Safe Plastic Food Containers: An Educational Intervention among Egyptian Female Employees

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ABSTRACT

Introduction. Plastic pollution is becoming a global reality. In recent years, numerous research papers have recognized the significance of public perception, knowledge, awareness, attitude, and behavior toward environmental problems. *Objective.* The aims of this study are to determine level and sources of Knowledge and behavior regarding safe plastic food containers (SPFCs) among female employees, and to evaluate the effectiveness of a health education program of SFPCs among them. *Methods.* An interventional study was conducted among female employees in Zagazig University, Sharkia Governorate, Egypt. A pre-post-test design was used in the evaluation of female employees' knowledge and behavior regarding SPFCs. A health education program was conducted to improve their knowledge and behavior; then, a re-evaluation was done after three months. *Results and conclusions*. Most participants determined that easy availability, cheapness, and lack of rules\bans for plastic usage presented the highest scores for widespread plastics utilization (88.7%, 82.3%, 74.2%; respectively). Most participants (79.0%) gained their knowledge regarding the SFPCs from the social media mainly Facebook. After the implementation of the health education program, there was a significant improvement in the participants' knowledge and behavior regarding SPFCs. Applying proper health education program for SPFCs gave promising outcome concerning knowledge and behavior.

Key Words: Food packing, Plastics, Safe plastic food container, Female Employees, Knowledge, Behavior, Intervention, Health education, COVID-19, Egypt

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ABBREVIATIONS:

BPA - Bisphenol A
IRB - Institutional Review Board
SPFCs - Safe Plastic Food Containers
SPSS - Statistical Package for Social Science
UAE - United Arab Emirates

INTRODUCTION

In 1907, Bakelite, the first synthetic plastic, was manufactured, marking the beginning of the global plastics industry. However, until the 1950s, rapid growth was not noticed in global plastic production. Annual plastic industry has grown almost 200-fold over the next 65 years, to 381 million tonnes in 2015; that is approximately equal to the mass of two thirds of the world's population (Ritchie & Roser, 2020).

Plastics are included in almost all aspects of life, enabling effective transmission of a huge varieties of food, drink, and other goods. Moreover, there is significant potential for new plastic applications that will be beneficial in the future (Thompson et al., 2009). Egypt produces 5.4 million tons of plastic per year, with an average daily plastic waste production of 0.18 kg per person. These figures put Egypt on the top of plastic polluters among the Arab countries and directly after Turkey in the Middle East (Ritchie & Roser, 2020). Therefore,

Egypt is suffering a plastic waste issue, with nearly one million ton of plastic waste generated per year (El-Gundy, 2019).

Plastic has been categorized as a persistent marine pollutant (Rhodes, 2019), that threatens the biodiversity and the food chain and, consequently, the human and animal health. Accordingly, this argument has received considerable attention from researchers, producers, and stakeholders (Foschi et al., 2020). However, the advent of the COVID-19 pandemic (a severe acute respiratory syndrome caused by a novel coronavirus - SARS-CoV-2) progressed rapidly (Patrício Silva et al., 2020); and the preventive measures applied to prevent and control its high transmissibility implicated a significant ascension in need for, and usage of, plastics by the general population, service workers and healthcare workers. With human health being prioritized over environmental health, plastic reduction policies and plastic waste management strategies have recently been reversed or temporarily postponed (Prata et al., 2020).

Wide range of chemicals are ingredients of the plastic used in bottles or containers manufacture such as Bisphenol A (BPA), thalates, brominated flame retardants and poly-fluorinated compounds. Majority of these chemicals are persistent organic pollutants through being persistent in the environment and high toxicity level, so they are potentially hazardous to human. Storage of food or drinks in plastic containers lets minimal amounts of the chemical substances to migrate to food and drinks through the process of leaching. Whilst the suspension of utilization of plastic containers may be not possible, the applicable solution is the selection of SPFCs with safe quality and its ideal utilization (El-sayed et al., 2019).

Accordingly, straightforward public behavior can dramatically alleviate plastic hazards. So, health education represents the corner stone for prevention of such threatening environmental problem especially with widespread obvious social ignorance. In the struggle against plastic pollution, women represent the crucial target group as future educated workers, manufacturers, and policymakers. Moreover, being the country’s future backbone, they can motivate other individuals to raise their awareness regarding this outgoing disaster (Hammami et al., 2017).

Recently, the impact of public perception, knowledge, awareness, attitude, and behavior towards environmental issues has been highlighted throughout many scientific articles (Afroz et al., 2017). However, few studies have been conducted in developing nations like Egypt. In the light of that; the objectives of this study were to determine level and sources of Knowledge regarding safe plastic food containers (SPFCs) among female employees, to assess their behavior regarding safe plastics food containers (SPFCs) and to evaluate the effectiveness of a health education program on knowledge and behavior of safe plastic food containers (SPFCs) among participants.

SUBJECTS AND METHODS

An interventional study was conducted among female employees in Zagazig University, Zagazig City, Sharkia Governorate, Egypt. Data were collected from August 1st 2019 until February 1st 2020.

Study population

Determination of sample size and sampling technique

A stratified random sample of 62 female employees was selected from those who were working at Zagazig University. female employees were grouped into three strata according to their working places "administrative buildings, practical and theoretical faculties"; then simple random sample was selected from each stratum. The sample size was calculated through Epi-Info (Epidemiological information package) software version 6.1.; assuming that change in mean knowledge score about SFPCs from pre-test (1.78±1.6) to post-test (2.8±0.98) **(Priya, et al., 2016)**, and a confidence level of 95% and the degree of precision was 80%, the estimated sample size was 54 plus 20% non-response (incomplete answers), So the calculated sample size was 65; however, only 62 female employees completed the training program.

A pilot study was conducted during July 2019. It was carried out on 10% of the study sample (7 female employees) to assess the validity and reliability of the questionnaire. The reliability coefficients were generally high for all questionnaires and suitable for scientific purposes

(Cronbach's alpha ranged from0.79 to 0.91). All female employees of the pilot were excluded from the results of the study. According to the result of the pilot study, the questionnaire was assessed, and some modification was done.

Study procedures

The study was conducted in three phases:

Phase 1 (Pre-intervention): A self-administered questionnaire guided by relevant literature and previous studies (Priya, et al., 2016; Afroz et al., 2017; Hammami, et al., 2017; El-sayed, et al., 2019); was introduced to the participant through a 15-min face-to-face semi-structured interview. The questionnaire is composed of five sections as follow:

Section I: Socio-demographic and occupational characteristics of the studied participants as age, marital status, residence, and duration of work (years).

Section II: Factors attributed to the widespread utilization of plastics from participants' points of view.

Section III: Sources of knowledge regarding SFPCs

Section IV: Knowledge regarding SPFCs (27 items) which included "Hazards of unhealthy plastics (7 items), Storing & utilization (6 items), Types & symbols of plastics (8 items), Plastics' alternatives (3 items), and methods for reducing plastics hazards (3 items)" (see Appendix).

Section V: Behavior regarding SPFCs (14 items), containing questions about Waste separation (1 item), Disposal (1 item), Uses (8 items) and Check before buying (4 items) (see Appendix).

Phase 2 (Intervention):

An educational intervention was conducted to improve participants' knowledge and behavior regarding SPFCs. Participants were randomly assigned to three different groups. Each participant was asked to attend two training sessions each of about 30 min, 1 day a week for

2-weeks during October 2019. Various training tools were used for illustration as the data show, posters, photos, and video files, and at the end, participants were given booklets containing all needed information to ensure delivering the message.

Phase 3 (Post-intervention): three months after the implementation of the educational program, the participants were asked to complete the same sections of the pre-test evaluating knowledge and behavior regarding SPFCs (post-test) to evaluate the impact of the intervention.

Statistical analysis

The collected data were computerized and statistically analyzed using SPSS program (Statistical Package for Social Science) version 16.0. Qualitative data were represented as frequencies and percentages. Quantitative data were represented as mean and standard deviation and compared using Student's t test. The test results were considered significant when p value < 0.05.

RESULTS

Sixty-two female employees were included in the study. About half of them (54.8%) were ≥ 30 years old with a mean age of 34.9 ± 8.4. Most of them were married (69.4%) and living in urban areas (59.7%). As regarding occupational history, about two thirds of participants (66.1%) had worked for more than 10 years with a mean of 11.1 ± 5.9 (Table 1).

As regarding Factors attributed to the widespread utilization of plastics from participants' point of view; Easy availability and cheapness presented the highest scores (88.7%, 82.3%; respectively), while Durability was the least one (35.5%) (Figure 1)

Figure 2 showed that most participants (79.0%) gained their knowledge regarding SPFCs from the social media mainly Facebook, while, free reading was the least common source of knowledge (4.8%)

Table 1. Socio-demographic and Occupational characteristics of the studied female employees:

GENERAL CHARACTERISTICS	(N =62) NO.	%
Age groups		
<30 years	28	45.2
≥30 years	34	**54.8**
Mean ± SD	34.9 ± 8.4	
Range	23 - 54	
Residence		
Urban	37	**59.7**
Rural	25	40.3
Marital status		
Un-married*	19	30.6
Married	43	**69.4**
Duration of work (years)		
<10ys	21	33.9
≥10ys.	41	**66.1**
Mean ± SD	11.1 ± 5.6	
Range	1 - 22	

***Un-married including single, divorced, and widower.**

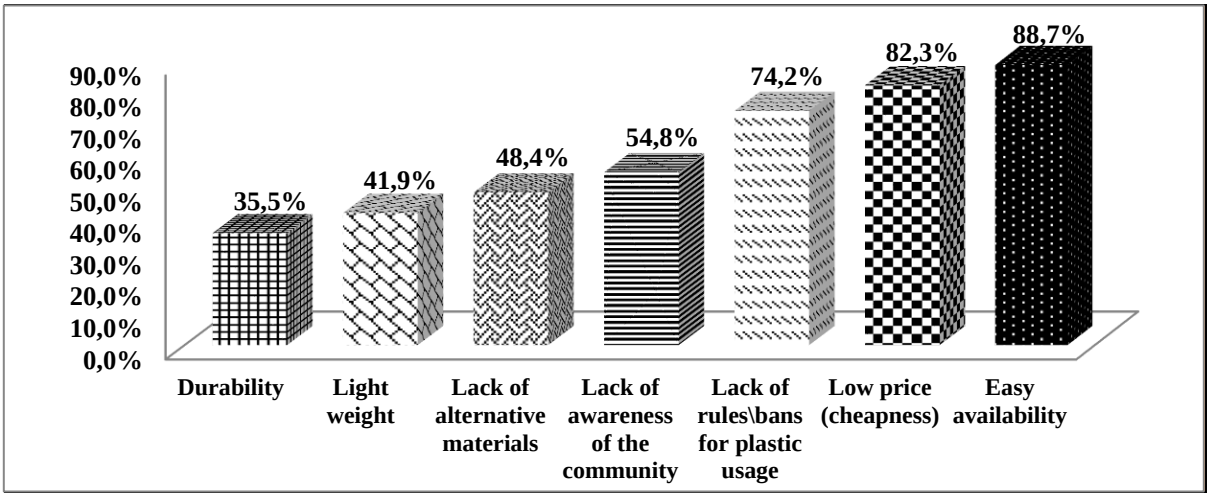

Figure 1. Factors attributed to the widespread utilization of plastics from participants' point of view

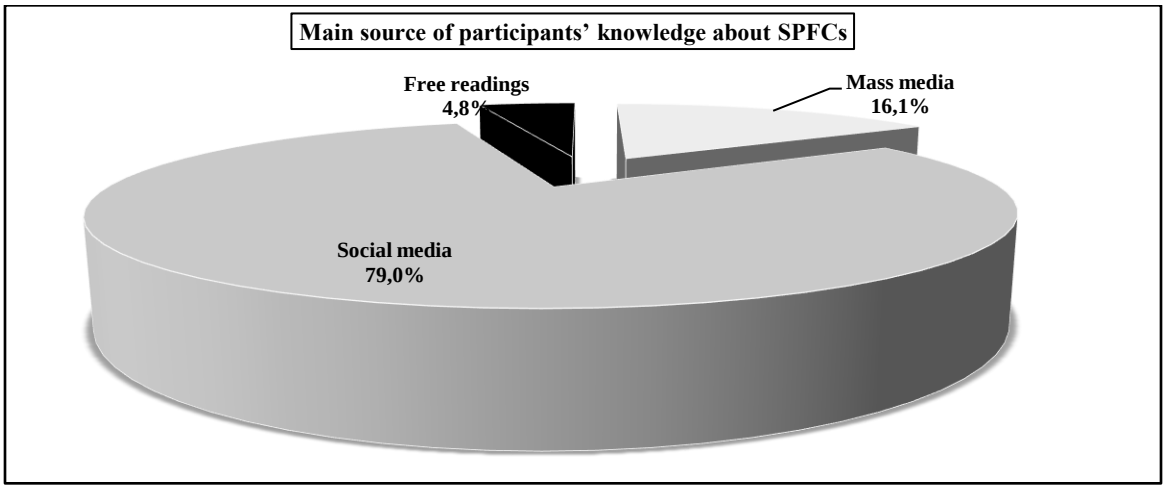

Figure 2. Source of information about uses of SPFCs

Results of this study showed that there was a significant improvement in the participants' knowledge about SPFCs (pre/post-intervention). Knowledge had highly significant improvement ($p<0.01$) after intervention in all the items except the item of types & symbols of plastics ($p<0.05$) (Table 2). As regards behavior, it was significantly changed after intervention ($p < 0.05$) except the item of separation of wastes before disposal ($p>0.05$) (Table 2).

Table 2. Participants' Knowledge and behavior regarding SFPCs (pre/ post Intervention)

Participants' Knowledge & behavior		Pre-test	Post-test	P value
		Mean ± SD	Mean ± SD	
Knowledge	Plastic hazards	36.88 ± 9.34	82.46 ± 13.39	**<0.01****
	Storing & Utilization	33.27 ± 7.38	83.55 ± 15.24	**<0.01****
	Types & Symbols	26.65 ± 9.13	52.78 ± 10.32	**<0.05***
	Alternatives	38.98 ± 8.14	87.42 ± 14.31	**<0.01****
	Reducing the hazards	49.67 ± 9.32	90.23 ± 18.10	**<0.01****
	Total knowledge score	**39.77 ± 9.23**	**81.44 ± 17.32**	**<0.01****
Behavior	Separation	26.55 ± 8.16	30.01 ± 11.32	0.053
	Disposal	32.27 ± 11.29	50.02 ± 16.47	**<0.05***
	Use	22.12 ± 7.24	60.47 ± 21.09	**<0.01****
	Check before Buy	23.79 ± 8.09	48.10 ± 17.54	**<0.05***
	Total behavior score	**29.62 ± 9.03**	**44.43 ± 12.87**	**<0.05***

***p<0.05, **p<0.01**

DISCUSSION

Plastic pollution has become an emerging global challenge attracting the whole world's attention. Production and widespread utilization of plastic products had remarkable negative impacts on the environment economies, ecosystems, and human health (Hammami et al., 2017).

Moreover, the COVID-19 pandemic has obviously increased the perceived threat of plastic pollution. Plastics have become an extensive global threat to the environment and human health, with studies predicting a twofold increase in plastic debris (including micro and nano-sized plastics) by 2030. However, such predictions will likely be aggravated by the exaggerated use and consumption of single-use plastics (including personal protective equipment such as masks and gloves) due to COVID-19 pandemic (Patrício Silva et al., 2021).

Recently in accordance with the marked industrial evolution in Egypt, there is a notable upsurge in plastic utilization. In the current study, the main causes of widespread utilization of plastics from the participants' points of view were easy availability, cheapness, and lack of rules\bans for plastic usage presented the highest scores (88.7%, 82.3%, 74.2%; respectively). These results are in line with that was documented in a recent study among secondary school students in Sharjah city, UAE. in which the participants choosing the high availability, low costs, and lack of awareness as the most important causes of the rise in plastic utilization (Hammami et al., 2017).

Hopefully in Egypt, Cotton bags have become available recently at grand chain markets summer 2019. Moreover, after vanishing for decades, Egyptian shops return to use paper bags in wrapping meat and fish. Several workshops began to advertise they were producing biodegradable carton straws instead of plastic straws. Unfortunately, there is still a gap in laws and regulations that control plastic utilizing, except at Red Sea governorate that bans single-use plastics in businesses such as restaurants, markets, and pharmacies since April 2019 (El-Gundy, 2019).

As a matter of fact, the levying of taxes on products is a golden tool to affect consumer behavior; usually leading to dramatic reduction in utilization (may reach 90%), littering, and environmental pollution (Convery et al., 2007). Obviously, Cheapness, easy availability, and lack of rules\bans for plastic usage are closely linked in a reciprocal relationship. Therefore, as suggested by Hammami et al. (2017); there is an urgent need for reviewing of plastic regulations. Applying rules\bans, supplying alternatives, increasing costs of plastic, and decreasing its availability might be a milestone for the policy makers to make a change regarding plastic utilization, particularly with the existence of public's acceptance and support which can be achieved through health education. Moreover, the rising hazard of plastic waste due to COVID-19 underlines the crucial need to reinforce plastic reduction policies (Patrício Silva et al., 2020). Education is a powerful strategy in the fight against plastic pollution. Education and awareness must therefore focus on practical activities, including a decline in the usage of hazardous products, waste reduction and an advancement in recycling rates (Prata et al., 2019). Therefore, formal or informal education should be valued as a long-range strategy to diminish plastics utilization (Ambrose et al., 2019).

Hence, this interventional study was conducted among 62 female employees in Zagazig University aiming to evaluate the effectiveness of a health education program on knowledge and behavior of SPFCs. Concerning source of information about plastics, more than three quarters of participants depended on social media (79%) followed by mass media (16%). This agreed with the study by Elsayed et al. (2019), where that internet and television were main sources of their information about SPFCs. This can be attributed to the high educational level of the participants and the wide accessibility to social media through mobile phones at any time and place. Moreover, this is an extra evident that internet and television is a crucial tool that facilitates spread of knowledge and increasing awareness of public regarding SPFCs. This is in line with Prata et al. (2019) who stated that the internet can be considered as a unique educational method as 80% of search queries is targeting gain of information, moreover social media generates opportunities to engage with information, now having a greater impact than other information outlets.

There is evidence that intervention programs based on health education can be effective in raising knowledge and therefore improving behavior (Bala et al., 2013). This was reflected in our study, which revealed a significant improvement of knowledge and behavior of participants regarding SPFCc after the implementation of the health education program.

The same results were reached in prior studies in developing countries; the Palestinian territory (Al-Khatib, 2015), Egypt (El-sayed et al., 2019) and India (Kaur et al., 2019) which reported that the participants had unsatisfactory knowledge and improper practice concerning harmless use of plastic food containers which significantly improved after implementation of health education program. That may be attributed to the lack of public awareness regarding SPFCs throughout developed countries. These results also support the hypothesis that lack of knowledge is the main cause for unhealthy handling of plastics; that agreed with Bortoleto et al., (2012) who stated that the knowledge of individuals is recognized as a critical and influential factor in practices. Moreover, Srinivasan et al., (2019) stated that a positive correlation exits between the knowledge and behavior where acquiring considerable knowledge on a particular subject will definitely have an impact on one's behavior. In Malaysia; after a year of 'no plastic campaign' applied, almost all (95%) participants became aware of that campaign, 85% supported the campaign by bringing their own washable food container and about half of them (46%) managed to reduce plastic usage, in addition to lesser number of garbage collections per week. Only less than 10% of the participants had negative feedback on the campaign (Abd Hamid et al., 2020).

In light of the present study, it can be concluded that revising regulations and laws might be a milestone for the policy makers to make a change regarding plastic utilization, particularly with the existence of public's awareness which can be achieved through health education. Applying proper health education program for SPFCs gave promising outcome concerning knowledge and behavior.

Health education programs involving social media, mass media and undergraduate curricula should be applied to encourage safe plastics utilization. Posters on safe plastic utilization and alternatives can be displayed up at public places as schools, universities, shopping malls and markets. Legislation and provision of healthy alternatives are inevitable approaches to imp-

rove outcome of such programs and promote health. This referred to the urgent need to put laws that regulate plastics utilization.

Strengths of the study

To our knowledge, this study was one of very few studies that put light on safe plastic utilization especially SPFCs in Egypt. Moreover, it is an interventional one and outcome evaluation involved both of knowledge and behaviors that were re-assessed after three months to test ability to retain received information and competency in implementing healthy behaviors.

Limitations

This study was conducted on a sample of female employees of relatively similar educational and socio-economic level. Moreover, the long-term effect of education program was not evaluated.

Human and animal rights and Informed consent: All procedures followed were in accordance with ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. An informed consent was obtained from all participants of this study. The female employees were told about the aim of the study, and they were informed that the data would be used for scientific purposes only. The female employees were also given the right to refuse or participate in the study.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES

1. Abd Hamid, I., & Yahaya, W. A. W. (2020). Zero-Waste Campaign: Assessment on University Student's Behaviour, Awareness, and Impact on Plastic Products. Malaysian Journal of Social Sciences and Humanities (MJSSH), 5(3), 24-29.
2. Afroz, R., Rahman, A., Masud, M. M., & Akhtar, R. (2017). The knowledge, awareness, attitude and motivational analysis of plastic waste and household perspective in Malaysia. *Environmental science and pollution research international*, *24*(3), 2304–2315. https://doi.org/10.1007/s11356-016-7942-0
3. Al-Khatib, I. A., Kontogianni, S., Abu Nabaa, H., Alshami, N., & Al-Sari', M. I. (2015). Public perception of hazardousness caused by current trends of municipal solid waste management. *Waste management (New York, N.Y.)*, *36*, 323–330. https://doi.org/10.1016/j.wasman.2014.10.026
4. Ambrose K.K., Box C., Boxall J., Brooks A., Erikse M., Fabres J., Fylakis G., Walker T.R. (2019). Spatial trends and drivers of marine debris accumulation on shorelines in South Eleuthera, The Bahamas using citizen science. Mar. Pollut. Bull;142:145–154. doi:10.1016/j.marpolbul.2019.03.036.
5. Bala, M. M., Strzeszynski, L., & Topor-Madry, R. (2017). Mass media interventions for smoking cessation in adults. *The Cochrane database of systematic reviews*, *11*(11), CD004704. https://doi.org/10.1002/14651858.CD004704.pub4.
6. Bortoleto, A. P., Kurisu, K. H., & Hanaki, K. (2012). Model development for household waste prevention behaviour. *Waste management (New York, N.Y.)*, *32*(12), 2195–2207. https://doi.org/10.1016/j.wasman.2012.05.037
7. Convery F, McDonnell S, Ferreira S (2007) The most popular tax in Europe? Lessons from the Irish plastic bags levy. Environ Resour Econ 38(1):1–11. https://doi.org/10.1007/s10640- 006-9059-2
8. El-Gundy Z. (2019, Sep 23). Egypt in the process of going plastic-free: The little things that make a big difference. Ahramonline. Retrieved from http://english.ahram.org.eg/NewsContent/1/151/351327/Egypt/Features/Egypt-in-process-of-going-plasticfree-The-litt.aspx

9. El-sayed, Y., Marzouk, S. A., Mahmoud, T. M., & El Magrabi, N. M. (2019). Effectiveness of Educational Intervention on Knowledge, Attitude and Practices of Children's Mothers Regarding the Safe Use of Plastic Containers. American Journal of Nursing Research, 7(5), 723-731.
10. Foschi, E., D'Addato, F., & Bonoli, A. (2020). Plastic waste management: a comprehensive analysis of the current status to set up an after-use plastic strategy in Emilia-Romagna Region (Italy). *Environmental science and pollution research international*, 10.1007/s11356-020-08155-y. Advance online publication. https://doi.org/10.1007/s11356-020-08155-y.
11. Hammami, M., Mohammed, E. Q., Hashem, A. M., Al-Khafaji, M. A., Alqahtani, F., Alzaabi, S., & Dash, N. (2017). Survey on awareness and attitudes of secondary school students regarding plastic pollution: implications for environmental education and public health in Sharjah city, UAE. *Environmental science and pollution research international*, *24*(25), 20626–20633. https://doi.org/10.1007/s11356-017-9625-x.
12. Kaur, S., Jeganathan, J., & Kaur, M. (2019). Effectiveness of Structured Teaching Programme on Knowledge regarding Health Hazards of Plastic use among Students–A Quasi Experimental Study. Nurs Health Care Int J, 3(2), 000180.
13. Patrício Silva, A.L., Prata, J.C., Walker, T.R., Campos, D., Duarte, A.C., Sores, A.M.V.M., Barcelò, D., Rocha-Santos, T. (2020): Rethinking and optimising plastic waste management under COVID-19 pandemic: policy solutions based on redesign and reduction of single-use plastics and personal protective equipment. Sci. Total Environ., 742 (2020), p. 140565. https://doi.org/10.1016/j.scitotenv.2020.140565
14. Patrício Silva, A.L., Prata, J.C., Walker, T.R., Duarte, A.C., Ouyang, W., Barcelò, D., Rocha-Santos, T. (2021): Increased plastic pollution due to COVID-19 pandemic: challenges and recommendations. Chem. Eng. J., 405 (2021), p. 126683. https://doi.org/10.1016/j.cej.2020.126683
15. Prata, J. C., Silva, A., da Costa, J. P., Mouneyrac, C., Walker, T. R., Duarte, A. C., & Rocha-Santos, T. (2019). Solutions and Integrated Strategies for the Control and Mitigation of Plastic and Microplastic Pollution. *International journal of environmental research and public health*, *16*(13), 2411. https://doi.org/10.3390/ijerph16132411

16. Prata, J.C., Silva, A.L.P., Walker, T.R., Duarte, A.C., Rocha-Santos, T., (2020). COVID-19 pandemic repercussions on the use and management of plastics. Environ. Sci. Technol.54, 7760–7765. https://doi.org/10.1021/acs.est.0c02178.
17. Priya, A., Toppo, M., Singh, D., Singh, N., & Sethia, S. (2016). A study to assess the impact of education intervention on the knowledge regarding hazards of plastic food containers in school children. Int J Community Med Public Health, 3(8), 2275-80.
18. Rhodes, C. J. (2019). Solving the plastic problem: From cradle to grave, to reincarnation. Science Progress, 102(3), 218-248.
19. Ritchie H. and Roser M. (2020) - "Plastic Pollution". *Published online at OurWorldInData.org.* Retrieved from: 'https://ourworldindata.org/plastic-pollution' [Online Resource].
20. Srinivasan, N., Swarnapriya, V., Felix, A. J. W., & Pravin, T. (2019). Assessment of knowledge and practice on plastics among the professional course students of Annamalai University, Tamil Nadu. International Journal of Community Medicine and Public Health, 6(2), 510-514.
21. Thompson, R. C., Moore, C. J., Vom Saal, F. S., & Swan, S. H. (2009). Plastics, the environment and human health: current consensus and future trends. Philosophical Transactions of the Royal Society B: Biological Sciences, 364(1526), 2153-2166.

APPENDIX

Table (A): Knowledge regarding SPFCs (27 items)

Hazards of unhealthy plastics (7 items)
1. Plastic waste causes health hazards 2. Plastics are dangerous for humans/planet. 3. Plastics are biodegradable. 4. Plastics are recyclable. 5. Have you heard of Bisphenol A? 6. BPA is used to make what type of Plastic. 7. Plastics are banned in different countries
Storing & utilization (6 items)
1. Storing and using hot food items in plastics are injurious to health. 2. Did colored plastic bags use for transporting and handling bread? 3. Plastic used for packaging medicines, milk, and handling of solid waste is excluded from the ban. 4. Do you know that bottled water should be used to drink baby once? 5. Do you know that child's food should not be kept in plastic dishes in the refrigerator? 6. Do you know that plastic utensils should not be used for heating foods in the microwave?
Types & symbols of plastics (8 items)
1. Do you know that there a difference in the prices of safe and unsafe plastic containers? 2. Do you know that there is a safe plastic and another hazardous? 3. Is there a symbol indicating the type of plastic below the packaging? 4. Do you know the types of plastic and their symbols? 5. Is there any plastic symbol on the infant's bottle feeding? Mention the safe number below it. 6. Is there any plastic symbol on your infant's or child's toys? Mention the safe number below them. 7. Is there any plastic symbol on your child's food storage container? Mention the safe number. 8. Is there any plastic symbol on your child's food dishes? Mention the safe number
Plastics' alternatives (3 items)
1. Cloth bag 2. Paper bag 3. Jute bag
Methods for reducing plastics hazards (3 items)
1. Reduce 2. Reuse 3. Recycle

Table (B): Behavior regarding SPFCs (14 items)

Waste separation (1 item)
At home, do they separate waste of plastics, paper, glass, etc., before their disposal?
Disposal (1 item)
Method of disposal of plastic wastes (multiple responses allow) Throw in drain Burning Throwing in open space Dump on dumping site Dustbin/public garbage bin Reuse Sell to agent for recycle. Burying
Uses (8 items)
1. Use of Plastic Container 2. Use of Substitutes of Plastic 3. Eat or drink in Plastic Containers. 4. Use bottle feeding for the child does not have any symbols*. 5. Replace infant bottle formula with baby if it changes in color or smell. 6. Keep food inside the refrigerator in plastic containers with no symbols*. 7. Put hot food in plastic containers with no symbols*. 8. Use natural water bottles more than once*
Check before buying (4 items)
1. Check the type of Plastic before buying to know safe symbols. 2. Buy a plastic container without a symbol*. 3. Buy unsafe plastic containers because of their cheap prices*. 4. Buy plastic-colored toys without a symbol*

(*) Negative statement.