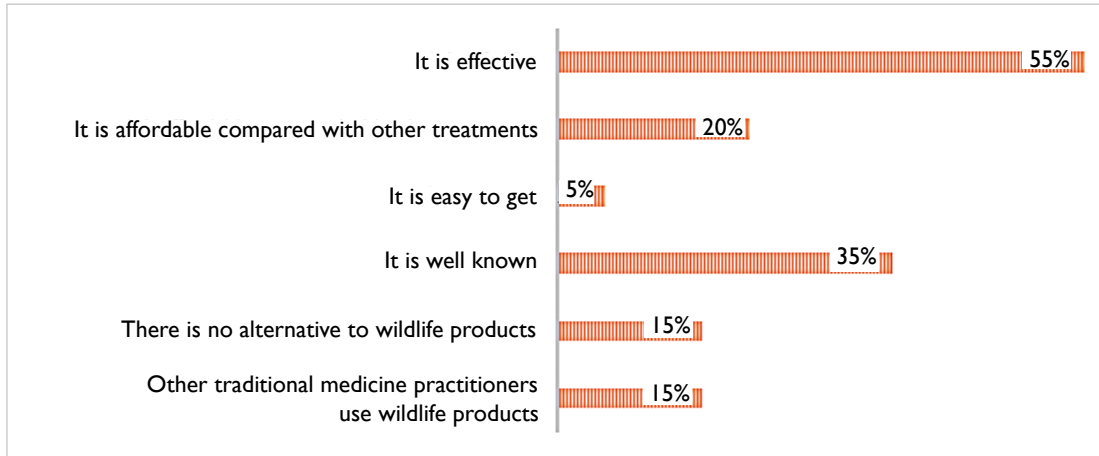


Fig. 4. The reasons to recommend the use of protected wildlife products (n=20).

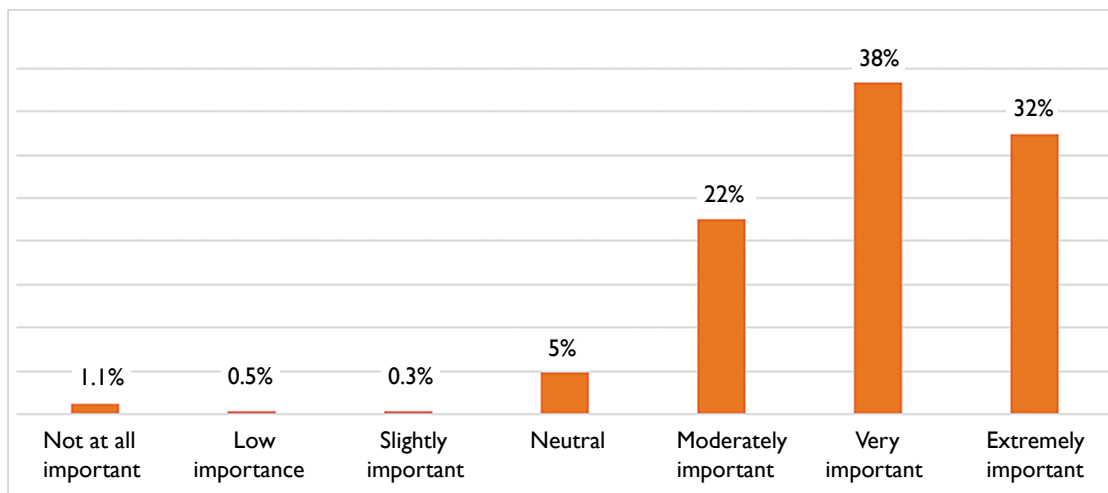


Fig. 5. Results of the question “how important is it to protect the reputation of TM practitioners?” (n=1,055).

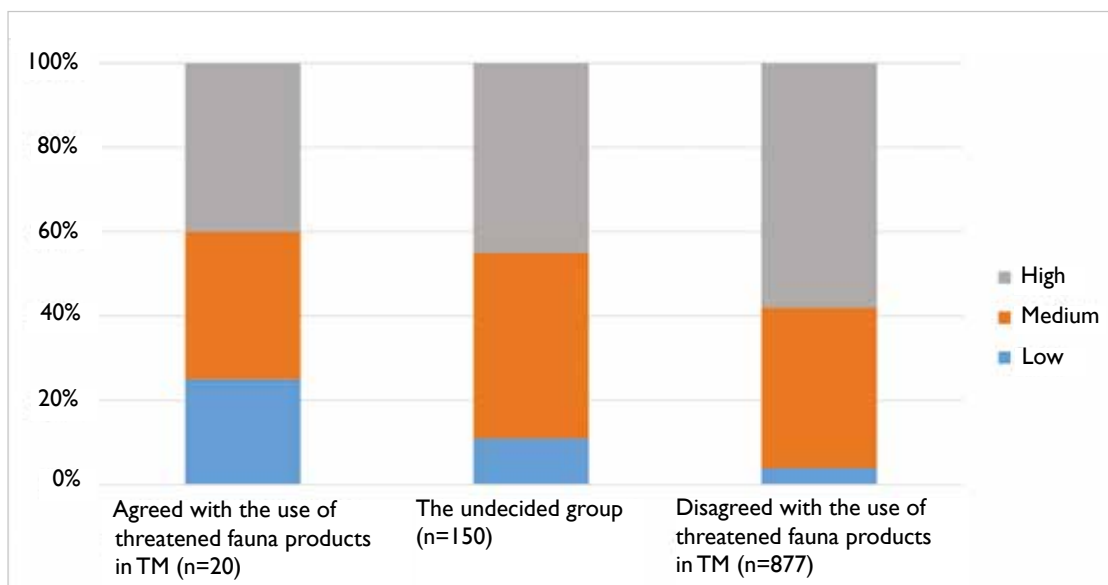


Fig. 6. Willingness to participate in a wildlife conservation programme organised by university (n=1,047).

Vietnamese culture overrules the risk of breaking the law and of illegally prescribing fauna products to family and friends, as well as to customers and patients asking for products.

Even though the size of the survey sample was small, the results seem to suggest that the students' support of the use of wildlife products in TM was largely based on knowledge of the products' perceived benefits that had been gained from more senior TM practitioners rather than based on any scientific evidence. Behaviour change efforts should include the undecided group (about 10% of the sample size for this survey) as they do not have a clear perspective on the use of wildlife products for TM.

While the results demonstrate that criminal activity and punishment can act as deterrents for TM practitioners to prescribing and recommending protected wildlife products, the relevant regulations and laws are not subjects covered in the TM curriculum. The survey findings suggest that increased and improved education on laws and regulations is critical if the use of wildlife products in TM is to be reduced.

Overall, a change in social norms is required to make it unacceptable to consume threatened and/or illegal wildlife products as TM. The importance and further enhancement of the reputation of TM practices and its practitioners could be highlighted if this behaviour is to shift. This survey has identified that TM students do and would like to participate in conservation programmes; this presents environmental organisations with an opportunity to target behaviour change campaigns that will lead to a zero-tolerance of wildlife products used in TM.

RECOMMENDATIONS

This research provides insights into the perceptions of medical students of the use of threatened and/or illegal wildlife products in TM and identifies the importance and opportunities for shifting social norms around such use. Targeted behaviour change campaigns in Viet Nam have been demonstrated to be able to deliver a reduction in desire to consume wildlife products, such as rhino horn (TRAFFIC, 2017).

It is recommended that a behaviour change initiative is focused around enhancing the reputation of TM practitioners as champions for sustainability and protection of natural resources, including wildlife. Furthermore, it is critical that universities include content on the environmental laws and regulations, as the risk of fines and punishment was identified to be a deterrent for the students. The authors therefore encourage engagement by NGOs and other relevant organisations with the Ministries of Health and Education to integrate into the curricula subjects and content regarding environmental laws and regulations as well as on biodiversity conservation.

Using online surveys is an effective and affordable way to develop an understanding of the knowledge,

attitudes and practices of a target audience and to create a baseline. The survey can easily be repeated during and/or at the end of the behaviour change intervention to evaluate its impact and importance, to carry out further adjustments and to identify whether the campaign has had the desired effect.

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