

Eva Garcia-Vazquez (1,2) & Cristina García-Ael (2)

1: University of Oviedo; 2: National Distance Education University, Spain

Background and objectives

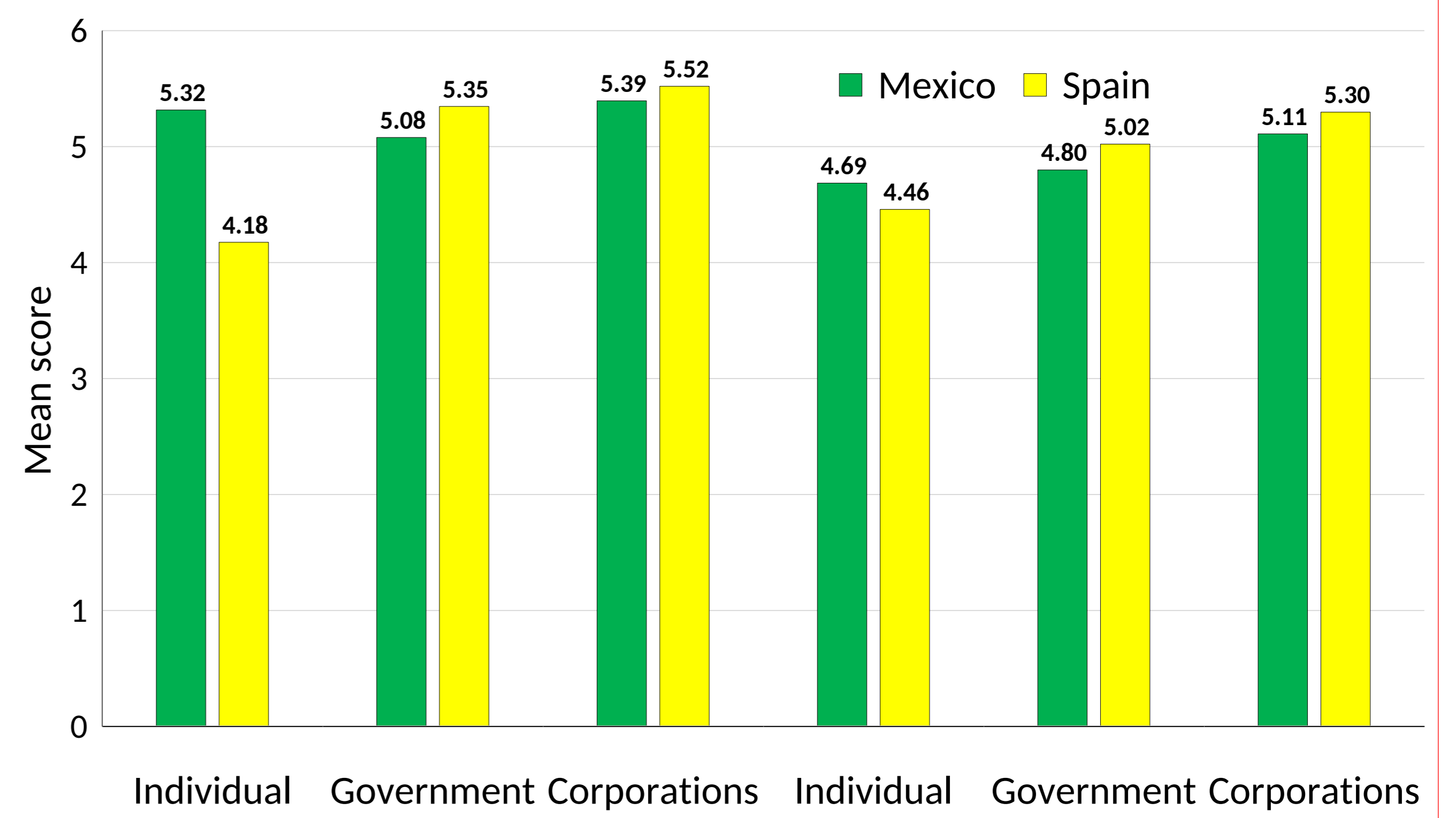
Corporations and consumers produce much plastic, microfibers and microbeads waste. Such wastes cause enormous levels of microplastics pollution worldwide. Feeling personally responsible for the environment determines individual sustainable behaviors about plastic consumption (Garcia-Vazquez, García-Ael et al., 2022).

The objective of this study was to identify psychosocial aspects that could help in the prevention microplastics pollution from the industry.

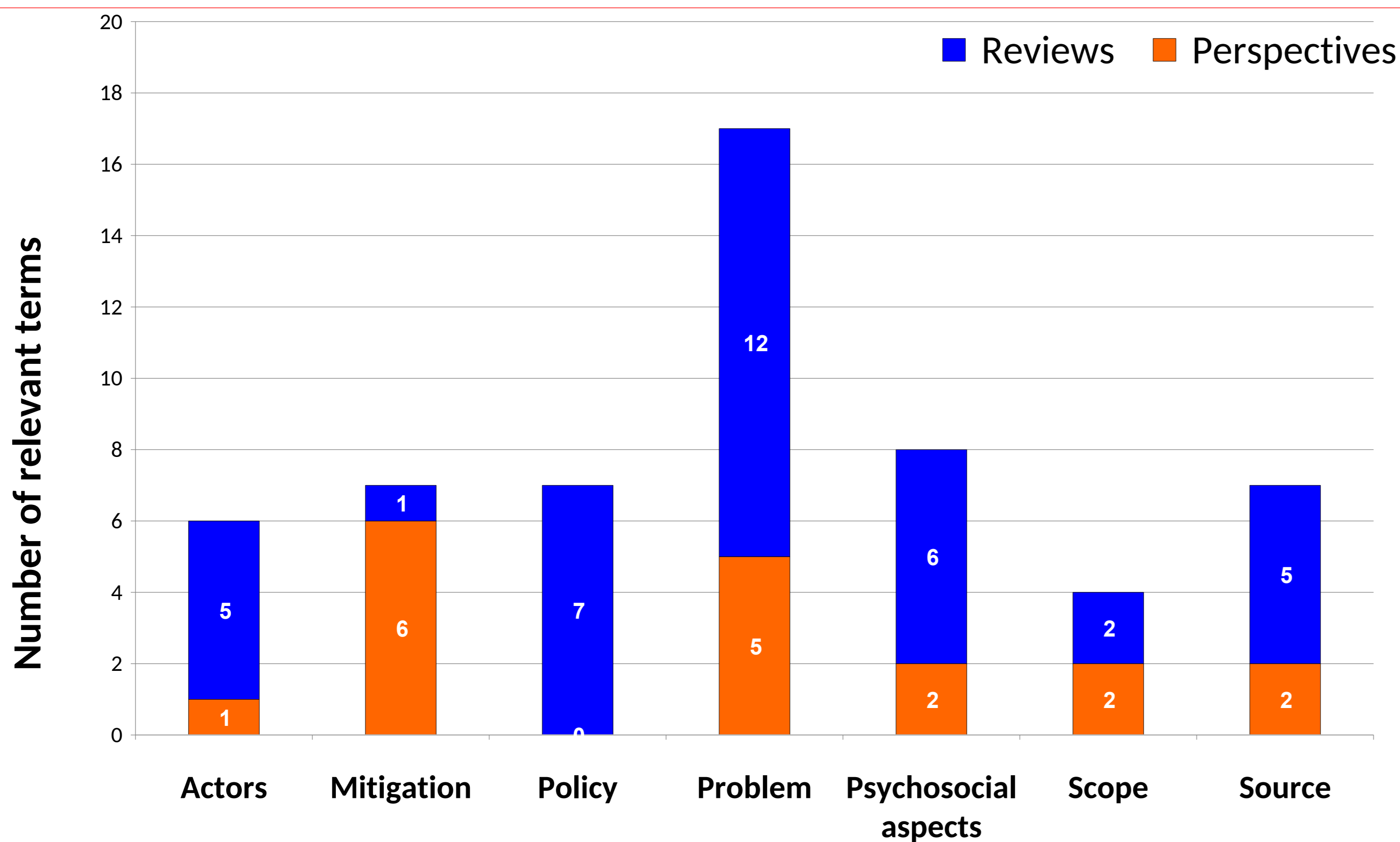
Methodology

Literature analysis of reviews and prospective articles applying quality filters according to PRISMA methodology (Moher et al. 2009). Online survey in Spain (N = 619) and Mexico (N = 339) to explore the responsibility attributed to the industry in different cultures. Approved by the competent Spanish Committee of Research Ethics of Asturias Principality with the reference CEImPA:2021.116. ANOVA analysis.

Responsibility attribution



Attributed responsibility for the control of microplastics to individuals, governments and corporations. Results expressed as mean scores over a total of 7. Standard error as capped bars.



Frequency of relevant terms in different categories for reviews and perspective articles found in the present study

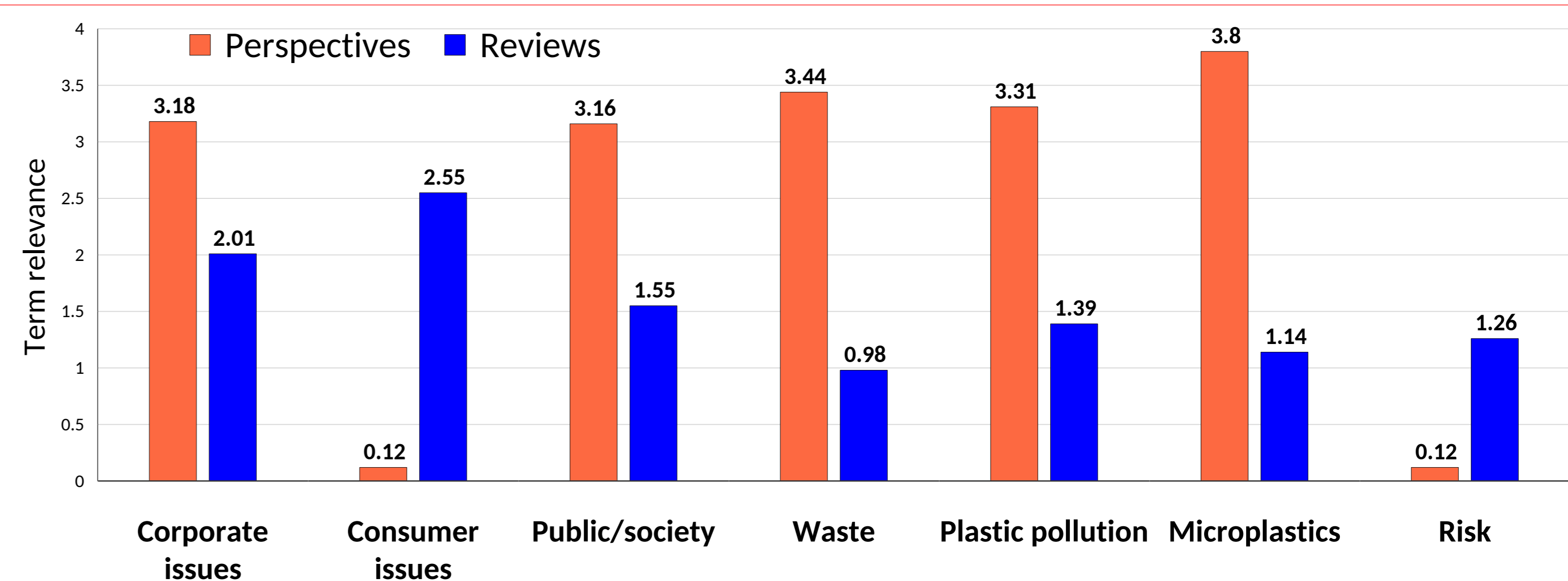
Non students	Sum of squares	df	Mean square	F	p (same)
Country	3.36	1	3.36	1.11	0.293
Agent	370.07	2	185.03	61.04	6.44E-26
Interaction	21.71	2	10.855	3.58	0.028
Within:	3473.81	1146	3.031		
Total:	3868.94	1151			

Students	Sum of squares	df	Mean square	F	p (same)
Country	1.58	1	1.58	0.51	0.475
Agent	105.89	2	52.95	17.08	4.51E-08
Interaction	17.65	2	8.83	2.85	0.06
Within:	5300.08	1710	3.099		
Total:	5425.2	1715			

ANOVA for non-students (above) and students (below) from Mexico and Spain, testing the effect of country (Mexico, Spain) and agent (individual, government, corporation) on the mean scores of the attributed responsibility for the control of microplastics.

Results

- ❖ Both students and non-students attributed a higher responsibility for the control of microplastics to the industry than to individuals and governments. The effect of the country was not significant.
- ❖ Prospective studies emphasize microplastics mitigation while reviews are focused on the problem and the actors.
- ❖ Prospective studies identify the industry as the main actor for the control of microplastics, but very few psychosocial studies have tackled this issue being more focused on consumers.
- ❖ Sustainable corporate habits about microplastics are determined by the awareness of microplastic pollution risks.



Relevance of different terms in reviews and perspectives, estimated using VOSviewer (van Eck & Waltman, 2010)

Recommendations

- ❖ To explore the effect of agent's responsibility attribution on consumer's behaviour about microplastics.
- ❖ To expand studies about microplastics perception to different cultures in order to design control measures worldwide.
- ❖ To increase the research about the perception of corporations about their responsibility towards microplastics pollution.
- ❖ To enhance corporate social responsibility in order to promote the circular economy, thus plastics and microplastics pollution.

