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Research article

Assessment of knowledge, attitude and practice towards sustainable consumption among university students in Selangor, Malaysia

Nurul Ruwaidah Ahamad*, Mariani Ariffin

Department of Environmental Management, Faculty of Environmental Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

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ABSTRACT

A crucial challenge to achieve sustainable development is counteracting the current unsustainable consumption. Unsustainable consumption has contributed to resource exhaustion, environmental pollution and climate change problems that we face today. The key principle of sustainable consumption is to enhance the quality of life without causing further environmental degradation while securing the future generation's needs. This paper assesses the level of knowledge, attitude and practice of university students towards sustainable consumption. A validated and pilot-tested questionnaire was distributed to 390 students and results were analysed using SPSS. The study found significant relationships between knowledge, attitude and practice towards sustainable consumption using Pearson's Chi-square test for independence. The findings further showed there is a high level of knowledge but moderate level of attitude and practice among the students. The study discovered social media is the primary source of getting environmental knowledge for them. The findings also showed that urgent changes in perspective is needed to reduce unsustainable consumption. Associations between KAP were significant at significant level of p < 0.05. Undertaken at one of the top public universities in Malaysia, this paper aims to shed light on the current situation of KAP on sustainable consumption. This study provides indicator of where their consumption patterns stand and insights for policy makers to better consider sustainable consumption to achieve sustainable development.

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1. Introduction

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15 16 Recently, the World Wildlife Federation (WWF) (2016) reported that we currently need the bio-capacity of 1.6 Earths to cater the goods and services that we demand each year. This makes us ponder upon the sustainability of our present consumption patterns. Additionally, the global world population is expected to reach 9 billion people by 2050. If we were to continue our consumption patterns, how can we affirm that present-day resources will be sufficient to last for future generations?

Our current unsustainable consumption can be accounted for resource exhaustion, environmental pollution and deterioration as well as climate change problems that our world is facing today (Liu et al., 2015; Tan and Lau, 2009). These environmental impacts increase alongside with consumption (Mont et al., 2014). This is one of the challenges that needs to be addressed in order to achieve sustainable development. Additionally, the rising awareness of these increasing environmental issues has also led to petitions from international communities to take action in adopting principles of sustainable development (Wright and Horst, 2013). It

* Corresponding author. E-mail address: eddahamad@gmail.com (N.R. Ahamad). is even listed as a goal under the 2030 Agenda for Sustainable Development. The agenda specifically expressed determination of 'protecting the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources as well as acting on climate change to support the needs of present and future generations' (United Nations, 2015).

One of the key principle of the concept of Sustainable Consumption (SC) is to enhance the quality of life that does not contribute further to environmental degradation alongside securing the needs of future generations. SC seemed to be a recently developed concept that came into light as the state of our environment exacerbate, but the concept was actually set forth about 20 years ago at the Earth Summit, 1992. There have been increasing amount of studies on SC for the past few years. Shibin et al. (2016) discovered that 50% of published articles during the last 5 years were in fact concerning SC itself. However, they also stated that further thorough research is still essential to heighten awareness of SC by means of programs and policies.

Although challenging to any governments, it is necessary to promote environmental actions among citizens by encouraging participation to foster environmental behavior that would help in reducing negative impacts to both the environment and population (Ahmad et al., 2010). Governments should advocate effective

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Nejati, 2013).

52 53 55 strategies and the implementation of policies to steer production and consumption patterns towards sustainability (Vantamay, 2018). This study prioritizes university students as the focal point of investigation because they are going to become leaders from this day forward especially in leading the movement to counteract global ecological collapse (Moore, 2005). They are progressively seen as crucial conduit for fostering sustainable behavior and hence, contributing to the global agenda of sustainable development (Tuncer, 2008). As a matter of fact, more and more universities are now pledging themselves to sustainability (Nejati and

1.1. International measures on sustainable consumption and produc-

The concept of sustainable consumption and production was first raised in Agenda 21, specifically in Chapter 4. It is an action plan and a comprehensive blueprint that is adaptable in striving towards sustainable development (United Nations, 1997). The agenda was brought forward at a global environmental conference, commonly known as the Earth Summit, held in Rio de Janeiro in 1992. It calls for both action and promotion of consumption patterns that minimize environmental stress and fulfill the basic needs of humanity (Vittersø and Tangeland, 2015). The Chapter 4 particularly contained two programme areas: (1) focusing on unsustainable patterns of production and consumption, and, (2) developing national policies and strategies to encourage changes in unsustainable consumption patterns (United Nations Sustainable Development, 1992).

In addition, the Sustainable Development Goals (SDGs) were introduced and presented at the United Nations Conference on Sustainable Development in Rio de Janeiro just two years ago. The SDGs are a set of universal goals, targets and indicators that members of the United Nations will use to frame their agendas and policies over the next 15 years (Hak et al., 2015). Altogether, there are a total of 17 distinctive goals and the 12th goal is on responsible consumption and production. This makes the concept of SCP to even be a more vital topic to be researched about to assist in reaching the sustainable development goal.

1.2. Defining sustainable consumption

Szerenyi et al. (2011) stated that determining what sustainable consumption should mean is not straightforward as there are a substantial number of other definitions of the concept. These definitions are interpreted differently by different researchers (Quoquab and Mohammad, 2017) and institutional bodies. So, it is imperative for us to understand SC by defining the concept first and foremost.

As proposed during the Oslo Symposium on Sustainable Consumption in 1994, the working definition of sustainable consumption is "the use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations" (Oslo Symposium, 1994). The concept calls for a wise consumption habit practices whereby the post-consumption consequences in the present and the future is taken into consideration in an individual (Quoquab and Mohammad, 2017). Meanwhile, Wolff and Schonherr (2011) suggested that the concept encourages a socially and environmentally responsible way of buying, using and disposing goods and services. It is the avoidance of over indulging in purchase alongside encouraging the cautious use of goods and services (Quoquab and Mohammad, 2017).

The definition also includes the important aspect of resource efficiency that is utilizing less resource inputs in order to obtain

equal or better output with an aim the future generations are not deprived of them (United Nations Environment Programme, 2015). A recent report backs up the significance of resource efficiency whereby it is predicted that over the next 35 years, the use of natural resources will increase from 85 billion to 186 billion tonnes thereby raising serious questions on the ability of Earth's resources in meeting the needs of human societies (United Nations Environment Programme, 2017).

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From the definition, it can be argued that SC strives for an enhanced quality of life, resource efficiency, the reduction in waste and pollution as well as meeting future needs. Quoquab and Mohammad (2017) pointed out that SC ensures at least 3 elements which are quality of life, environmental protection and meeting needs of the future generation. Lim (2017) also identified the common aspects of SC to be the meeting of basic needs and maintaining current needs without compromising the ability of future generations to meet their needs. Collectively the constituents of SC gathered are improving quality of life, assuring environmental protection, resource efficiency and meeting the needs of future generation. These constituents are taken into account when selecting items in developing the questionnaire for the current study.

1.3. Knowledge, attitude and practice (KAP)

The Knowledge, Attitude and Practice (KAP) survey was first applied to understand family planning and population studies in the 1950s (Launiala, 2009). It measures the Knowledge, Attitude and Practices of a community (Kaliyaperumal, 2004). It is conducted to investigate human behavior related to a certain topic — sustainable consumption in this case, and simultaneously identifies what people know (knowledge), how they feel (attitude) and what they do (practice) (Vandamme, 2009). Additionally, Kaliyaperumal (2004) refers knowledge as 'understanding of any given topic', attitude as 'feelings towards it, along with predetermined opinions' and practice as 'ways in which they demonstrate their knowledge and attitude through their actions'.

Sybille (2011) argued KAP surveys show not only characteristics in knowledge, attitude and behaviors but also the conception each person has on the subject matter. It has the potential to enhance knowledge, attitude and practices in a way that it identifies what is known and done about the different subjects (Sybille, 2011). Even though the reliability, validity and measurements of KAP have been criticized in terms of data and intensity of opinions and attitudes, they have been widely used to explore human behavior in different fields (Ahmad et al., 2015). In fact, recent KAP studies have been employed in various environmental studies. These include measuring the public's knowledge, attitude and practice towards recycling activity (Yaziz and Rahman, 2015; Nordin and Saliluddin, 2016), landslides (Lateh and Ahmad, 2011), solid waste management (Babaei et al., 2015; Barloa et al., 2016), solid waste open burning (Ariffin and Wan Yacoob, 2017), drinking water quality (Razak et al., 2015) and sustainable swiftlet ranching (Vaiappuri, 2013). In other fields, the studies include malaria during pregnancy (Launiala, 2009), e-learning (Visalam Kumar et al., 2015), disaster management among emergency medical personnel (Ahayalimudin and Osman, 2016), food safety and hygiene (Firdaus Siau et al., 2015; Al-Shabib et al., 2017; Zanin et al., 2017) and tobacco cessation (Kattoor et al., 2017).

A KAP survey proposes that knowledge forms attitude, and both knowledge and attitude are the building blocks for practice (Ahmad et al., 2015). According to Mont et al. (2014) and Wright and Horst (2013), the transition towards a sustainable society needs an active collaboration, obligation and empowerment of all relevant stakeholders. They do not only bear expertise but also both insight and foresight to diagnose future changes as well to advance and implement innovative ideas. Geng et al. (2016) further

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