

Graphic Design Campaigns For Environmental Awareness: Reducing Plastic Bag Usage In Palestine A Preliminary Review

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ABSTRACT

Single-use bag pollution is a rising menace to the sustainability of the environment in developing countries as the enforcement of environment of laws is not enforced to the fullest measure. The following paper indicates a thematic review of the influence of environmental awareness campaigns and in particular those that employ the use of graphic design in raising the awareness of the population and changing the behaviours associated to the use of plastic bags. Applying to the Palestinian reality, the review summarises the literature on world and regional awareness campaigns, the role of visual communication, and the science of behaviour, which leads to societal participation. Three important findings show that there is disjunction between the environmental knowing and the observed behavioural change whereby culturally-adapted visually effective and emotion appealing advertising campaigns are required. The review also finds that there were severe gaps in research and the need to have integrated approaches that used combinations of policy, education and creative advocacy. This piece of work is not only valuable in the scientific discussion, but also valuable in ways of proceeding in a sustainable environmental behaviour using the communication design.

Keywords: *Environmental Awareness, Plastic Bag Pollution, Graphic Design Campaigns, Behavioural Change, Sustainability Communication*

1. INTRODUCTION

Plastic pollution is a worldwide ecology emergency and has increased in the last few decades on the back of the growth in plastic production and use. Perhaps one of the most evident and harmful outgrowths of this crisis is the popularity of disposable plastics bags, which no longer remain exclusive property of developed, but took root in everyday life of developing countries. The material of these bags is light, cheap and lasting but then it is also such an unfriendly environmental issue given the busy environment. After polymers are disposed of, plastic bags remain in the environment to cause land degradation, marine trash, and a variety of public health problems that take hundreds of years (Marnn et al., 2022).

The adverse effects of using plastic bags are worsened by the fact that in most developing countries like the Palestinian territories there are no stringent environmental laws, little awareness among people and even among those that are aware, there are no eco-friendly alternatives regarding their plastic bag consumption. Research carried out in West Bank and Gaza has revealed the extent to which plastic waste represents a significant percentage of garbage in the domestic domain as well as streets with little intervention by governmental or non-governmental bodies to regulate the vice (Ftayyer, 2016). Citing this background, environmental awareness campaigns have come up as one of the approaches to induce behavioural change. The intention of such campaigns is to raise awareness among the population of the ecological and health effects of using plastic and encourage the population to switch to using such a sustainable substitute as paper or reusable fabric bags.

However, the success of these campaigns is, in most cases, determined by the manner and tools employed to reach the target audience. Specifically, graphic design has been revealed as an effective strategy of making otherwise complicated environmental messengers less complex and engaging more people (Vise, 2021). Environmental campaigns that utilize graphic design use incorporation of storytelling visuals, use of iconography, colour psychology, and use of typographic hierarchy to produce powerful messages to reach the hearts of the masses. The ability of graphic design to be used in the activist movement against environmental crimes in Palestine has a large potential but it is not well explored because of the relatively high rate of media consumption and the increasing rate of visual literacy in the country.

Moreover, the international examples of the implementation of awareness campaigns in countries not only global leaders like the United Arab Emirates (Abu Dhabi), China (Macau), and Kenya but also the developing ones demonstrate that such policy-driven campaigns can lead to a substantial decrease in the consumption of plastic when effective visual communication plans are applied (Xu et al., 2022; Kosore et al., 2023). This research is, thus, aimed at investigating where environmental awareness advocates and the graphic design in the role of raising community awareness of the dangers of consuming plastic bags meet. The importance of the study about the Palestinian context is not to contribute to missing a gap, but to provide certain evidence with the help of which this research can be applied to other developing countries that have a similar challenge regarding the environment.

2. THEMATIC LITERATURE REVIEW

2.1 Environmental Pollution from Plastic Bags

Plastic bags have been posing some of the most widespread and incessant environmental deformity mostly in the urban and the semi-urban landscape. Plastic bags form a large share of municipal solid waste, particularly in developing nations, where the rate of consumption is high, and waste management systems are usually undeveloped (Li et al., 2022). They are easily carried away by wind and water thanks to their lightness and thus end up being widely dispersed in the landfills, drainage systems, rivers and coastal regions. The plastic bag pile-up in such set ups distorts the ecological balance, which changes the soil texture, hinders the penetration of water, and directly threatens aquatic and land creatures. Evidence of the magnitude of the problem is further highlighted by the empirical cases at various regions of the world. As an example, a population-based research on Gaza Strip by Ftayyer (2016) showed that a significant amount of coastal trash was composed of plastic bags, which is a sign of either their overuse or improper disposal.

On the same note, a study carried out in Malawi revealed that the percentage of plastic waste gathered in the urban environments was above 80%, with plastic bags accounting to the highest number (Jhariya et al., 2022). The trends represent a larger trend of plastic pollution in the Global South where growth in population, urbanisation and weak environmental regulation is exacerbating plastic pollution. The environmental impact of plastic pollution bags is dreadful. According to Giabriela et al. (2019), plastic debris causes the death of aquatic animals by being ingested or entangled, it also disrupts food chains, destroys agricultural land due to poor root growth and modification of the microbiotic activity, and causes freshwater contamination due to the leaking of microplastic and chemical additives.

Plastic in the soil may alter the food security by damaging the crops in agricultural lands and may affect the soil fertility in the long term. Worse still, in most developing areas, the waste management systems were not so huge. Most urban infrastructures are poorly prepared in dealing with the quantity, sophistication, and toxicity of plastic waste. They are regularly dumped and even burnt without restrictions which is devastating to the environment and subsequently the health of the population. The emission of toxic gases, including dioxins and furans, results in the contamination of the air leading to respiratory diseases among people living near them.

2.2 Role of Environmental Awareness Campaigns

The campaigns on the environment act as a platform of raising awareness and modifying the attitudes of the people. According to Xu et al. (2022), more than 95 percent of the participants in Macau minimized plastic consumption in the light of the awareness policies and media outreach activities. In a similar way, Tang (2023) noted that environmental act-willingness depends predominantly on knowledge and media messages in the case of the general population. In Abu Dhabi, the introduction of the ban to single-use plastic bags was accompanied by a strategic awareness campaign that has led to quantifiable decreases in use a proper awareness campaign is necessary in shaping awareness, knowledge, and practices of people. Intervention campaigns that educate and use community mobilisation to change the behaviour have successfully achieved good results in countries such as the UAE and China. According to a study conducted by Xu et al. (2022), awareness delivery campaigns provided policy support that resulted in the substantial decrease in the use of plastic bags in Macau. Kosore et al. (2023) found the same results in Kenya where the adoption of policy bans on single-use plastic bags along with community education introduced cleaner coastlines and additional compliance with the policies across the population.

However, according to Asaad (2023), in Palestine there is no planned regular campaigns on the environmental damage caused by plastic waste. There is little awareness because there are no sufficient educational resources and little support by the government. Still, other works, like the one of Anabaraonye (2023), have demonstrated that creative modes of expression such as photography, poetry, and visual art can be utilized in awareness campaigns to be able to convey the environmental threats effectively.

2.3 Graphic Design as a Communication Tool

The form of graphic design is very influential in conveying the message on the environment. Vise (2021) states that design enables you to turn a complicated data set in the realm of ecology into something visual and easy to digest and recall that enhances the general understanding and awareness of people. In Palestine with limited use of the formulation of public policy regarding environmental issues, the incorporation of innovative design within the campaigns for the raising of awareness of

the populace would be used to enhance the transmission of the message, as well as interaction with the citizens. The combination of visual message in awareness campaigns has rendered the messages more memorable and behaviourally supportive has developed to be an effective tool communicating environmental messages, especially in presentation of visual aspect that simplified and humanized complex messages. According to Vise (2021), successful graphic design takes all of these things together clarity, innovation, and emotional persuasion, to encourage behavioural change. The elements of the design, like a powerful imagery, psychology of colour, iconography, and infographics, are utilized in environmental campaigns to explain urgency and ways of resolving a problem.

The article by Asaad (2023) focuses on the strategic application of the graphic design in Palestinian campaigns, stressing that the lack of strong infrastructure in terms of policy is addressed by the visual retelling that closes the gap between science and society. Graphic design can be used to impact the urban people and the rural people by using the visuals that suit local cultural expectations and shaping them around the local environmental realities. Additionally, the researchers state that data visualisation leads to the enhancement of the level of recognition and remembrance of environmental messages in the population when applied to campaigns (Kuran et al., 2019).

2.4 Community Perceptions and Behavioural Change

Environmental messages resonate with the population and this plays a central role in determining the success of a campaign. Aithal and Ashwini (2023) explained factors affecting consumer acceptance of green bags with a mention of perceived usefulness and social norms as well as pricing. In addition, Fareed and Iqbal (2022) noted that since consumers are becoming more eco-friendly, the probability of their adopting paper and reusable bags is high. However, researchers such as Chin et al. (2022) in Malaysia reveal that environmental campaigns may be quite unproductive even with high awareness because community perception and desire to adopt the behaviour change needs to be structured, mainly with the support of policy and infrastructure. A study by Fareed and Iqbal (2022) emphasised that awareness is not everything, but convenience, cost and social conventions play significant roles in determining whether people behave in an eco-friendly manner. Aithal and Ashwini (2023) pointed at the fact that individuals have increased chances of transitioning to a green option when they feel actual benefit or societal acceptance.

Similar research in Palestine indicated that, although people realize the dangerousness of plastic pollution, there is no access to using alternatives, it is too expensive, and the society is not ready to change (Asaad, 2023). Chin et al. (2022) confirm the same finding in the Malaysian context, where awareness-practice gaps were associated with poor policy enforcer and little recycling infrastructure. Thus, awareness campaigns can be made more effective by incorporating the principles of behavioural science into campaign design, i.e., by nudging, through commitment strategies, and use of role models in community.

3. RESEARCH GAPS

Although there is a big literature production on environmental awareness and plastic waste in recent years in the global arena, many vital research gaps still exist, particularly in conflict-torn and developing cities including Palestine. It is quite surprising that an empirical gap exists in terms of direct search on the effectiveness of environmental awareness campaigns on the behavior of individuals in the Palestinian context with most of the efforts being sporadic and not well-structured to measure their effects. This division inhibits a thorough insight into responses of citizens to different campaign forms and the media types. Moreover, as much as the capacity of graphic design has been tested in terms of its wide applicability in environmental advocacy, the conscious and constructive use of the same as an instrument of changing behavior is yet to be researched in full in Palestine. There is little study that has been done to determine the magnitude through which the design aspect (including color schemes, layout, and symbolism) influences the thoughts of the people and spurs action. The other common problem in the international studies that can also be witnessed locally is the continuous disjuncture between awareness and action, people are usually well-educated on the effects of plastic pollution and fail to convert this understanding into pro-environmental behaviors.

Such disjunction warrants an investigation of cultural, economic and infrastructural obstacles that might inhibit green behaviors. Also, Mixed methods with longitudinal studies need to be incorporated which is not represented well by the present research work and is mostly cross-sectional in nature or a questionnaire with its short-sightedness towards the change in the behavior observed by these research studies as a result of a particular means, not specifically showing the results of such change in the long term. And lastly, comprehensive strategy has to be engineered where effort made in communicating to the masses is supported in strategic policies by the government. When there is an underdeveloped policy framework in regards to plastic use, as is the case in Palestine, combined activities of campaigns and laws can have the potential to yield more sustainable consequences to the environment.

3.1 Theoretical Significance

The current study adds to the scholarly body of knowledge by investigating poorly studied connections between environmental awareness, behavioural change, and visual communication vis-a-vis the graphic design. This research unlike most other existing work attempts to generalise environmental behaviour contextually, which is what most global researchers

on environment have so far not done because of lack of contextual studies regarding the Palestinian environment. It contributes to the body of theory in a different way since it incorporates behavioural science and design thinking into environmental communication. In addition, it contributes to development of a conceptual framework of how culturally relevant visual strategies that are locally focused may shape environmental attitudes and behaviour and thus complement interdisciplinary research on environment, communication, and design.

3.2 Practical Significance

The study is resourceful in guiding various stakeholders on practical terms. First, it helps to solve a timely problem of the plastic pollution in Palestine as the researchers consider how the community may be made to mobilise towards sustainable behaviour through awareness campaigns. The results can be directly translated to the activities in the sphere of public health and environmental handling including programs by local governments to decrease the usage of plastic and increase recycling. Second, this is because the research can serve as a source of policy formulation in the context that allows, or does not allow, plastic bag policy. The study can be used as recommendations to the government agencies, NGOs and local authorities on how to create effective culturally sensitive campaigns. Third, the research puts graphic design into the spotlight and thus enables creative industries and educational institutions to become more actively involved in environment advocacy. Lastly, through the study, there is a contribution to the attainment of the international sustainability goals, especially SDG 12 (Responsible consumption and production) and SDG 13 (Climate action) i.e. how small-scale design-driven interventions can be used to support the larger environmental and climatic stability efforts.

4. DISCUSSION

The results of this preliminary review confirm the multi-character of the role that environmental awareness campaigns may play to re-frame the attitudes and behaviours of the population to the use of plastic bags. These campaigns, in the scenario of Palestine where environmental infrastructure and formal policy interventions are green, will provide a significant source of bringing change at the grassroots level. Among the key lessons is that there is general environmental awareness but conversely it usually does not translate into behavioural change.

This finding is consistent with others in the same setting including Kenya and the Philippines, in which interventions on awareness have achieved increasing knowledge although they have not been effective in altering everyday consumer behavior. Such a contradiction underlines the value of the design of campaigns that should not only include efficient messaging but also involve emotional appeal, community engagement, and behavioural nudges. In addition, the review shows that the use of graphic design is not a supporting strategy but it is a principal approach in communicating complex environmental matters. Visual ways of communication, i.e. posters, infographic, and electronic media can enable scientific information to be simplified, instill emotional appeal, and increase message recall. Such visual tools can be especially important in Palestine, where the rates of literacy and the access to formal education is not constant.

The other important thing mentioned is the interaction of the campaigns in the society and policy frameworks. However effective the awareness initiatives are, there are very little chance they can work useful to the extent that there is no reinforcement through the supportive regulations. To take an example, countries that adopted draconian measures against plastic bags, like Rwanda or Morocco, have tended to accompany these with the prolonged exercise of educating the people on the matter, demonstrating the complementarity of advocacy and enforcement. Lastly, as indicated in the review, proper cultural contextualisation of environmental campaigns should be put in place. This would imply integration of religious, historical and national discourses that would speak out to the population in Palestine. Coupling plastic pollution with the idea of threat to the environment and cultural identity can make the issues more emotional and lead to long-term behavioural compliance

5. CONCLUSION

This review has discussed the most important environmental challenge of plastic bag pollution and the use that can be made of the environment awareness campaigns in solving the same especially in the Palestinian setting. The examined literature points out to the seriousness of plastic waste, on both a global and local scale, and confirms the possible effectiveness of properly designed campaigns, particularly campaigns that include graphic designing, to change the community practices. The main conclusions indicate that despite the increasing awareness being experienced the world over, there still exist real anomalies in predicting an incessant change in behavioural variation and particularly in under-resourced areas. It is highly argued that behavioural sciences, cultural sensitivity, and creative communication mechanisms should be combined with environmental advocacy.

The limitation of this study is that in future the study should consider employing mixed-method and longitudinal designs to investigate the long-term effect of awareness campaigns on individual and community practices. Also, the relative study between the regions having the interventions with graphics and not may provide meaningful information. It is also suggested that co-creation of targeted, sustainable solutions between the designers, educators, policymakers, and environmental scientists should be involved in the future endeavors. Having considered these problems on the multidisciplinary level, the

present research is not only an addition to existing body of knowledge but can also lead to the development of some practical recommendations that assist national environmental policies and contribute to the global sustainability agenda.

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