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Pooja Arora
Student, M.Sc. (Food and
Nutrition), Bhagat Phool Singh
Mahila Vishwavidyalaya,
Haryana, India

Preeti Dhankhar
Assistant Professor, Bhagat
Phool Singh Mahila
Vishwavidyalaya, Haryana,
India

A study on giloy herb as an immunity booster during pandemic COVID'19

Pooja Arora and Preeti Dhankhar

Abstract

With the evolution of world, humans are also evolving both physically and mentally. Innovation, growth, development has no doubt changed the way we live. With so many changes around us human body is also adapting this rapid development. This transformation into unhealthy lifestyle, junk eating, hectic work life balance, the nutritional value of human body requires changes and modifications. Immunity in humans plays an important role to defend them in this ever changing scenario. The main purpose of immune system is to protect the body from viruses and bacteria. Without it, they would have a free reign and the person would be constantly falling ill. Immune system works by recognising the difference between body's cell and alien cells, allowing it to destroy any that could occurrence be potentially harmful. A properly functioning immune system helps us go about daily life as we came into contact with germs and bugs from pet, other people and our environment. Without a healthy immune system, the person could pick up infections and infectious disease more easily, and the effects could be serious even fatal. Occurrence of unfortunate COVID'19 has increased awareness in sanitary habits and hygiene habits and perceptions. In this immunity is our sword to fight this pandemic. History of India provides with many herbs natural supplements, medicinal plants like aloe vera, giloy, tulsi, Ashwagandha etc. In this research paper we will see how giloy can fight corona virus by boosting immunity.

Keywords: giloy herb, immunity booster, COVID'19

Introduction

Tinospora cordifolia, which is commonly known as Giloe, is an Ayurvedic herb. It is also called AMRITA in Sanskrit which means "the rohit of immortality". It is a part of Indian medicine from a very long time. Its abundant medicinal Properties have time and proved that Giloe is one of the most effective natural medicines. It can be consumed either in powder form or after boiling and making a soup. Giloe juice can also be prepared through it. It is a large, deciduous, extensively spreading climbing shrub with several elongated twinning branch.

A variety of active compounds (htt1) (Natural phytochemicals in ashwagandha, giloy, tulsi can fight COVID-19: Patanjali, 2020) derived from the plant like alkaloids, steroids, diterprenoid lactones, aliphatic and glycosides have been isolated from different parts of the plant body like root, stem and whole plant.

It also has various medicinal Properties like Anti- diabetic, Anti- oxidant, Anti- allergic, Anti-stress, Immunomodulatory etc. To prevent our body from various kinds of diseases that occur through various viruses and infection, a healthy immune system is required. Because Immunity is the balanced state of organism having adequate biological defenses to fight infection, disease or other unwanted biological invasion. The immune system attacks germs and helps keep us healthy. The person with weak immunity consistently fall ill. He will not able to fight with germs, bacteria and viruses. The immune system produces an antibody to kill pathogen. So, a strong immune system can also protect us from COVID - 19. Many people, had some kind of diseases or low immune system died because of corona virus. Giloe can act as a magical herb in this pandemic to fight against this deadly novel corona virus by boosting immunity. The Properties of Giloe help in strengthen our immune system by consuming it in various ways like Giloe juice, Giloy tablets, Giloy powder etc.

Literature review

(Kumari & Kapoor, 2013) [4]. The objective of this research is to evaluate the acceptability

Corresponding Author:

Pooja Arora
Student, M.Sc. (Food and
Nutrition), Bhagat Phool Singh
Mahila Vishwavidyalaya,
Haryana, India

potential of value added energy dense indigenous products. Giloe extract was added to Laddu and Mathri at different level to improve the Nutritional status of society. Stem of Giloe was used to get its white powder which contain several bioactive components responsible for pharmacodynamic Properties. That powder was incorporated at the level of 1%, 2%, 3% and 4%. There is no significance difference in the bitterness or sweetness among all levels of incorporation in laddu while in case of Mathri the sample having 4% of Giloe extract was bitter than the rest.

(SOOD, 2016) [13]. In this research a natural health drink with the help of adding Giloe in it with some other herbal species like Tulsi and Ginger because now people are more conscious about their health and Nutritional status, so they avoid other chemical based soft drinks which provide only empty calories. Quality and storage stability was also assessed by various parameters so that these beverages can assess for consumer's acceptability. For this experiment, stems of the Giloe procured from the local village and juice was extracted from it.

The raw as well as prepared sample were evaluated. This evaluation was done by various standard techniques. As per their research it has been concluded that Giloe which is used for preparation of medicines can also be used for the preparation of products that are ready to eat and healthy too.

(Rani, Bhati, Abid, Punar, & Maheshwari, 2017) [7]. The objectives of this research is to aware the people about the diverse Properties and uses of Giloe and in how many ways we can get its benefits like we can prevent body against infection by boosting immunity by consuming Giloe because it is the powerhouse of the oxidants and it can be also used to treat many psychological disorders, swine flu, fever due to infections, diabetes, leucorrhoea, to purify blood, to treat high/low Blood pressure, Bowel problem, Rheumatic pain etc.

(Sagar & Ghosh) [9]. The objective of this review is to encompass the genetic diversity of the plant and active components isolated from the plant and the biological roles in disease targeting. The researchers were taken published literature or recent developments in research in *Tinospora cordifolia* including original articles into study for this paper. All the reports of experiments on different model types were taken varying from animal and human model systems to analyze the data. That data represented in the form of figures and tables for this review.

As per their research it has been concluded that *Tinospora cordifolia* is a plant with diverse roles. It is a versatile resource for all forms of life. This study further need to be concluded with aspects how the active compounds interact with living. The future scope of the review remains in exploiting the biochemical and signalling pathways of active components of *Tinospora cordifolia*, thus enabling effective disease targeting as it truly acts as an incredible source with so many offers to the scientific world of medicines.

(Sarangi, 2015) [11]. This review article contains information on cultivation, harvesting, chemical constituents of *Tinospora cordifolia* and therapeutic benefits of the plant like Anti-ulcer, Anti-diabetic, Anti-inflammatory, Anti-Cancer, Anti-AIDS and Anti-allergic activities as *Tinospora cordifolia* is one of the important common herb which is used as an ingredient in various Folk, Ayurvedic, Unani and siddha system of medicines. Due to the various Properties of *Tinospora cordifolia*, it is called as magic herb. As per their research it has been concluded that Giloe is really a miraculous herb which can be used in each and every ailment. But it is not approved as herbal treatment like as well as other medication and not approved by federal drug Administration.

A further study is required along with the clinical trials to proof the benefits of this herb because some side effects like constipation can be seen in many cases.

(Reddy, Nageshwar, Bharathi, & Venkattapa, 2018) [8]. In this study, researchers present botanical description, medicinal Properties and pharmaceuticals importance of *Tinospora cordifolia*. They have found that *Tinospora cordifolia* is a medicinal plant having many Properties like Immunomodulatory Properties and medicinal Properties. They also gave the botanical description of *Tinospora cordifolia*. Its common name, Taxonomic classifications, Distributions, Growth requirements are also given in the paper. They have tried to analyze the medicinal application of *Tinospora cordifolia* because of its biological activities like Immunomodulatory, Anti-inflammatory, Anti-oxidant, Anti-diabetic, Anti-periodic, Anti-spasmodic, Anti-malarial, Anti-neoplastic activities, hepatoprotective, Anti-arthritis activity and various medicinal Properties. *Tinospora cordifolia* use in various ailments fevers, Asthma, Diabetes, Dyspepsia, Jaundice, Urinary problems, Skin diseases, chronic diarrhoea and dysentery. It also plays a key role in the treatment of heart diseases, leprosy, Helminthiasis and Rheumatoid arthritis. And as per these, it has been concluded that *Tinospora cordifolia* for its vast biodiversity and traditional medicinal Properties, provide a new sight of challenging Research to isolate pharmacologically active and Therapeutic components form the plant.

Objectives of the study

- To find out how giloy act as an immunity booster
- To study on how people of different age groups use giloy in different ways during pandemic
- To know the awareness level of people about giloy
- To find out what measures people are taking to build up their immunity

Research methodology

Data collection

A questionnaire was prepared having 15 questions about giloy. This questionnaire was sent to 118 respondents through online mode. After analysing the responses following analysis have been made.

Research design

The study has critically analysed the results and outcomes of the responses received and generated deep insights of how actually people are concerned about their immunity as well as discussing the magical benefits of giloy in a detailed manner.

Results and Outcomes

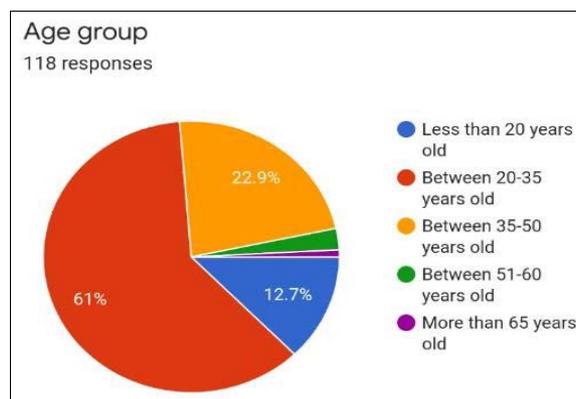


Fig 1: Age group

Age group and gender

Most of the respondents in our survey belong to the age group between 20 - 35 years old in which 55.9% are females and 44.1% are males. 22.9% respondents are belongs to the age group between 35-50 years old while 12.7% respondents are belongs to age group which is less than 20 years old. Other 3.5% respondents are more than 65 years old.

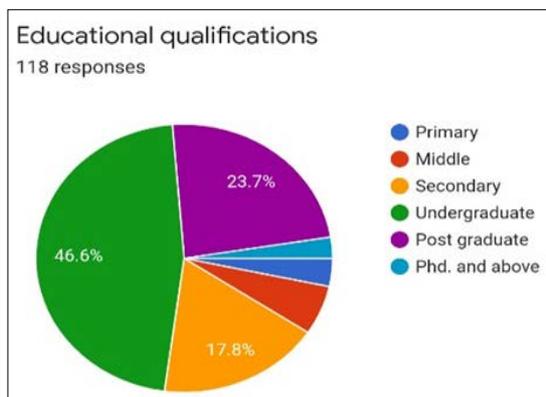


Fig 2: Educational qualifications

Educational qualifications

All the respondents have good educational qualifications. 46.6% respondents are undergraduate while 23.7% are Postgraduates and 17.8% respondents have completed their secondary education.

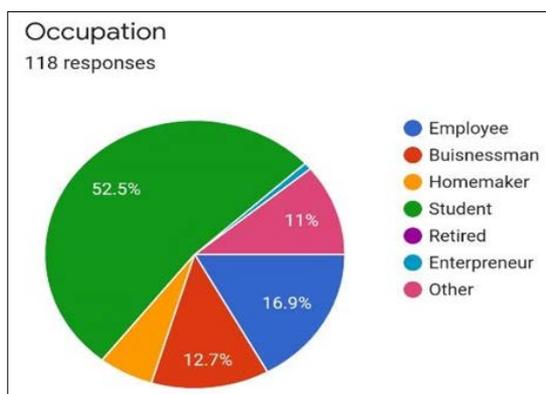


Fig 3: Occupation

Occupation

Most of the respondents are students and others have good source of income in which 54.2% people lives in a joint family and 45.8% lives in nuclear family.

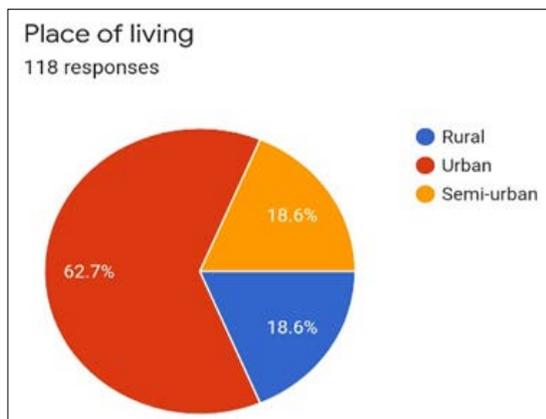


Fig 4: Place of living

Place of living

Most of the respondents live in urban area i.e. 62.7% and 37.2% lives in rural and semi-urban areas.

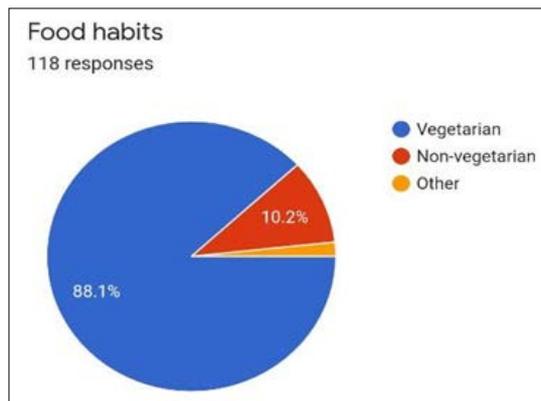


Fig 5: Food habits

Food habits

Out of all the respondents, 88.1% respondents are vegetarian and left are Non-vegetarian and others.

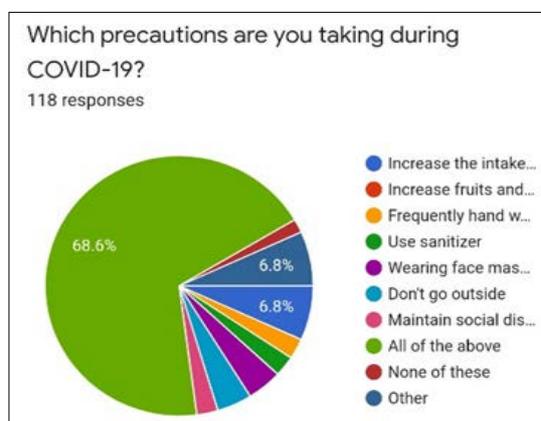


Fig 6: Which precautions are you taking during COVID-19?

Which precautions are you taking during COVID-19?

Approximately half of the respondents have increase the use of sanitizers while few people have increases the use of immunity boosting food items and others precautions.

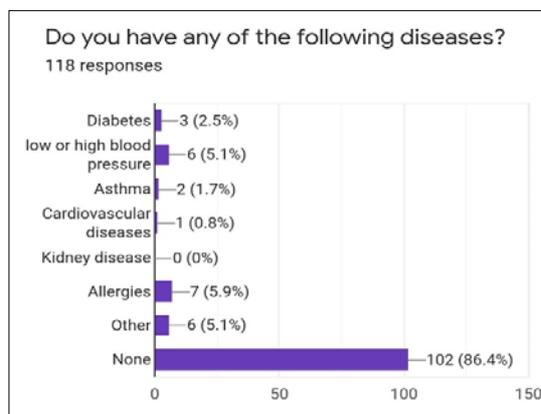


Fig 7: Do you have any of the following diseases?

Do you have any disease?

86.5% of people are free from any disease while some have the problem of high/low BP, Diabetes, Asthma, Cardiovascular disease and allergies.

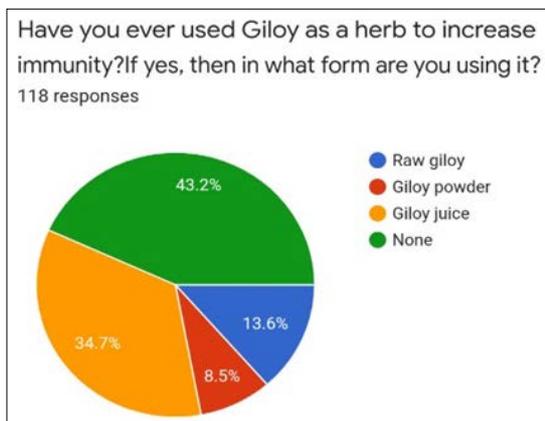


Fig 8: Have you ever used giloy as a herb to increase immunity? If yes, then in what form are you using it?

Have you ever used giloy as a herb to increases immunity? If yes, than in what form are you using it?

Among All the respondents 34.7% of people used Giloy in the form of Giloy juice and other few people are using it in some other forms like Giloy powder, Raw Giloy etc.

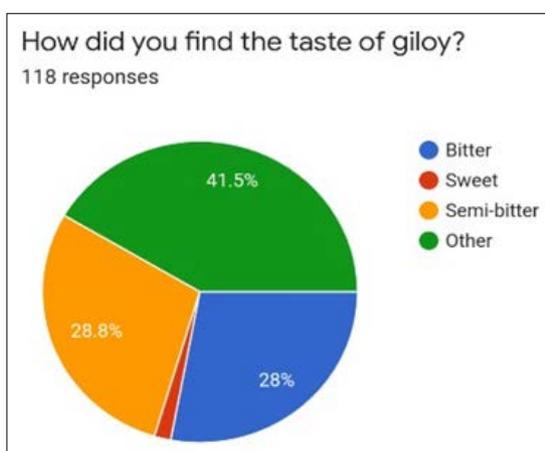


Fig 9: How did you find the taste of giloy?

How did you find the taste of giloe?

Most of the people found Giloe Semi - bitter in taste while 28% found it bitter in taste.

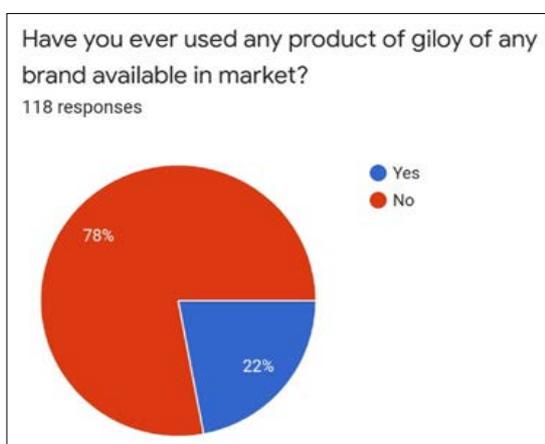


Fig 10: Have you ever used any product of giloy of any brand available in market?

Have you ever used any product of giloy of any brand available in market?

Only 25% nearly people say that they are using product made

from Giloy but by purchasing it from market and this shows that most of the people depends on the natural Giloy plant available to them and consume it naturally rather than purchasing it from market as may be because of their confidence in that product that in market it may be not as much worth it to use the packed Giloy in any form available rather than the natural giloy.

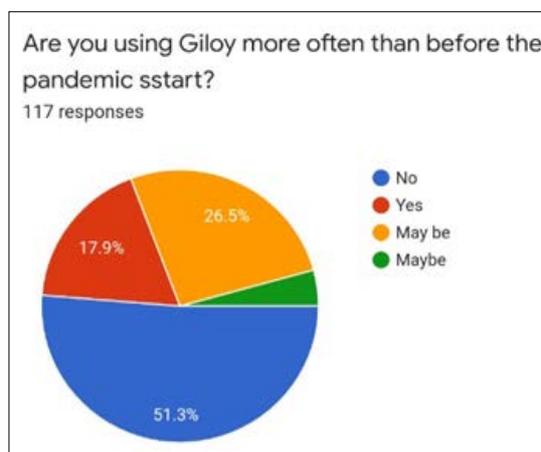


Fig 11: Are you using giloy more often before the occurrence of pandemic start?

Are you using giloy more often before the occurrence of pandemic start?

Half of the respondents are not using Giloe even after the pandemic as they are unaware of the benefits of Giloe. only few percent people are using Giloe to increases their immunity.

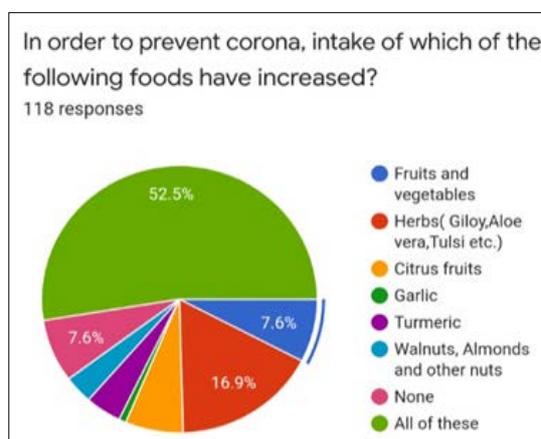


Fig 12: In order to prevent corona, use of which of the food items has increased?

In order to prevent corona, use of which of the food items has increased?

Approximately half of the total respondents agreed that they have increase the intake of garlic into the food routines to increase the immunity levels in the body. This indicates that garlic has been the most popular and influential food item among people as compared to other things.

Have you find any kind of benefits in your body after using Giloe or Giloe based products?

Only 17% people were using Giloe as an immunity booster before the Pandemic start but now after pandemic 37.3% people are using it and found its benefits in their body and 44.9% people think that it can surely be used as an immunity booster.

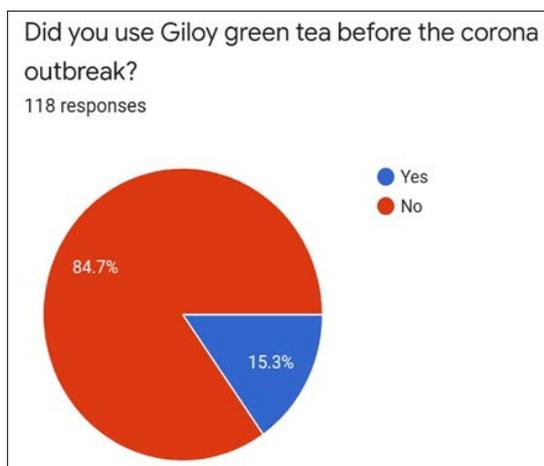


Fig 13: Did you use green tea before the occurrence of pandemic? Or are you using it after pandemic?

Did you use green tea before the occurrence of pandemic? Or are you using it after pandemic?

As per the survey responses we can say that almost the same proportion of people said no that they are not using green tea after the occurrence of pandemic and inference that Giloy green tea is not a much popular product and people are least aware about this even after the occurrence of the Global pandemic and they are depending more on the basics naturals available to them like garlic fruit juice and the natural Giloy more than the Giloy Green tea available in the market.

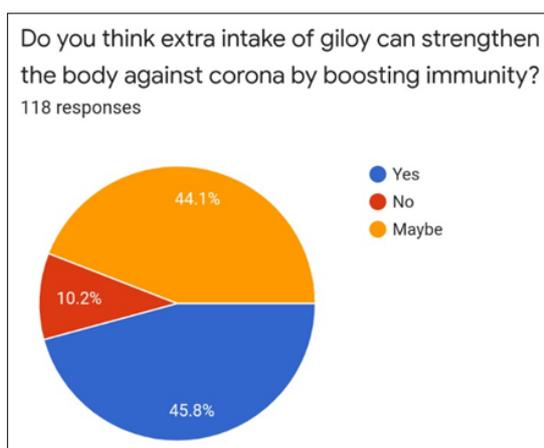


Fig 14: Do you think extra intake of giloe can strengthen the body to fight against bacteria and viruses?

Do you think extra intake of giloe can strengthen the body to fight against bacteria and viruses?

Almost half of the respondents agreed that Giloy can be very useful to strengthen our body to boost immunity.

Did you find any side effects of Giloe after using it?

Almost 99% people didn't see any kind of side effects in their body due to giloe.

Analysis

As per the survey results it can be analysed that few people are aware about the Giloe. Some of the people don't even know that we can also prepare some products naturally at home like we can prepare powder form it's stem and can be added to some energy dense products by Giloy which can be useful in boosting immunity to protect ourselves from various kinds of bacteria and viruses.

Results showed that even after pandemic, few people are

using Giloe due to lack of knowledge regarding the benefits of Giloe that can be act as a magic herb for boosting immunity. The best thing about using is that it doesn't have any side effects on body except some special conditions like pregnancy, Lactation etc. In which conditions like constipation can be seen often. Some people who are using Giloe, they are using it in the form of juice only. Hence there is a need to aware that we can use giloy in various forms. It can also be analysed with the help or results that Giloe have many benefits because it is a natural herb and name of this herb is very popular in our Ancient Vedic system of education. As this herb is linked with our Ancient Vedic education and people are still using it and get its benefits without any serious side effects.

Conclusion

The overall conclusion of the study can be explained as an awareness of a large amount of people of availability of Giloy and health benefits of Giloy and how it act as immunity booster and there is an urgent need to make people aware about these things so that we can find the pandemic in a much better way. There are some proportions of people who are actively using but unaware about benefits and these products but they are very less in number in comparison of the total population. Still there is a lot of scope to educate people more about immunity boosting and various other natural things like Giloy, aloe vera and the society needs to explore a lot more as we are in a country where natural products or Ayurveda products has a lot glorious history. In ancient time our Rishi Munis also gave a lot more importance to this magical herb. Around us we have a lot of herbs, plants, even in a kitchen spices and various other things which can really help us built in strong immunity. The only need of the hour is to make people aware as much as possible by various initiatives and campaigns.

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