



## ENVIRONMENTAL AWARENESS OF THE IMPACT OF THE TEXTILE INDUSTRY ON THE ENVIRONMENT – STUDENTS’ ATTITUDES

Professional paper  
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**ABSTRACT:** The textile industry has a significant impact on the environment through the consumption of water, energy, and chemicals, as well as through the generation of textile waste. The aim of this paper is to examine students' environmental awareness of the impact of the textile industry on the environment, as well as their attitudes and willingness to adopt more sustainable consumer behavior. The research was conducted using a survey method on a sample of 57 students from North Mitrovica. The questionnaire included questions about the frequency of clothing purchases, awareness of the environmental consequences of textile production, willingness to buy sustainable products, and participation in recycling activities. The results show that students generally recognize the negative impact of the textile industry, but that environmental criteria are still not dominant when purchasing clothing. It is concluded that additional education and clearer consumer information about sustainable textile products are needed.

**Keywords:** textile industry, environment, environmental awareness, students.

## EKOLOŠKA SVEST O UTICAJU TEKSTILNE INDUSTRIJE NA ŽIVOTNU SREDINU – STAVOVI STUDENATA

**APSTRAKT:** Tekstilna industrija ima značajan uticaj na životnu sredinu kroz potrošnju vode, energije i hemikalija, kao i kroz nastanak tekstilnog otpada. Cilj ovog rada je da se ispita ekološka svest studenata o uticaju tekstilne industrije na životnu sredinu, kao i njihovi stavovi i spremnost za održivije potrošačko ponašanje. Istraživanje je sprovedeno primenom anketne metode na uzorku od 57 studenata iz Severne Mitrovice. Upitnik je obuhvatio pitanja o učestalosti kupovine odeće, informisanosti o ekološkim posledicama tekstilne proizvodnje, spremnosti za kupovinu održivih proizvoda i učešću u akcijama reciklaže. Rezultati pokazuju da studenti uglavnom prepoznaju negativan uticaj tekstilne industrije, ali da ekološki kriterijumi još uvek nisu dominantni pri kupovini odeće.



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*Zaključuje se da je potrebna dodatna edukacija i jasnije informisanje potrošača o održivim tekstilnim proizvodima.*

**Ključne reči:** *tekstilna industrija, životna sredina, ekološka svest, studenti.*

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## 1. INTRODUCTION

The textile industry is one of the significant economic sectors, but at the same time it is a sector that creates considerable environmental pressures. The system of production and consumption of textiles is highly globalised with millions of producers and billions of consumers spread across the world in highly linear value chains involving raw material extraction, production, transportation, consumption and after-use disposal [4]. The textiles industry employs millions of people worldwide, making it among the largest in the world and an important part of Europe's manufacturing industry. However, textile production and consumption cause significant environmental, climate and social impacts by using resources, water, land and chemicals and emitting greenhouse gases and pollutants [2]. Textile consumption in the EU increased from 17 kg per person in 2019 to 19 kg per person on average in 2022. At the same time, around 12 kg of clothing per person is dumped each year in the EU [3].

## 2. ENVIRONMENT AND CIRCULARITY OF TEXTILE

In the context of Serbia, as an upper-middle-income economy and a country in the process of aligning its environmental policies with European Union standards, the issue of sustainable textile consumption is particularly important. Although environmental regulations and circular economy principles are increasingly emphasized, their practical implementation also depends on the awareness and behavior of consumers.

To achieve a successful circular economy, circularity principles must be integrated across every stage of the value chain, spanning from initial design and production to the final consumer [1]. The modern textile industry focuses on preserving the value of garments, fabrics, and fibers, ensuring they are reintroduced into the system once their utility is maximized. This requires shifting from the resource-heavy and waste-generating "fast fashion" model toward "slow fashion." This sustainable alternative encourages purchasing second-hand items, supporting local small-scale manufacturers, repairing existing wardrobe pieces, and investing in high-quality clothing with a longer lifespan. By reducing production volumes, slow fashion delivers superior quality garments manufactured under ethical working conditions, while significantly minimizing waste.

Young people, especially students, represent an important group in this process, since their purchasing habits, attitudes toward sustainability, and willingness to change consumption patterns may influence future demand for environmentally responsible textile products. Therefore, examining students' attitudes can provide useful insight into the level of environmental awareness related to textile consumption.



## 2. METHODOLOGY

The research was conducted with the aim of examining students' environmental awareness of the impact of the textile industry on the environment, as well as identifying their attitudes, habits, and willingness to adopt more environmentally responsible behavior when purchasing and using clothing. Special attention was paid to students' awareness of the negative consequences of textile production, the frequency of clothing purchases, their attitudes toward environmentally friendly textile products, and the barriers to their wider use.

The survey method was applied in the research. A structured questionnaire, designed for the purposes of this paper, was used as the research instrument. The questionnaire contained closed-ended questions and statements that respondents evaluated using a five-point Likert scale. This made it possible to measure the degree of respondents' agreement with statements related to environmental awareness, consumer habits, and willingness to engage in sustainable behavior. The research sample consisted of 57 students from North Mitrovica. The respondents were selected as the target group because students represent a young, educated population that actively consumes textile products and may play an important role in the future development of sustainable consumption patterns. The research was anonymous, and participation was voluntary. The collected data were processed using descriptive statistics. The results are presented through the percentage distribution of responses for each individual question and statement. In Table 1 are presented basic demographic data of respondents.

**Table 1:** Basic demographic data of respondents

| X                  | n  | %     |
|--------------------|----|-------|
| <b>Age</b>         |    |       |
| 19-24              | 45 | 78,95 |
| 25-30              | 12 | 21,05 |
| <b>Gender</b>      |    |       |
| Male               | 25 | 43,86 |
| Female             | 32 | 56,14 |
| <b>Study level</b> |    |       |
| Academic           | 47 | 82,46 |
| professional       | 10 | 17,54 |

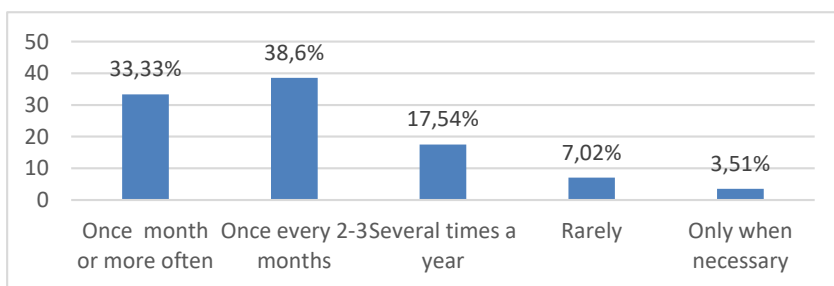
A limitation of the research is reflected in the relatively small and locally limited sample; therefore, the results should be interpreted as indicative rather than generally applicable to the entire student population.

## 3. RESULTS AND DISCUSSION

For the question “How often do you buy clothes?” on *Figure 1*, the largest share of respondents, 38.60%, stated that they buy clothes once every 2–3 months. A slightly lower

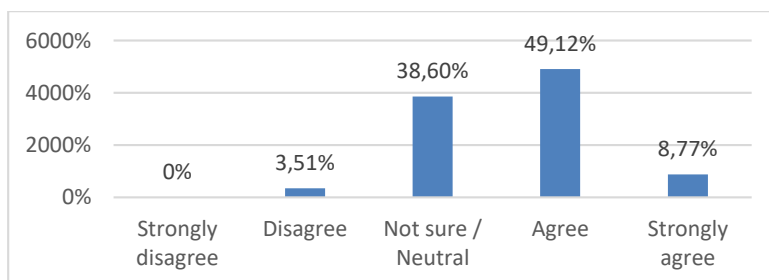
percentage, 33.33%, reported buying clothes once a month or more often. These results indicate that a significant proportion of the student population purchases clothes relatively frequently. A moderate frequency of clothing purchases was recorded among 17.54% of respondents, who buy clothes several times a year. A smaller number of students stated that they buy clothes rarely (7.02%), while only 3.51% of respondents buy clothes only when necessary.

The obtained results show that most students demonstrate noticeable consumer activity regarding clothing purchases. In total, 71.93% of respondents buy clothes at least once every 2–3 months (*Fig. 1*), which may indicate the strong influence of fashion trends, clothing availability, and youth consumer habits. From the perspective of sustainable development, this pattern of consumption is important because more frequent clothing purchases may contribute to increased consumption of textile products, the generation of textile waste, and greater pressure on the environment. On the other hand, the relatively small percentage of respondents who buy clothes rarely or only when necessary suggests that a more sustainable form of consumption is not dominant among students. These findings confirm the need to strengthen young people's environmental awareness, particularly regarding the consequences of excessive clothing purchases, fast fashion, and the importance of extending the life cycle of textile products.



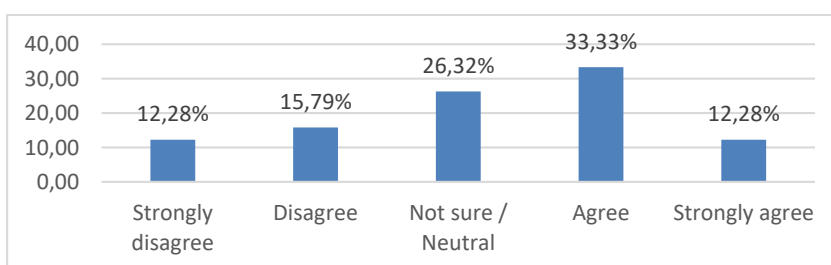
**Figure 1:** How often you buy clothes?

The results show that most respondents are aware that the textile industry can have a negative impact on the environment, as 49.12% of students agree and 8.77% strongly agree with the statement (*Fig.2*). Overall, 57.89% of respondents express a positive attitude, indicating a certain level of awareness of the environmental consequences of the textile industry. However, a significant percentage of students, 38.60%, selected the neutral or unsure option, which suggests that part of the student population may be insufficiently informed or may not clearly understand this issue. Only 3.51% of respondents disagree with the statement, while none strongly disagree. These results indicate that students generally have a basic awareness of the negative environmental impact of the textile industry, but they also show that there is room for further education on this topic.



**Figure 2:** I am aware of the fact that the textile industry can have a negative impact on the environment

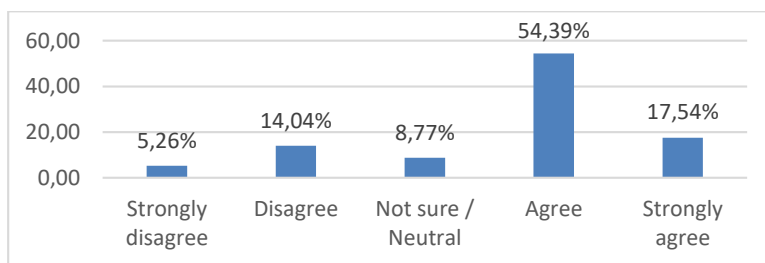
The results show that students' opinions on this statement are divided. On *Figure 3* there are presented the highest percentage of respondents, 33.33%, agree that clothing production can require significant consumption of water, energy, and chemicals. An additional 12.28% strongly agree with this statement. This means that a total of 45.61% of students demonstrate awareness of the resource-intensive nature of clothing production. However, a significant share of respondents, 26.32%, selected a neutral response, indicating uncertainty or insufficient information about this aspect of the textile industry. At the same time, 28.07% of respondents disagree or strongly disagree with the statement, which shows that a certain number of students lack knowledge about the consumption of water, energy, and chemicals in clothing production. These results indicate the need for additional education of students about the environmental consequences of textile production, especially regarding the consumption of natural resources and the use of chemicals.



**Figure 3:** I know that clothing production can require significant consumption of water, energy, and chemicals

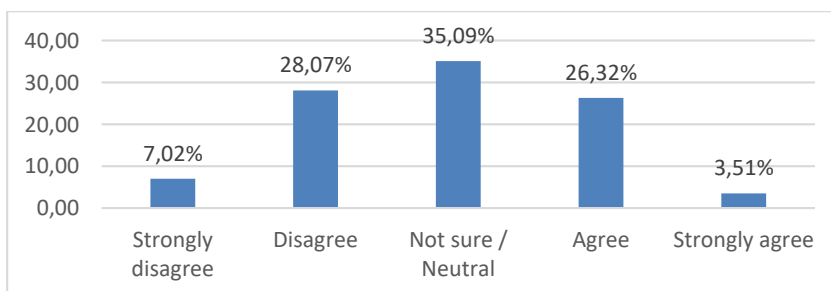
The results show that most respondents pay attention to the composition of the material when buying clothes (*Fig. 4*). The highest percentage of students, 54.39%, agree with the statement, while an additional 17.54% strongly agree. This means that a total of 71.93% of respondents show interest in the material composition of the clothes they purchase. A neutral attitude was expressed by 8.77% of respondents, while 19.30% disagree or strongly

disagree with the statement. These results indicate that most students show a certain level of attention to the characteristics of textile products, which may represent a good basis for developing more environmentally responsible consumer habits. However, the fact that nearly one fifth of respondents do not pay attention to material composition points to the need for additional information about the importance of materials, the origin of textiles, and their impact on the environment.



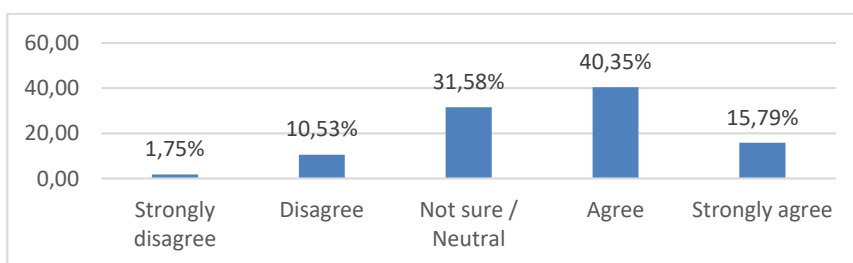
**Figure 4:** When buying clothes, I pay attention to the composition of the material

The results show that students pay considerably less attention to the environmental friendliness of a product when buying clothes (Fig. 5). The highest percentage of respondents, 35.09%, expressed a neutral attitude, which indicates uncertainty or insufficient information about how to recognize an environmentally friendly textile product. Total of 26.32% of respondents agree with the statement, while only 3.51% strongly agree, meaning that a total of 29.83% of respondents pay attention to this aspect of purchasing. In contrast, 28.07% disagree and 7.02% strongly disagree, meaning that a total of 35.09% of students do not pay attention to the environmental friendliness of clothing. These results indicate that, although a certain level of environmental awareness exists among some students, environmental criteria are still not a dominant factor when buying clothes. This confirms the need for additional education, clearer labeling of sustainable products, and greater availability of information about the environmental impact of textile products.



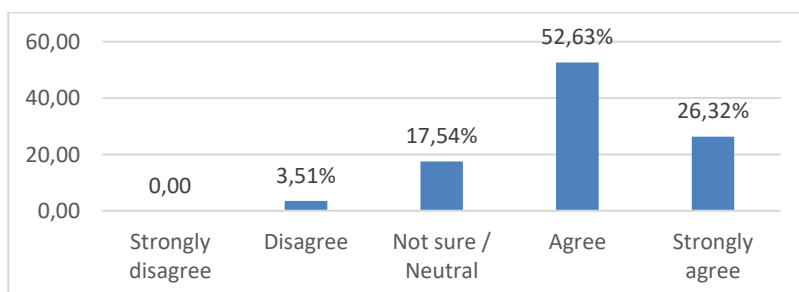
**Figure 5:** When buying clothes, I pay attention to whether the product is environmentally friendly

On Figure 6, we show a relatively high level of students' willingness to buy clothes made from recycled or sustainable textile materials, even if they are more expensive. 40.35% of respondents agree with the statement, while 15.79% strongly agree, which means that a total of 56.14% of students express a positive attitude toward purchasing sustainable clothing despite a higher price. A neutral attitude was expressed by 31.58% of respondents, which may indicate uncertainty or that the decision depends on the actual price difference, product quality, and available information. A smaller percentage of respondents, 12.28%, disagree or strongly disagree with the statement. These findings indicate that most students are willing to adopt more environmentally responsible consumer behavior, but also that price remains an important factor that may influence the final purchasing decision.



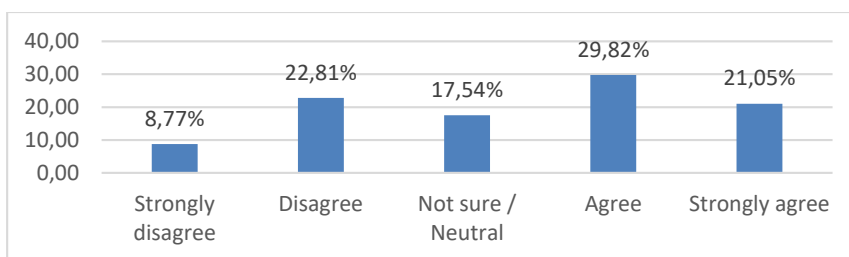
**Figure 6:** I am willing to buy clothes made from recycled or sustainable textile materials, even if they are more expensive.

The results show a high level of students' willingness to participate in campaigns for collecting, donating, or recycling old clothes (Fig. 7). More than half of the respondents, 52.63%, agree with the statement, while 26.32% strongly agree. This means that a total of 78.95% of students express a positive attitude toward such activities. A neutral attitude was expressed by 17.54% of respondents, while only 3.51% disagree, and none of the respondents strongly disagree. These results indicate that students show a strong willingness to take part in practical sustainability-related activities connected with textiles. This finding may provide a good basis for organizing campaigns for collecting, exchanging, donating, and recycling clothes at faculties and within the local community.



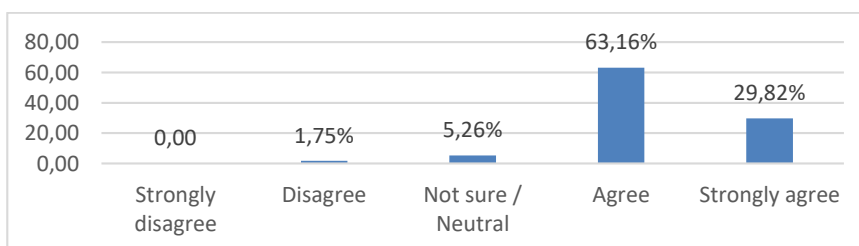
**Figure 7:** I am willing to participate in campaigns for collecting, donating, or recycling old clothes

Figure 8 show that half of the respondents recognize price as an important barrier to buying environmentally friendly clothing. 29.82% of students agree with the statement, while 21.05% strongly agree, which makes a total of 50.87% of respondents. A neutral attitude was expressed by 17.54% of students, which may indicate that price is not the only decisive factor, but that the decision also depends on quality, availability, and trust in environmental labels. On the other hand, 22.81% of respondents disagree and 8.77% strongly disagree with the statement, meaning that a total of 31.58% do not consider price to be the main barrier. These results indicate that price is a significant factor when purchasing sustainable clothing, but not the only barrier. Therefore, other factors such as information, product availability, and consumer trust in manufacturers' claims should also be considered.



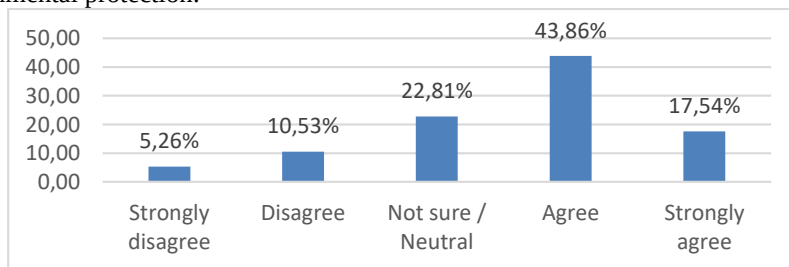
**Figure 8:** Price is the main barrier to buying environmentally friendly clothing.

The results on Figure 9 show a very high level of agreement among students with the statement that clothing manufacturers should provide clearer information to consumers about the environmental impact of their products. The highest percentage of respondents, 63.16%, agree with this statement, while 29.82% strongly agree. Overall, as many as 92.98% of respondents support the need for clearer information about the environmental impact of textile products. A neutral attitude was expressed by 5.26% of respondents, while only 1.75% disagree, and none of the respondents strongly disagree with the statement. These results indicate that students recognize the importance of transparency in the textile industry and believe that clearer information can contribute to more responsible consumer behavior when purchasing clothing.



**Figure 9:** I believe that clothing manufacturers should provide clearer information to consumers about the environmental impact of their products

The results shown on *Figure 10* that most students believe that individuals can contribute to reducing the negative environmental impact of the textile industry through their consumer habits. 43.86% of respondents agree with the statement, while 17.54% strongly agree, which means that a total of 61.40% of students express a positive attitude. A neutral response was given by 22.81% of respondents, which may indicate a certain level of uncertainty or an insufficiently clear understanding of the personal role of consumers in this process. On the other hand, 10.53% of respondents disagree and 5.26% strongly disagree with the statement, meaning that a total of 15.79% do not recognize a significant impact of individual consumer habits. These results indicate that students have a developed awareness of the importance of personal responsibility and the role of consumers in improving the sustainability of the textile industry, but also that there is a need to further strengthen understanding of the relationship between everyday purchasing decisions and environmental protection.



**Figure 10:** I believe that individuals can contribute to reducing the negative environmental impact of the textile industry through their consumer habits.

#### 4. CONCLUSION

The research showed that students buy clothes relatively often, since the largest share of respondents purchase clothes once a month or once every two to three months. This consumption pattern may be associated with the influence of fashion trends, the availability of clothing, and the habits of young consumers. From the perspective of sustainable development, frequent clothing purchases may contribute to increased consumption of textile products, the generation of textile waste, and greater pressure on the environment. A positive finding is the fact that most students pay attention to the composition of materials when buying clothes. However, a significantly smaller percentage of respondents pay attention to whether the product is environmentally friendly. This indicates that students take into account certain characteristics of the clothing they purchase, but that environmental criteria are still not a dominant factor in making purchasing decisions. The reasons for this may include a lack of information, unclear product labeling, insufficient availability of sustainable clothing, or the limited purchasing power of the student population.

The results also show that students are willing to adopt more environmentally responsible behavior. More than half of the respondents are willing to buy clothes made from recycled or sustainable textile materials, even if they are more expensive. A particularly high level



of willingness was observed regarding participation in campaigns for collecting, donating, and recycling old clothes. This finding indicates that students can be an important target group for organizing activities aimed at reducing textile waste and promoting sustainable consumption.

Price proved to be a significant, but not the only, barrier to purchasing environmentally friendly clothing. In addition to price, product availability, trust in manufacturers' claims, and the quality of information provided to consumers also play an important role. A very high percentage of respondents believe that clothing manufacturers should provide clearer information to consumers about the environmental impact of their products. This confirms the importance of transparency, clear labeling, and reliable information in the process of making responsible consumer decisions.

Based on the obtained results, it can be concluded that students have a basic level of environmental awareness regarding the impact of the textile industry on the environment, as well as a willingness to engage in certain forms of sustainable behavior. However, further efforts are needed to educate students about the specific environmental consequences of textile production, the importance of responsible purchasing, textile recycling, and extending the life cycle of clothing. It is especially important to strengthen the understanding of the relationship between individual consumer habits and the overall negative impact of the textile industry on the environment.

In practical terms, the research results indicate the need to organize educational campaigns, clothing collection and recycling initiatives, as well as to introduce clearer labeling of environmentally friendly textile products. Students, as a young and educated population, can play an important role in raising awareness of sustainable fashion and responsible consumption. However, this requires sufficient information, available sustainable products, and support from educational institutions, manufacturers, and the local community.

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