



BIRMINGHAM COUNTY FOOTBALL ASSOCIATION CASE STUDY

September 2023



EXECUTIVE SUMMARY

This report assesses the impact of Pledgeball on the Birmingham County Football Association (BCFA), its member clubs, and fans. It employs the Triple Bottom Line framework, which measures economic, social, and environmental impacts and explores their interconnectedness.

METHODOLOGY

We developed a mixed methods approach, encompassing quantitative and qualitative data acquisition, to evaluate the influence of pledging on fans' environmental, social and consumer behaviors, their perceptions, and engagement regarding sustainability issues and climate change. Specifically, data were collected through an online fan survey resulting in 149 responses, three semi-structured interviews were conducted, and further quantitative data were utilized from Pledgeball's website including number of pledgers, pledges and kg of CO₂e emissions. Those data were analysed by developing a 2-stage Structural Equation Model (SEM) combined with manual thematic analysis for the interviews.





KEY FINDINGS

- 1,094 pledgers have collectively made 32,140 pledges, resulting in 6,128 tons of CO₂e emissions.
- Almost 70% of the respondents believe that climate action is important for everyone to contribute to, including themselves. On the contrary, only 18% feel connected to climate action and environmental sustainability efforts.
- Among the 30% of fans who have embraced Pledgeball, we observe a remarkable level of dedication and loyalty to their respective clubs.
- Fans are more likely to adjust their daily consumption habits in response to their club's involvement in Pledgeball, such as purchasing biodegradable products and improving home insulation, than making high-involvement consumption decisions.
- However, less than 20% show a stronger engagement in climate change and sustainability.

CONCLUSION

In conclusion, this report identifies the extent of Pledgeball's influence on BCFA and its member clubs to date. Fans are more likely to adjust their daily consumption habits in response to their club's involvement in Pledgeball, such as purchasing biodegradable products and improving home insulation, than making high-involvement consumption decisions. Raising environmental awareness, promoting Pledgeball through various social media channels, simplifying communication, and making actions visible are some of the recommended efforts for enhancing Pledgeball's influence on BCFA.

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INTRODUCTION

Climate change is one of the most pressing issues of modern times. The sports sector is not left unaffected by the consequences of global warming and the changing climate. At the same time the sports industry also has an impact on the environment. Football is a sport supported by billions of people either playing the game or supporting it as fans or followers, thus giving the sport the power to influence the behavior of its followers towards pro environmental behaviors.

Within this context, rising environmental concerns are observed within many sports organizations and associations in the UK. In its effort to drive change among its member clubs and their fans towards more sustainable behaviors and actions, Birmingham County Football Association (BCFA) has joined forces with Pledgeball, a charity aiming to exploit the power of every individual belonging to a community to tackle climate change and drive positive change by encouraging fans to reduce their CO2 emitting activities. Pledgeball stands as a strong partner to the BCFA, as it seeks to not only enhance the quality of football in the region but also to leverage the power of the sport to drive positive environmental, social and community impact. The purpose of this impact assessment report is to evaluate the effects and outcomes of Pledgeball, shedding light on its contributions to the BCFA's mission to engage in and promote environmentally sustainable behaviors among its footballing community.



By utilizing the Triple Bottom Line Framework and combining quantitative data analysis, and stakeholder interviews, this report offers a comprehensive view of Pledgeball's influence on BCFA's members and the association's effort towards creating a low carbon and greener game.

In summary, this impact assessment report serves as a valuable tool for both Pledgeball and Birmingham FA, its stakeholders, and anyone interested in the intersection of football, community development, and social and environmental change. Through this assessment, we aim to chart a path forward for Pledgeball, ensuring that it continues to be a driving force for positive transformation within the Birmingham football community.

In the following sections, a detailed and replicable methodology will be provided, the results of a survey will be presented and discussed, and practical recommendations will be provided based on the survey's findings.



BACKGROUND

In a policy brief from January 2022, the United Nations stated that “sport is a key social platform that can reach and influence millions of people worldwide and raise awareness on climate change, promote a culture in favor of climate action, and champion sustainable behaviors”.

The above statement indicates that sports can play a significant part in tackling climate change through raising awareness and encouraging its billions of followers around the globe to engage in more sustainable behaviors. The need for raising awareness among fans has also been highlighted by scholar research. The world of football has realized that it can influence its fans, raising their level of environmental awareness and giving them incitements to adopt eco-friendly behaviors.

A study by Cayolla et al. (2022) using F.C. Porto as a case study, concluded that being aware of the sustainability initiatives carried out by professional sports organizations was crucial for their success. In another study, Casper et al. (2020) concluded the necessity for sports organizations to engage spectators in their sustainability initiatives in order to assure their awareness and participation in these efforts.

In the UK, the Football Association is committed through their sustainability strategy to increase awareness and environmental sustainability practices across football. This will be achieved by supporting County FAs through collaborations on campaign activity with regard to educating fans and raising awareness of environmental and climate change issues. BCFA is in turn committed to a long-term environmental sustainability strategy as stated in their 2021-2025 strategy with the ultimate goal to create a low carbon greener game.

Pledgeball is playing an active role in supporting English football fans to become more aware of the pressing environmental issues. By establishing the Pledgeball League, the charity has created an entertaining way to both raise awareness and motivate football fans to support their beloved teams and at the same time actively contribute to climate change mitigation.

In this context, our study assessed the impact of Pledgeball in its collaboration with Birmingham County FA. The degree of the FA's members awareness of Pledgeball and the Pledgeball League was measured along with their perceptions of their clubs' efforts and behavioral intentions with regard to environmental sustainability.

The assessment was made based on the Triple Bottom Line (TBL) framework, (Figure 1), referring to social, environmental, and economic outcomes resulting from the pro-environmental behaviors of organizations.

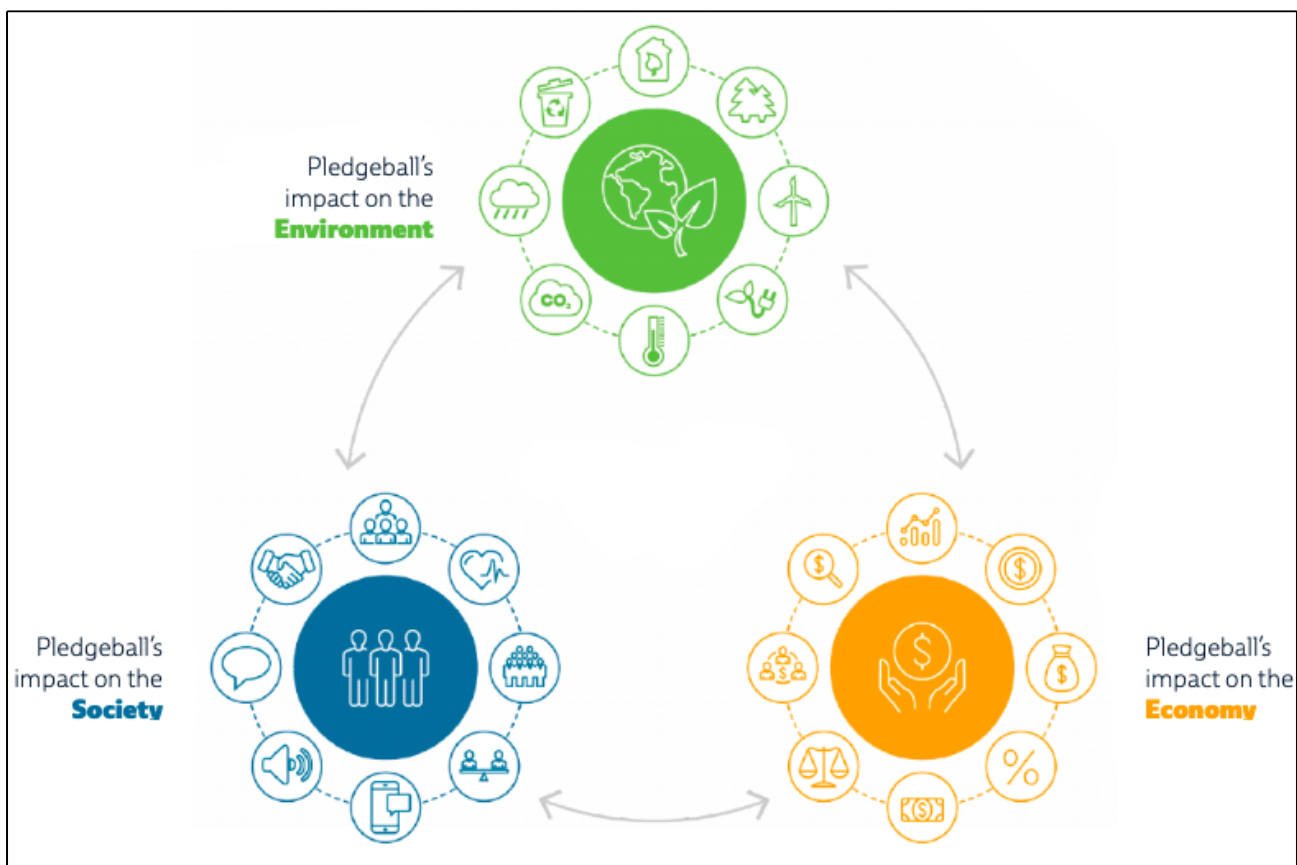


Figure 1 - The Triple Bottom line (TBL)

METHODOLOGY

DATA COLLECTION

- 1. Fan Survey (Online Self-Administered Questionnaire):** We collected 149 valid survey responses with the following aims:
 - a. To identify benefits from the BCFA's teams' participation in Pledgeball, focusing on the social and environmental aspects
 - b. To examine differences between those who have participated in Pledgeball and those who haven't.
- 2. Interviews:** We conducted three interviews to gather further qualitative insights into the impact of Pledgeball. Interviewees roles included club's secretary and parents of children competing to a BCFA's competitions.
- 3. Website Data:** Data from the Pledgeball website were utilised, which included:
 - 32,140 pledges made
 - A total of 1,024 pledgers contributing to a reduction of 6,128,170 kg of CO₂e emissions

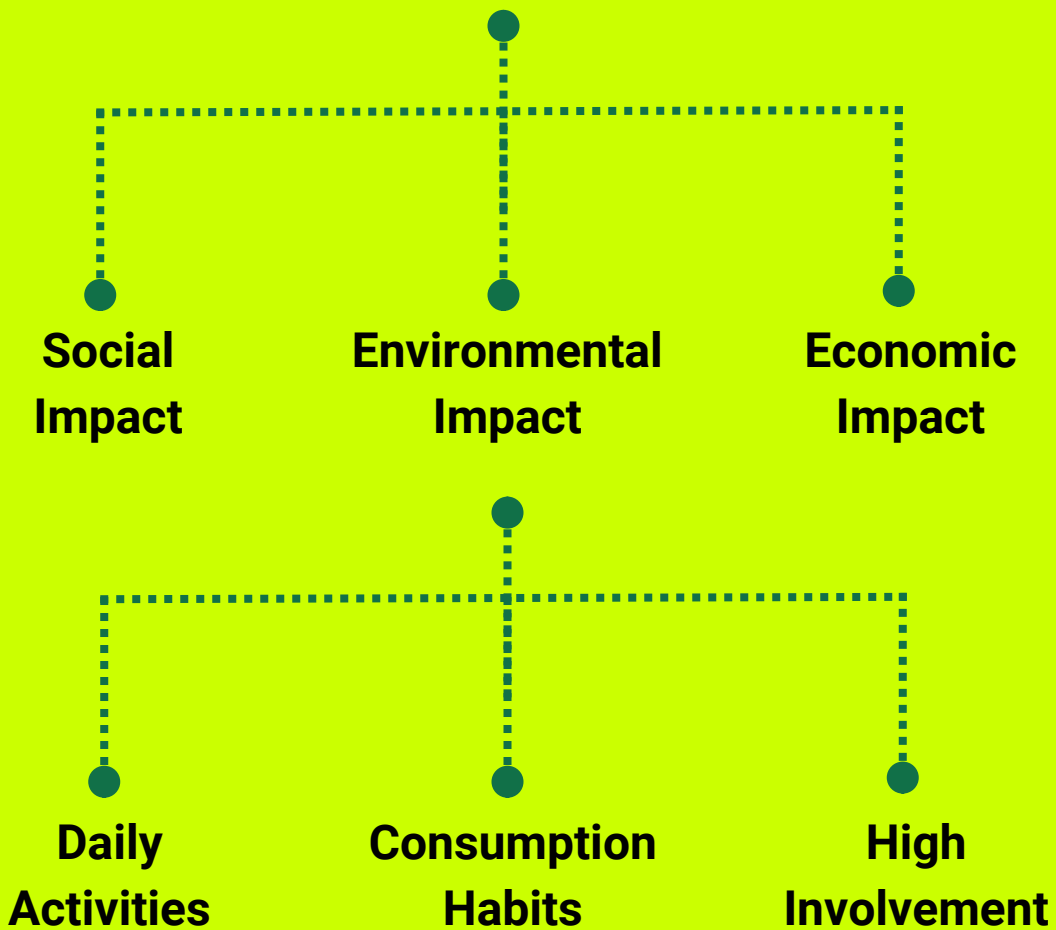
DATA ANALYSIS

A 2-stage Structural Equation Model (SEM) was employed with the following characteristics:

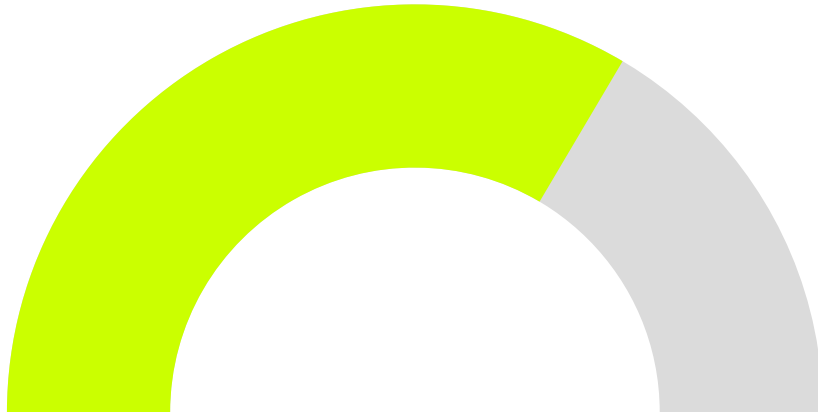
- **Model Fit:** The fit of the SEM was assessed using respective measures, with a p-value less than 0.01, indicating satisfactory fit. The Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI) both exceeded the cutoff value of 0.9, further confirming model adequacy.
- **Internal Consistency:** Measures of Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) all exceeded the recommended thresholds. Specifically, Cronbach's alpha and CR were greater than 0.7, and AVE was greater than 0.5, signifying good internal consistency.
- **Standardized Loadings Interpretation:** We analyzed standardized loadings in the SEM, where:
 - A standardized loading greater than 1.0 indicated a strong relationship, suggesting that a one-standard-deviation increase in the predictor led to a greater-than-one-standard-deviation increase in the outcome.
 - A standardized loading less than 1.0 indicated a weaker relationship, implying that a one-standard-deviation increase in the predictor led to a less-than-one-standard-deviation increase in the outcome.

PROJECT DESIGN

Fans' Approval & Adherence of Pledgeball



DATA COLLECTION



149 of 273 FAN SURVEYS

3

INTERVIEWS

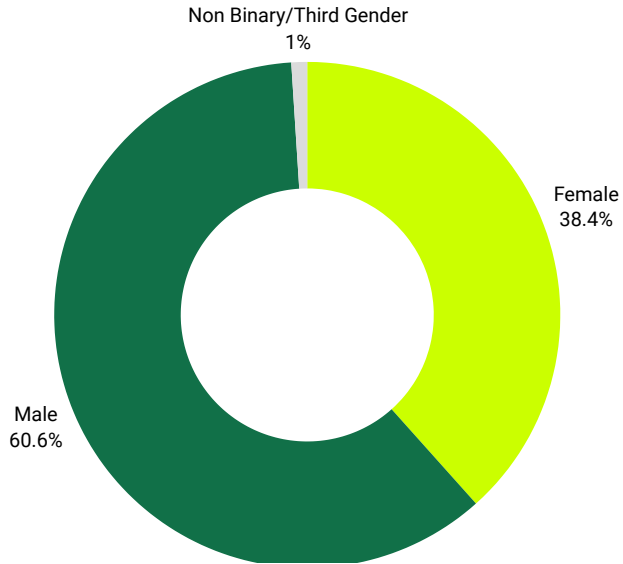
32,140 PLEDGES

1,024 PLEDGERS

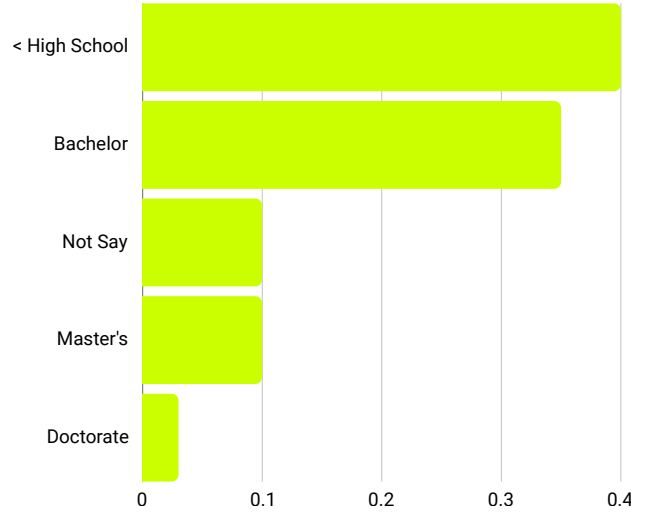
6,128,170 KG CO₂e

AUDIENCE

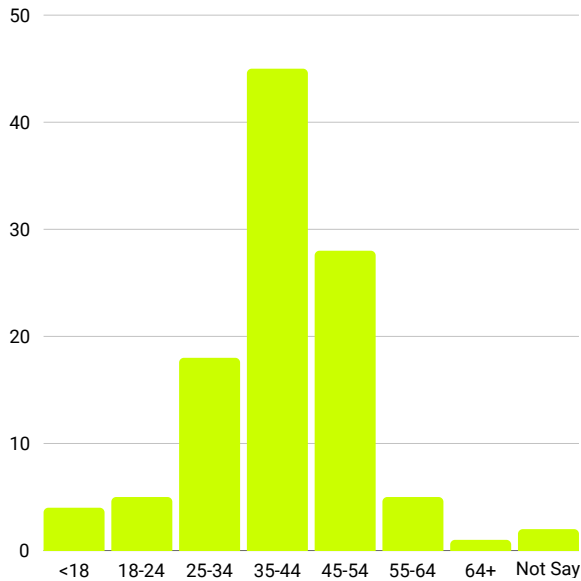
Female Male Non Binary/Third Gender



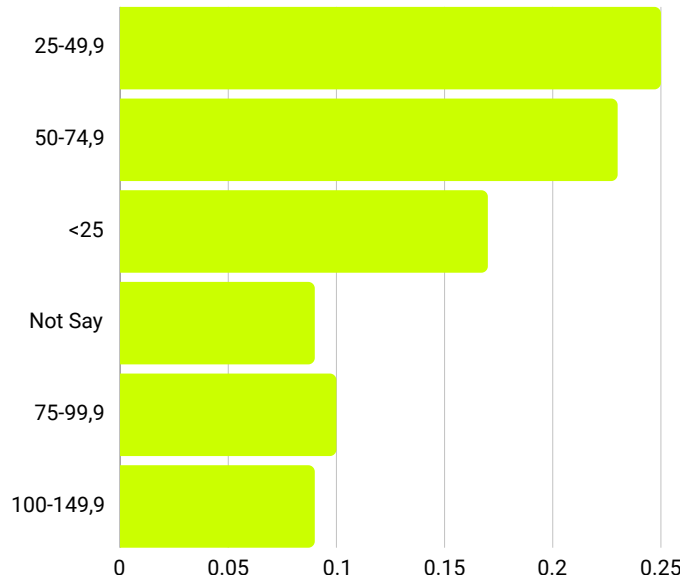
Education Level



Age



Household Income



73% of respondents fully employed

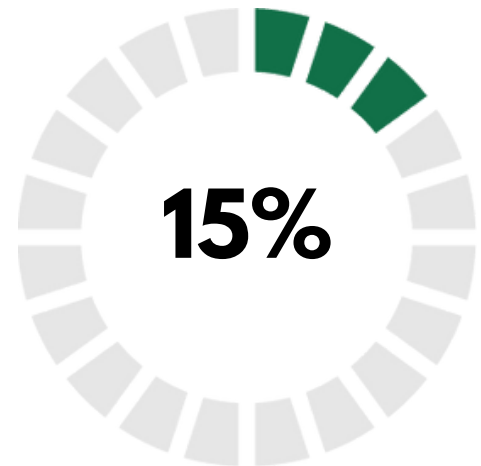
ATTITUDES

Almost **70%** are **willing to engage** in discussions about climate change.

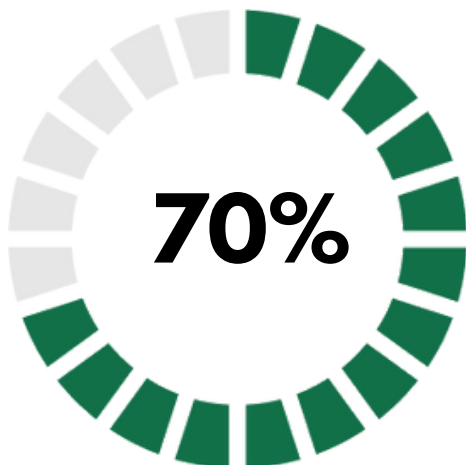


PARADOX 1

Only **15%** are **frequently looking for opportunities** to discuss it.

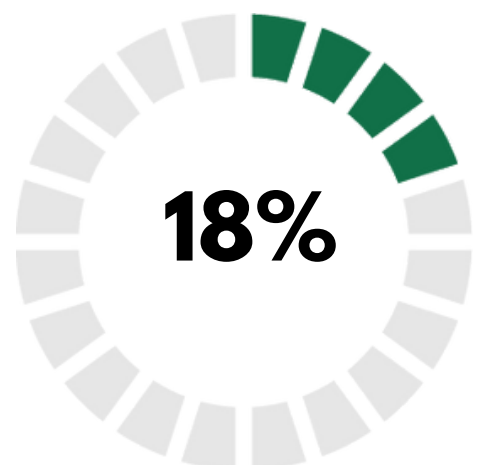


Almost **70%** believe that climate action is **important** for everyone to contribute to, **including their self**.



PARADOX 2

Only **18%** feel very connected to climate action and environmental sustainability efforts.



STRUCTURAL EQUATION MODEL (SEM)

Based on Figure 8, fans' approval and loyalty to their club have a positive influence on their environmental and social behaviors, with environmental benefits showing a stronger correlation with the perception of Pledgeball League participation compared to social benefits.

This suggests that fans are more likely to adjust their daily consumption habits in response to their club's involvement in Pledgeball, such as purchasing biodegradable products and improving home insulation, than making high-involvement consumption decisions. Further details on these findings are provided in Appendix A, summarizing the results of the 2-stage Structural Equation Model (SEM).

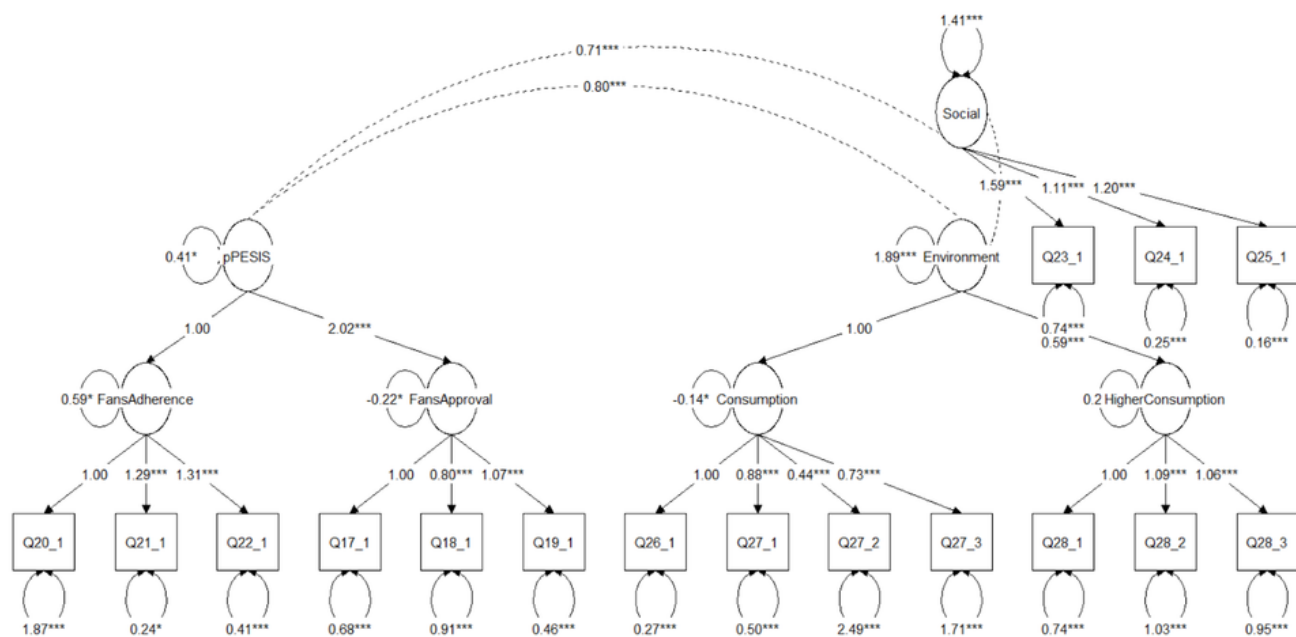


Figure 8 - The Structural Equation Model (SEM)

	<i>Fans Adherence</i>	<i>Fans Approval</i>	<i>Social</i>	<i>Consumption</i>	<i>Higher Consumption</i>	<i>Environmental</i>	<i>pPESIS</i>
<i>Fans Adherence</i>							
<i>Fans Approval</i>	0.649***						
<i>Social</i>	0.593***	0.892***					
<i>Consumption</i>	0.541***	0.828***	0.883***				
<i>Higher Consumption</i>	0.489***	0.739***	0.753***	0.834***			
<i>Environmental</i>	0.540***	0.822***	0.860***	0.965***	0.950***		
<i>pPESIS</i>	0.861***	0.946***	0.850***	0.785***	0.703***	0.780***	

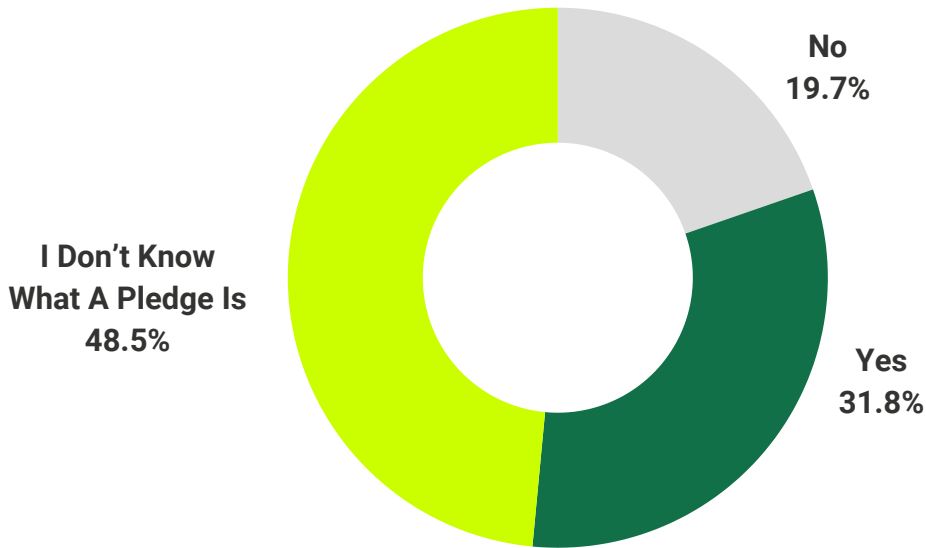
	<i>Social</i>	<i>pPESIS</i>	<i>Environmental</i>
<i>Social</i>			
<i>pPESIS</i>	0.850***		
<i>Environmental</i>	0.860***	0.780***	

Computed correlation used pearson-method with listwise-deletion.

Table 1 - Pearson correlation between the latent variables, which have been constructed through the SEM model. The hypothesis of no correlation is rejected for all pairs of variables.



PLEDGING



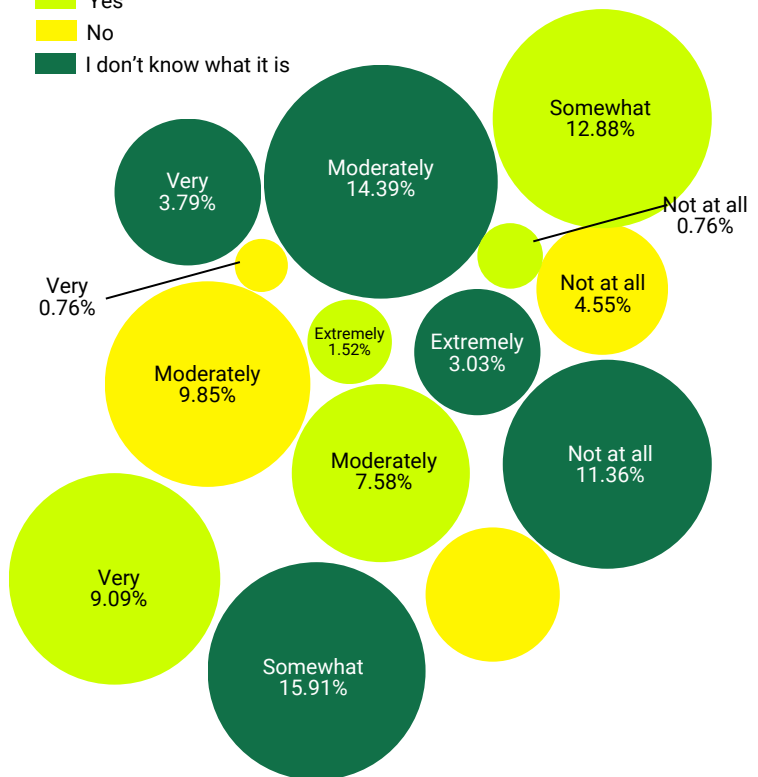
30% of the people **don't know what Pledgeball is** and feel **moderately or somewhat connected** to climate change.



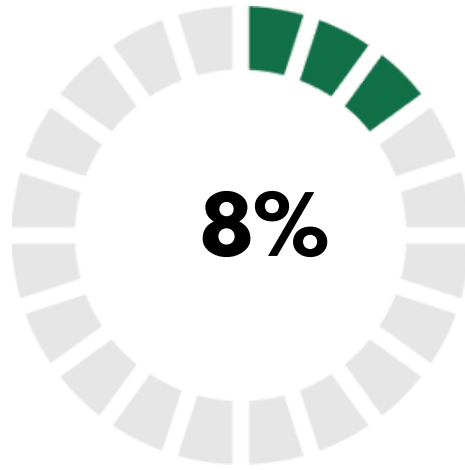
To what extent do you **feel a personal connection to climate action and environmental sustainability efforts?**

Did Pledge:

- Yes
- No
- I don't know what it is



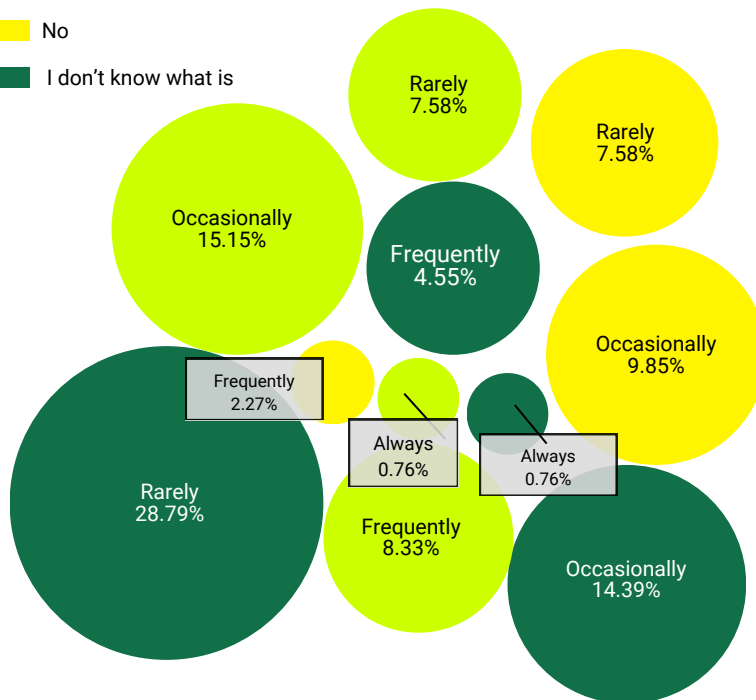
30% of the people **don't know what Pledgeball is** and **rarely discuss** climate change, whereas **among people who Pledged**, this percentage is only **8%**.



To what extent do you **feel a personal connection to climate action and environmental sustainability efforts?**

Did Pledge:

- Yes
- No
- I don't know what is



Fans' approval and fans' adherence are indicators of the degree of approval of the Pledgeball League campaign. Figure 12 shows that making a pledge positively affects people's perception of environmental sustainability and their approval and adherence to their club, highlighting the positive impact of Pledgeball.

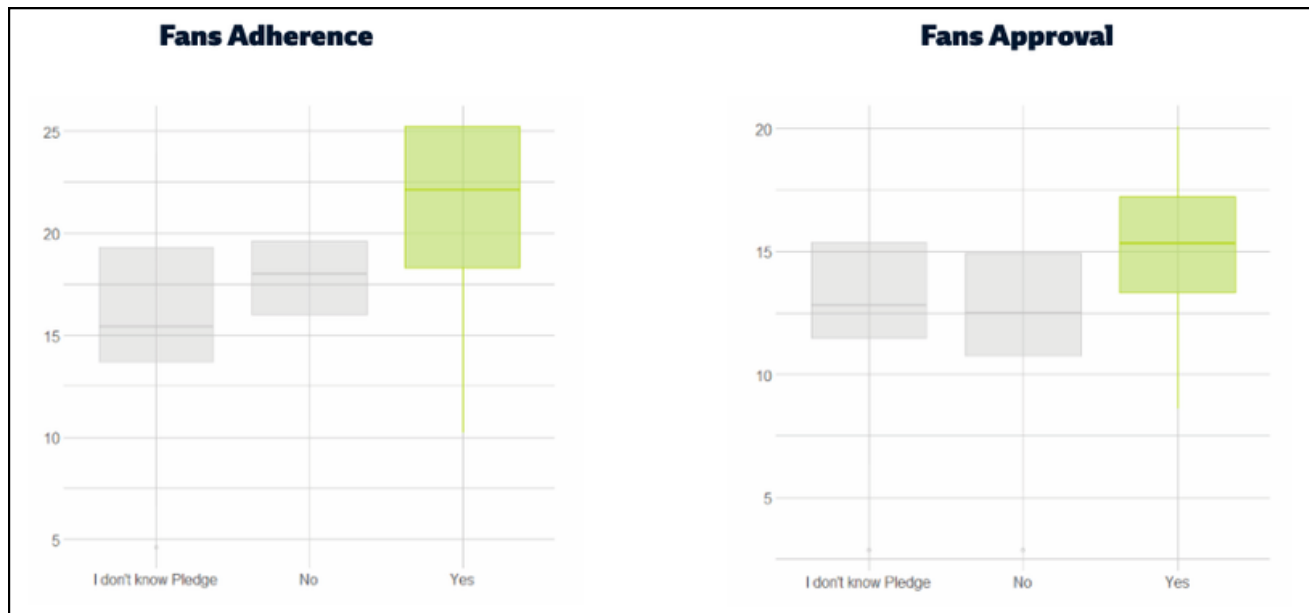


Figure 12 - Adherence & Approval vs. Pledging

Age groups 25-34 and 35-44 showed high levels of variations regarding their perception of environmental sustainability (p-PESIS) and environmental and social benefits (Figure 14), while the age group 55-64 showed a positive correlation between adherence and approval and environmental benefits.

Gender, on the contrary, appears not to play a significant role in fans' perceptions (p-PESIS), environmental and social benefits, and approval or adherence in relation to their club's participation in the Pledgeball League (Figure 15).

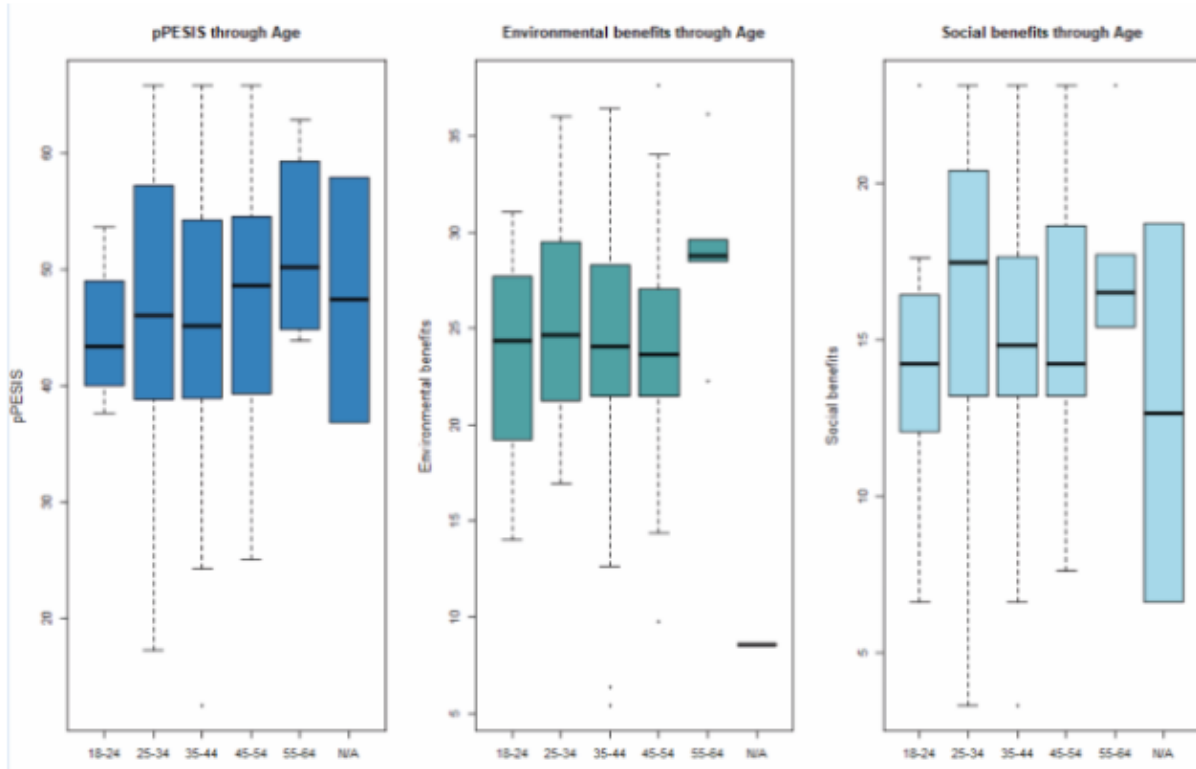


Figure 14 - p-PESIS, Environmental and Social Benefits vs. age

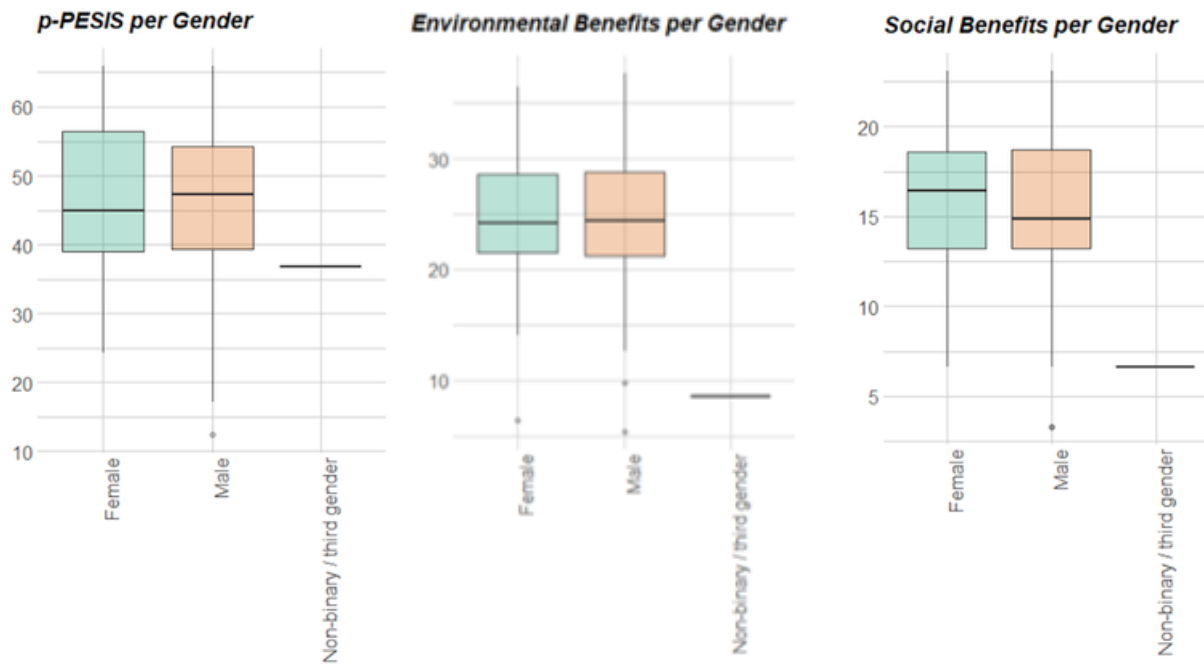


Figure 15 - p-PESIS, Environmental and Social Benefits vs. gender

ADDITIONAL FINDINGS - QUOTES

Respondents' comments in the qualitative part of the survey provided additional valuable insights regarding the impact of Pledgeball.

"Our club promotes sustainability really well. Recycling football boots and kits and carries out local litter picks. We promote the use of BPA-free water bottles. Also take part in Pledgeball and other promoting projects where and when possible."

On the contrary, ignorance about Pledgeball was also found to be present.

"Didn't know about it – could write to members and could share on social media, agenda item at managers meetings."

"The initiative could have been promoted more proactively."

"Never heard of Pledgeball until this email so the club could literally do anything and promote it better."

Despite ignorance about Pledgeball, a positive influence was observed related to clubs that are environmentally oriented, and respectively a negative effect of clubs disregarding environmental issues.

"I am not saying oh yeah this is the club I will come and join because it is clean and they take care of the environment, but it is one of those things that make you feel better going where you're going."

"There was nothing environmentally friendly in ... It was not the reason we left, but it was one of those things that is one of those tick boxes."

A potential was identified regarding factors that can prove motivating for people to engage in environmentally friendly activities.

"For kids, it is fun to do this like that and to be fair, especially in environments like football, kids have loads of influence on parents...the parents would do it because it makes their kids happy."



DISCUSSION

The survey's results indicate an existing concern about climate change among fans. Environmental measures adopted by clubs encourage fans to alter their behavior both towards the environment as well as their environmental behavior in other social events. Herein lies a potential for further impact on the fan basis of BCFA.

The fact that most people are willing to engage in discussions about climate change, but not seeking to initiate a conversation on the subject, thus highlighting the observed value-action gap, indicates the potential of a more targeted and better promoted campaign by the clubs. In this context, a more proactive promotion of Pledgeball could lead to an increased participation in the Pledgeball League.

The need for improved communication pathways within the BCFA and between the BCFA and clubs is also indicated by the significant degree of ignorance about Pledgeball and Pledgeball League observed in the present survey. A further indication of this is seen in the fact that almost one third of the fans feel a moderate connection to climate change despite being unaware of Pledgeball. Improved communication could potentially also increase the number of pledges among fans already making pledges.

The need for enhanced communication is further supported by the limited participation of younger age groups in the survey. Improved communication, and reaching out to these age groups, would enhance awareness of Pledgeball's existence, and promote positive behavioral changes. In this context, the quote on children's influence on parents acts as an imperative for improved communication within younger age groups.

On club level, a higher level of engagement with regard to environmental and social actions, combined with greater awareness raising efforts, would result in better promotion of sustainability actions supported by Pledgeball and the Pledgeball League. Perhaps educational initiatives would help in this aspect.

Fans who are aware of Pledgeball, have a more positive perception of the environmental and social benefits of clubs' environmental actions, leading to the conclusion that Pledgeball has a positive impact on the adoption of environmental practices by the clubs. This finding underscores the need for improved and enhanced communication of the Pledgeball League, resulting in greater participation in the League with more fans making pledges.

The fact that one out of five people haven't made any pledges despite being aware of Pledgeball, additionally provides a basis for further investigation of the motivating factors for pledging and ways to reduce the observed value-action gap.



CONCLUSION

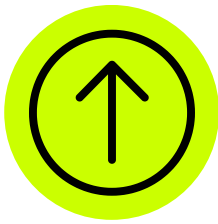
In summary, this report reveals the significant impact of Pledgeball on BCFA and its member clubs. It provides insights to guide future efforts of Pledgeball and BCFA in promoting sustainable practices within the football community. Notably, despite nearly 50% of fans being unaware of Pledgeball, a substantial 70% express a strong commitment to climate action and a willingness to engage in climate change discussions. This highlights the potential for increased involvement.

Additionally, among the 30% of active Pledgeball participants, we've observed dedication and loyalty to their clubs, reinforcing the positive influence of the initiative. Surprisingly, even among the 20% of fans claiming unawareness of Pledgeball, a significant portion still demonstrates a connection to climate change. However, it's important to note that fewer than 20% exhibit a deeper engagement in climate change and sustainability, suggesting room for further growth and focus in this area.

These findings provide valuable direction for future initiatives, emphasizing the potential for Pledgeball and BCFA to continue advancing environmental responsibility within the football community, promote educational/informational activities, and reach out to a bigger and wider fraction of their fans.



RECOMMENDATIONS



INCREASE

Environmental awareness campaigns and promotion of Pledgeball, especially to younger age groups.



PROMOTE

The initiative across various social media channels.



SIMPLIFY

Communication with the clubs and fans e.g. through an easy to use and forward information text application.



VISIBILITY

Make actions more visible to fans, e.g. by installing recycling bins and communicate the results of their actions.



INCENTIVES

Provide incentives, e.g. prizes for fans to participate in Pledgeball League.



RESEARCH

Conduct further research to identify key motivators for pledging and ways to reduce the value-action gap.

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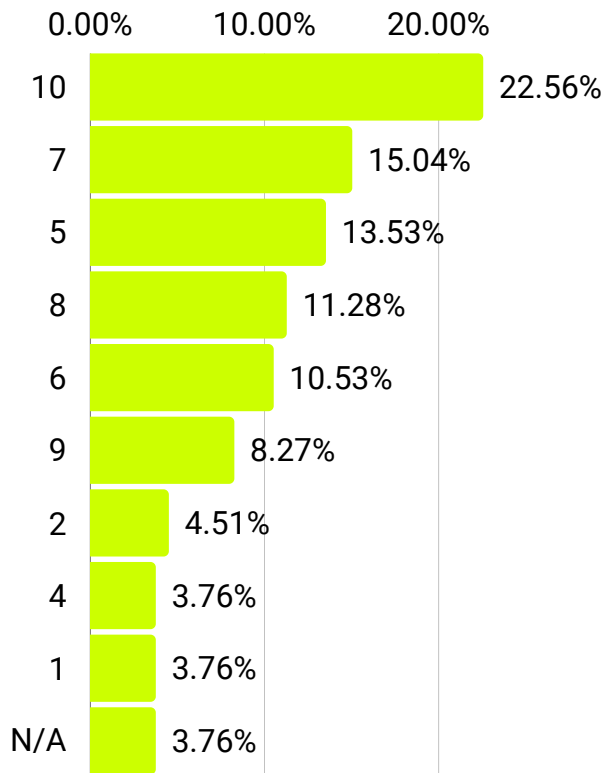
<https://www.birminghamfa.com/about/our-strategy-purpose-and-values>

<https://www.thefa.com/about-football-association/what-we-do/sustainability>

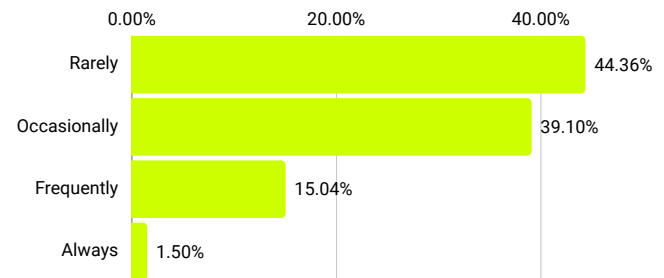


APPENDICES

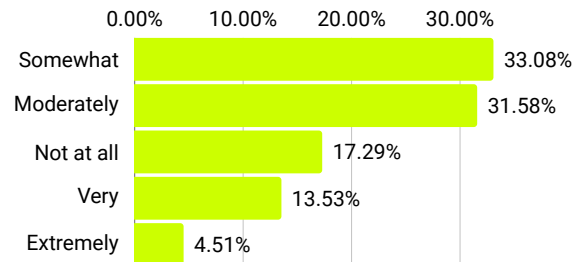
How willing are you to engage in discussions about climate change and sustainability with others?



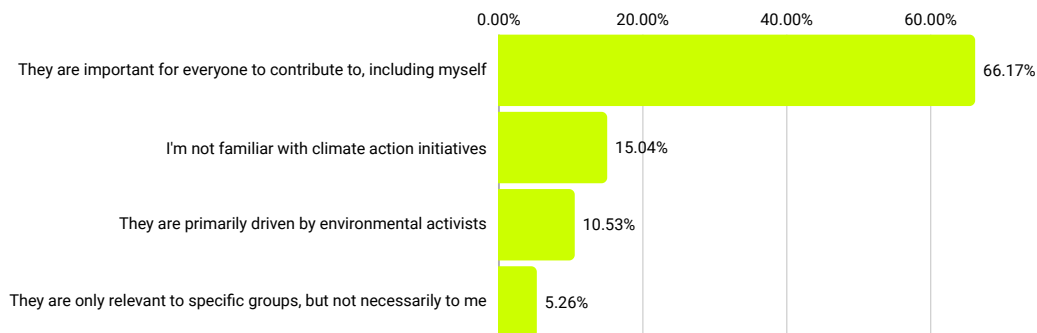
How often do you actively seek out opportunities to discuss climate change and sustainability with friends, colleagues, or members of your community?



To what extent do you feel a personal connection to climate action and environmental sustainability efforts?



How do you perceive climate action and environmental sustainability initiatives?



Respondents' perception and behaviour with regard to environmental sustainability in their daily conduct.

Constructs	Items	First Order		Second Order	
		Std. Loading	p-value	Std. Loading	p-value
p-PESIS (Alpha=0.78)					
Fan's Approval of Pro-Environmental Sustainability Initiative <i>(CR=0.85; AVE=0.67; Alpha=0.82)</i>	IT1-My club's participation in Pledgeball, positively influences my support as a fan	0.827	NA	1.071	<0.001
	IT2-I am prouder of a club that promotes Pledgeball	0.713	<0.001		
	IT3-Because my club carries out initiatives related to Pledgeball, I am more loyal to the club	0.887	<0.001		
Fan's Adherence of Pro-Environmental Sustainability Initiatives <i>(CR=0.85; AVE=0.54; Alpha=0.79)</i>	IT1- I am aware of my club's participation in Pledgeball	0.591	NA	0.540	NA
	IT2- I am interested in Pledgeball when promoted by my club	0.936	<0.001		
	IT3- I will participate in Pledgeball when promoted by my club	0.900	<0.001		
Social Benefits <i>(CR=0.93; AVE=0.84; Alpha=0.93)</i>	My club's participation in Pledgeball: IT1-makes me more aware of the importance of environmental sustainability				-
	IT2- influences my environmental behaviours at other social events (music, arts, culture or sports)	0.935	<0.001		
	IT3- influences my environmental behaviours with my family and friends at- home	0.963	<0.001		
Environmental Benefits (Alpha=0.78)					
Consumption <i>(CR=0.75; AVE=0.47; Alpha=0.72)</i>	IT1-My club's participation in Pledgeball influences my environmental behaviours with my family and friends at-home	0.930	NA	1.038	NA
	As a result of my club's participation in Pledgeball, in my personal daily life: IT2- I buy biodegradable products				
	IT3- I eat more vegetables and less meat	0.347	<0.001		
	IT4- I made my home more energy efficient (e.g. better insulation, solar panels, etc.)	0.596	<0.001		
Higher Consumption <i>(CR=0.81; AVE=0.60; Alpha=0.82)</i>	As a result of my club's participation in Pledgeball, in my personal daily life: IT1- When choosing my vacations, I will take into account environmental concerns			0.909	<0.001
	IT2- When buying a car, I will take into account environmental concerns	0.767	<0.001		
	IT3- When buying a home, I will take into account environmental concerns	0.772	<0.001		

Notes: CR=Composite Reliability; AVE=Average Variance Extracted

Model fit: $\chi^2(97)=179.131$ ($p<0.001$); RMSE= 0.092 90% CI=(0.071, 0.113); CFI= 0.943; TLI=0.929

METHODOLOGY

QUANTITATIVE DATA ANALYSIS

The extracts from all three semi-structured interviews were analysed thematically, in order for patterns within the data to be identified, following the protocol of Boyatzis, (1998).



We thank you for your ongoing support of Pledgeball.

Acknowledgements

Your **group of researchers**

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