

Education for Sustainable Fashion



ANALYSES OF THE EXISTING COMPETENCIES IN THE FIELD OF TEXTILES AND FASHION OF THE EMPLOYEES IN THE TEXTILE SECTOR AND CONSUMERS OF TEXTILE PRODUCTS IN THE FOLLOWING COUNTRIES: GREECE, ITALY, ROMANIA, SLOVENIA

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1. Introduction

The fashion and textile industry is the second largest polluter in the world. Boosting the sustainability of the sector and addressing the challenges brought about by the COVID-19 crisis are the EU wide concerns, in which the stakes in terms of cross border pollution effects and impact on the internal market are high. The changes proposed by new EU Textiles Directive will be enforced starting next year, pressing businesses in the textile sector to change their operations and products. However, since the changes required are drastic, many businesses will be affected due to the lack of specialized education and preparation, especially in the small and medium size enterprises (SMEs). To comply to the new legal and market demands, businesses will have to train their employees on sustainable fashion and textiles (SF&T), with specialized trainings that involve high costs, endangering the small business world, that may not have residual funds for such trainings.

The goal of the Erasmus+ funded project “ReFashion – Education for Sustainable Fashion” is to help small and medium-sized enterprises and consumers to cope with the expected legal and market challenges in the fashion and textiles industry, by increasing their capacity and knowledge through awareness and education.

To get the needed information regarding the status of textile and fashion industry knowledge, the survey method amongst the target group was chosen. A well-structured questionnaire has been developed within the project, which, besides demographic questions, covers a wide range of questions referring to several different topics from the field of textile and fashion industry. Through the collected answers, which are gathered in a national level from each partner organization, a national report is drafted. After the collection of all national report, the next step is the synthesis of a final report, containing all data from the participating countries. This report contains analyses of the existing competencies in the field of textile and fashion industry of employees in the textile and fashion sector and the consumers of textile products from 4 countries – Greece, Italy, Romania, and Slovenia.

The ReFashion project aims to provide knowledge about sustainable fashion and textile to the employees in the textile and fashion industry and to the consumers of the textile products. The ReFashion project was developed aiming to raise awareness regarding the impact that fashion, as it is, has on the environment, propose ways to make it more sustainable and feasible, introduce the benefits of using cutting-edge digital application in the production, and emphasize on the fact that some of our everyday items, items we cannot live without, and items that we purchase without extra thinking, have an extensive and harmful impact to our planet. Overall, the purpose of the ReFashion project is to pave a path towards responsible, sustainable fashion, highlighting the fact that there is

no simple answer to diminishing fashion's role in climate change, but there moving towards that direction, is the only answer. The only viable solution is a slow shift from fast to sustainable fashion, but through finding ways to minimize the, sometimes, high costs.

The new educational program in ReFashion will be tailored on the SMEs needs and will be offered for free, by making use of innovative digital practices, while the ReFashion Consumer Guide, in an attractive and easy to understand format, will support consumer to get the right information and be able to change their consumption habits and preferences.

2. Methods

For the implementation of the first steps of the project result 1 activity, a research methodology was developed. The basic part of the methodology was the development of a questionnaire containing questions regarding knowledge about textile and fashion industry, to identify the existing skills in the field, and to map the gaps.

The number of questions was 53, and for carrying out the questionnaire, a Likert scale from 1-5 was chosen, starting from 1 = strongly disagree, to 5 = strongly agree. 3 questions were general demographical questions regarding age, country, and education. There were 49 topical questions. At the end, the respondents answered an open question about whether there is a topic they want to get more information on. The questionnaire contained questions on the fields of origin and impact of raw materials, circular and sustainable fabrics, sustainable garment design, sustainable production practices, enhancing product durability and garment life cycle, end-of-life management and implementation of circularity and sustainability practices in fashion and textile industry.

The participants were mostly contacted through project's social media channels, organizations' media channels and through connections with the partners. Thus, it was expected that the answers will be provided by either people who work in the textile and fashion industry or the consumers of textile products.

The questionnaire was carried out during the month June 2022 by using the Qualtrics platform. The use of the Qualtrics platform equipped our research with credibility, tracking of the number of responses and the date, and the possibility to export the report of the results in many possible forms. The answers from the questionnaire were embodied in the report from the Qualtrics platform in the form of graphs.

The partners conducted a countrywide survey outlining the situation of textile and fashion competencies in Greece, Italy, Romania, and Slovenia.

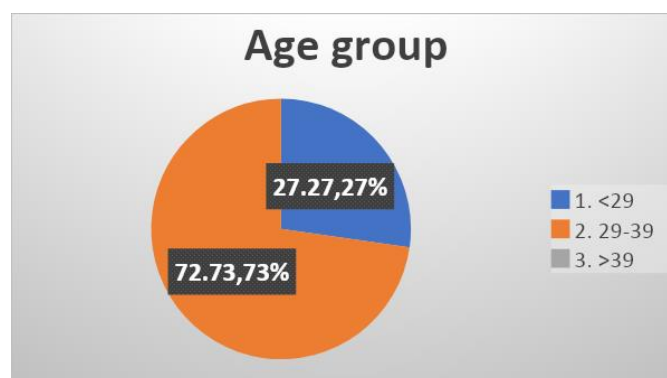
3. Competencies questionnaire results

3.1 Greece

This section represents the results obtained from the questionnaires in Greece. The results are presented with the results of individual questions. 22 responses to the questionnaire were obtained in Greece.

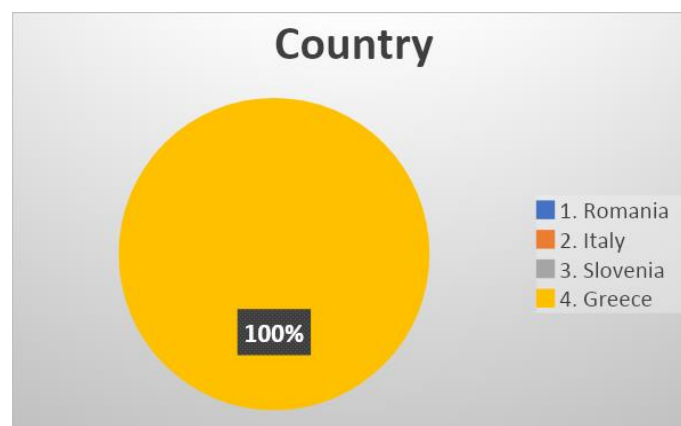
In this section of the national report, the results will be displayed in the form of pie graphs and column graphs, followed by short explanations to each, providing some fundamental remarks based on the results.

1. What is your age?



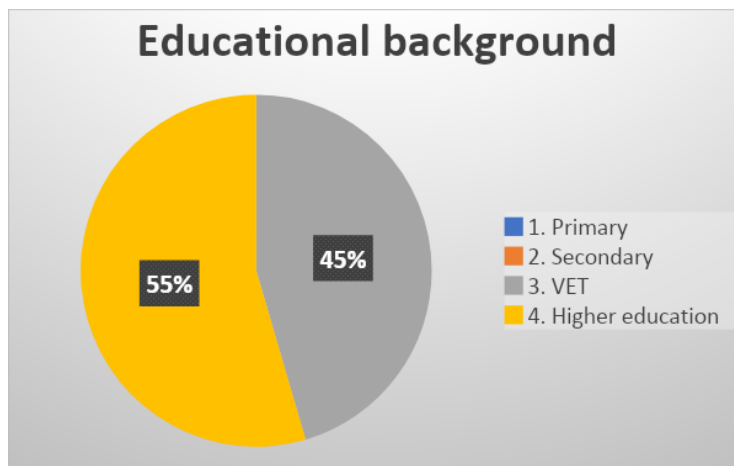
As demonstrated in the pie chart, the vesting majority (almost 73%) of the collected answers belongs to the second age group, ages between 29-39, indicating that the interested parties are -probably- not at the beginning of their careers, might have been working for a period in the area, and, for sure, have witnessed the turn to sustainability in fashion in its early steps.

2. What is your country?



The total of the provided answers was collected from Greece, since it was the country that the questionnaire was distributed.

3. What is your educational background?

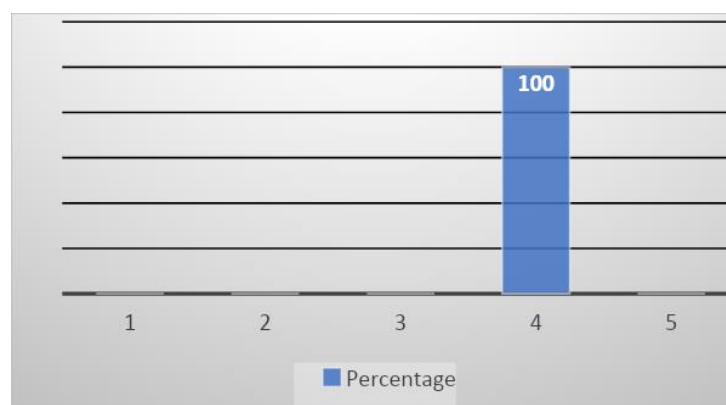


The educational background of the respondents to our questionnaire was divided between VET learners, and higher education (diploma or degree) graduates, highlighting the fact that the academic level of the respondents is quite high, and the experience they might have gained for their profession and their career in the fashion and textiles industry, comes in accordance with specific knowledge gained through studies.

TOPICAL QUESTIONS

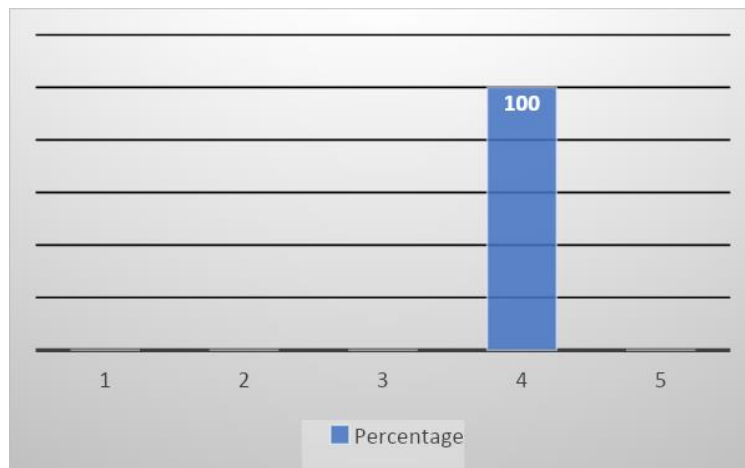
TOPIC 1: Understanding the origin and impact of raw materials

4. I can classify textile raw materials in more main categories.



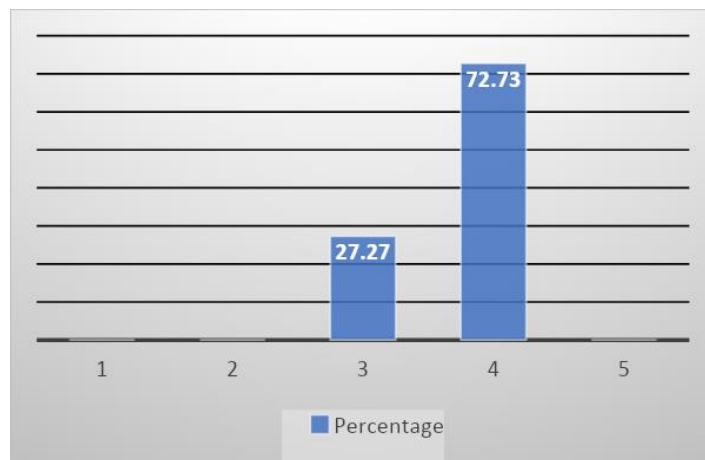
The total number of the collected responses to the fourth question of the questionnaire voted that they agree with the possession of knowledge regarding the classification of raw materials in more main categories, an ability that professionals of the field should acquire.

5. I can mention at least 3 natural textile fibers plant based.



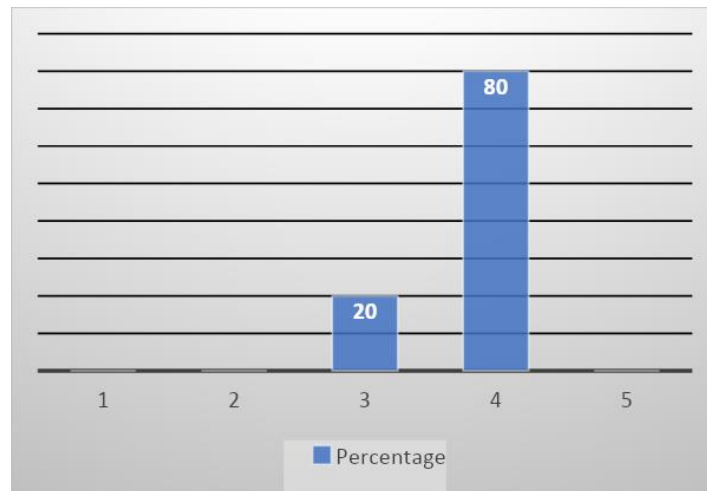
Moving towards the same direction, a total 100% has responded positively to the question of the acquisition of the ability of mentioning at least 3 natural textile fibers that are plant based, a fact that given the requirements of the constantly changing requirements of the field, seems significant.

6. I know exactly what animal textile fibers are. I can mention at least 3 natural textile fibers animal based.



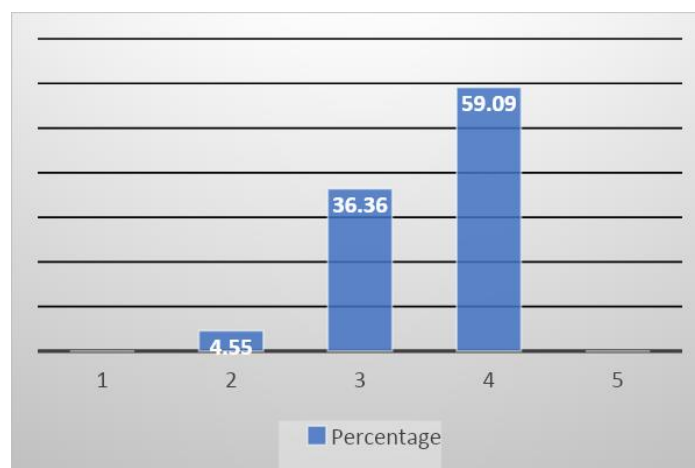
Most of the respondents agreed on the fact that they are aware of the existence and functionality of animal-based fibers, and that they are in position of naming at least 3. This comes in accordance with the knowledge on plant based, as well as animal-based fibers. From our point of view, this knowledge is mandatory for fashion and textiles professionals, as well as for fashion enthusiasts.

7. I have knowledge about the natural fibers production processes.



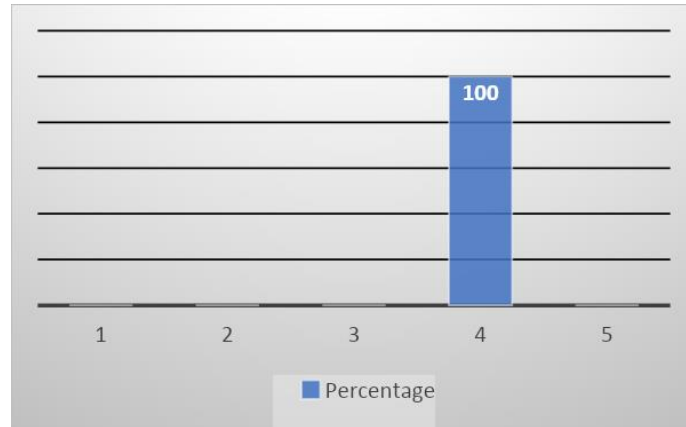
Accordingly, knowledge about the processes of production of natural fibers appears of significant value, so, it is very encouraging that the 80% of the positive responses indicate its existence.

8. I have knowledge about manmade fibers production processes.



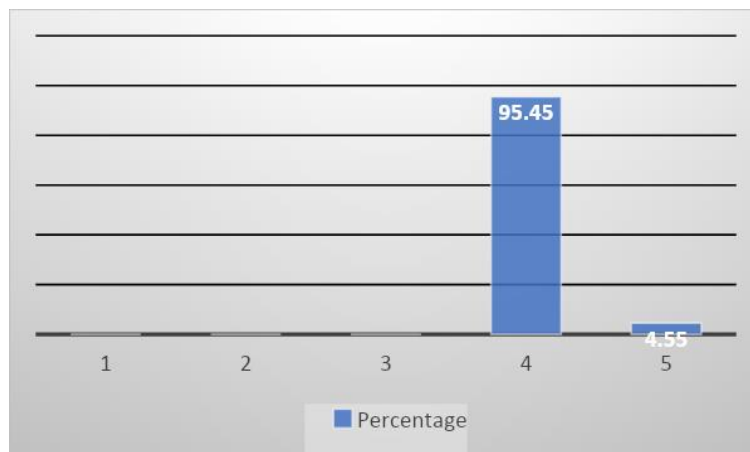
Encouraging is also the fact that more than 59% of the answers were positive to the question of knowledge capacity regarding manmade production processes, which, yet again, seems of great value for the field.

9. I am aware of the environmental impacts generated by the textile fiber production.



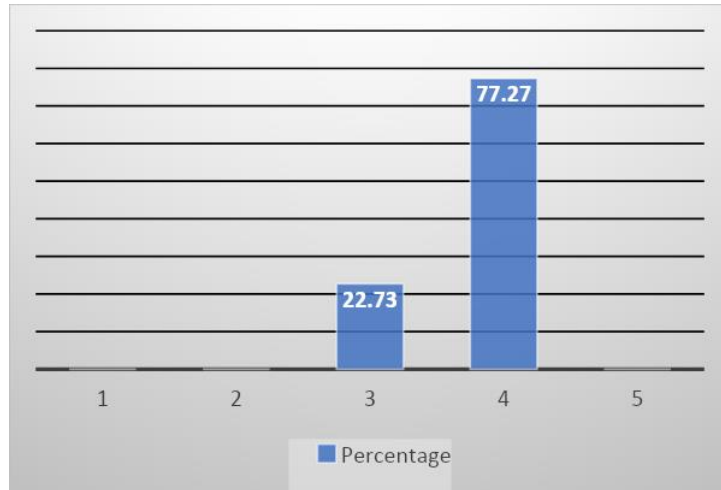
A very optimistic indicator is the fact that 100% of the responses were positive to the question of awareness of the environmental impacts that are generated by the textile fiber production, an indicator that is the first, and most important step, towards a sustainable and circular turn.

10. I am aware that washing clothes made from artificial fibers releases hundreds of thousands of microplastics fibers into the ocean and environment.



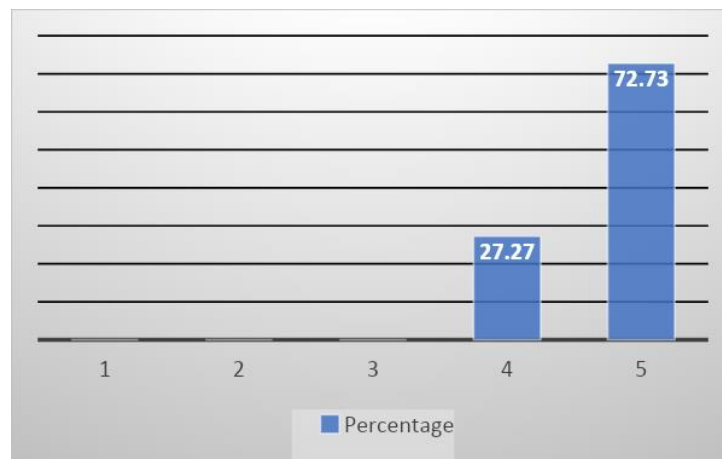
Moving along, a very interesting fact in terms of Greek statistics, is the fact that more than 95% (95.45%) of the responses were positive regarding the microplastics emission from the washing of clothes made from artificial fibers. Statistics have shown that the Greek seas are high in microplastics density, all because of mismanagement of urban residues that end up in the ocean, and of lack of knowledge of the true dimensions of the problem.

11. I am aware of the areas in which I can improve my sustainable fashion behaviors.



77.27% of the respondents claimed that they are in a position of awareness regarding the improvement of sustainable fashion behaviours, so, the only thing left to track, is the actual implementation of these behaviours, if feasible, due to economical or other reasons.

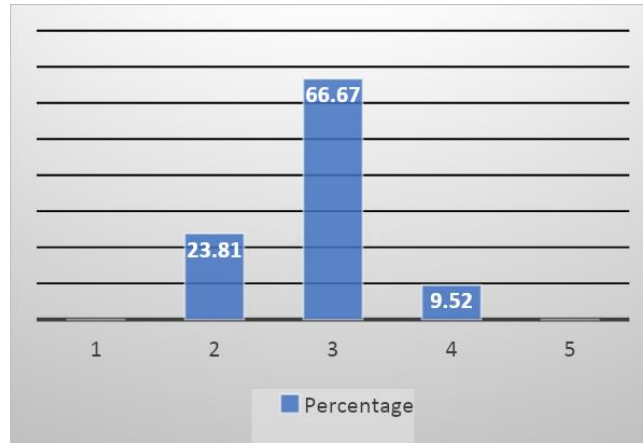
12. I am interested in learning more about raw materials.



More than 72% of the respondents seem more than willing to learn more about raw materials, highlighting the fact that although knowledge may be scarce, there is an inclination towards enhancing that knowledge.

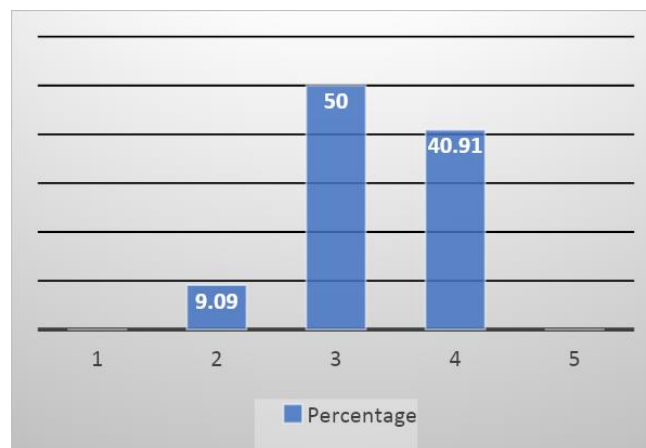
TOPIC 2: Circular / Sustainable Fabrics

13. I am familiar with at least 3 innovative sustainable textiles materials (e.g. Pinatex).



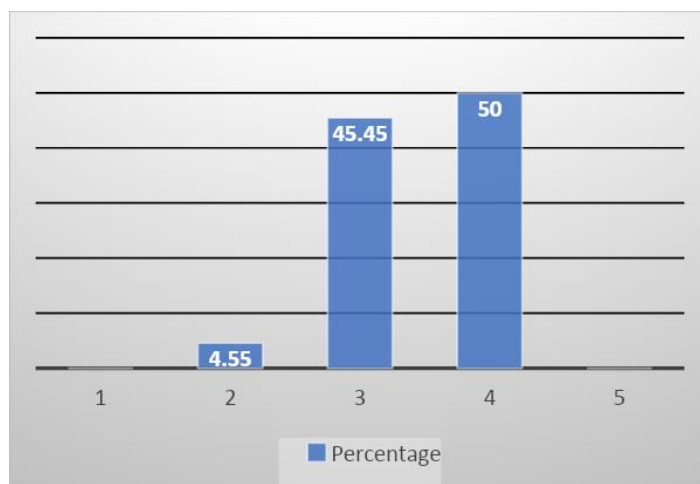
A controversial fact is the fact that 66.67% of the answers to the question about familiarization with at least 3 innovative sustainable textiles materials, were neutral. This indicates the lack of confidence in that area, and maybe the respondents are not that up-to-date with the current textiles status, and the European Green Deal priority.

14. I am familiar with eco-friendly fabrics production processes.



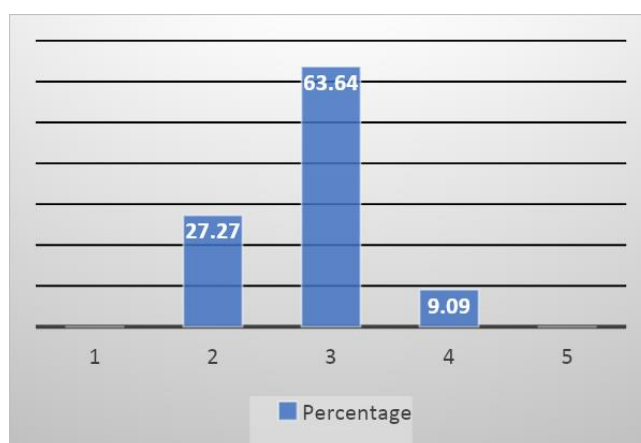
50% of the collected answers appear uncertain when it comes to familiarization with eco-friendly fabrics production processes, while the rest 40.91% responded quite positively. That indicator shows that the sustainable practices have already begun to have a reach in our country.

15. I am informed of circular/sustainable strategies in fabrics production.



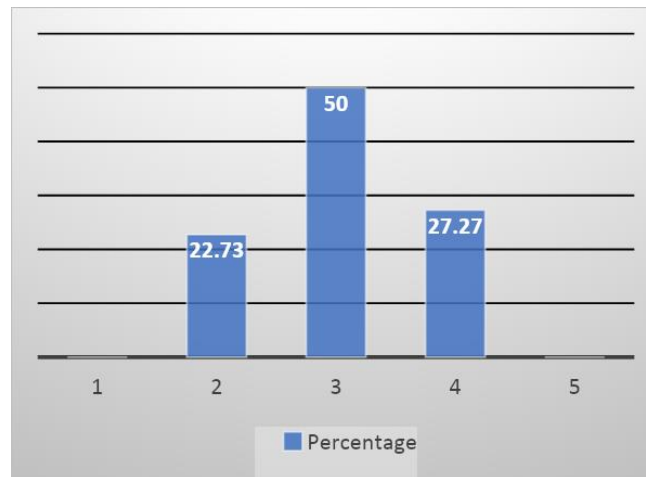
50% of the answers were encouragingly positive to the question regarding information about circular/sustainable strategies in fabric production, leaving unanswered the question if these strategies are, or could actually be implemented in our country.

16. I am familiar with 3 circular design strategies which are applied in textile industry.



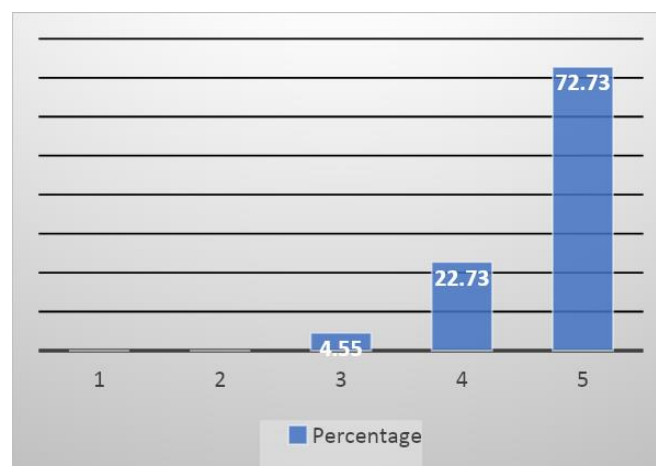
While the majority of the respondents, in general, find themselves confident in terms of knowledge, when it comes to actual implementation of circular strategies, 63.64% of the answers are characterized as neutral.

17. I know what design for longevity in textile design means and what are the main principles.



50% of the answers to the question concerning knowledge on the design for longevity in textile design means and its main principles, appear neutral, while a small, yet significant 22.73% responded negatively in terms of acquiring that knowledge.

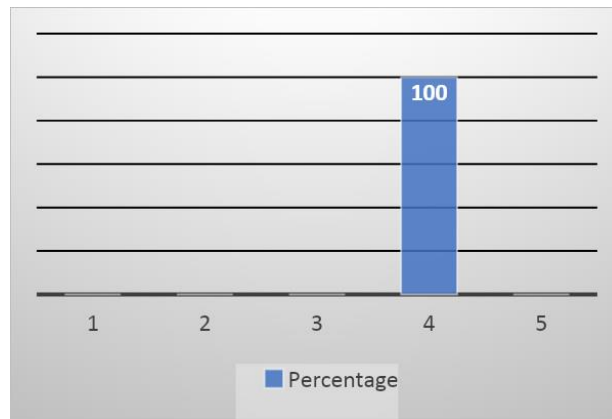
18. I am interested in learning more about circular / sustainable textile design.



An overwhelming 72.73% of the respondents seemed eager in learning more about circular/sustainable textile design, demonstrating the fact that, although knowledge might not exist at a significant point, there is a will for learning.

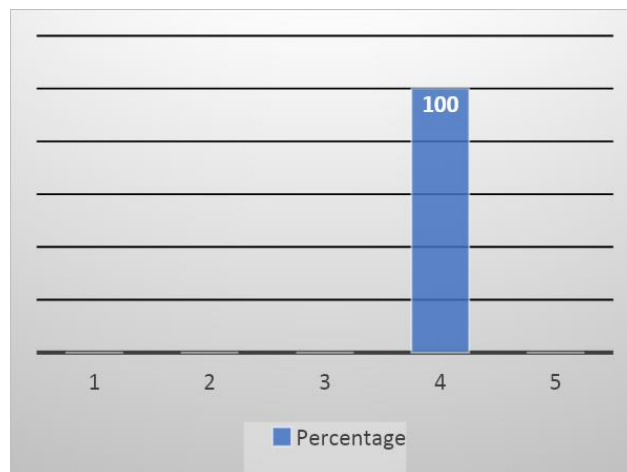
TOPIC 3: Circular/ Sustainable garment design

1. I know what slow fashion is.



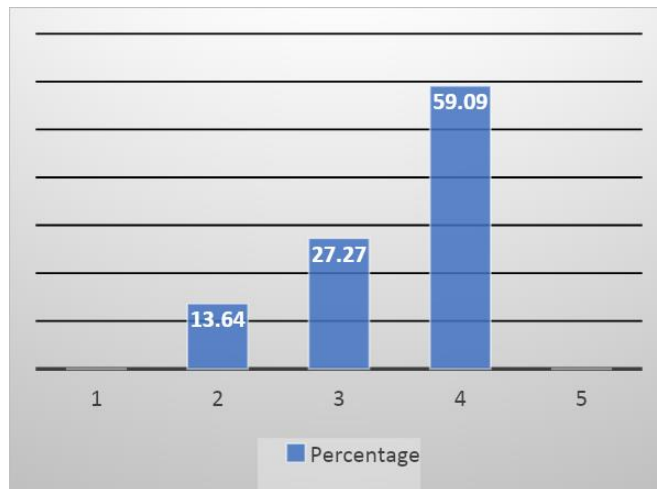
100% of the respondents know the meaning of slow fashion, an overriding percentage, since the expected answer would be the opposite, meaning the knowledge of fast fashion.

2. I am aware of the impact that clothing production has on the environment.



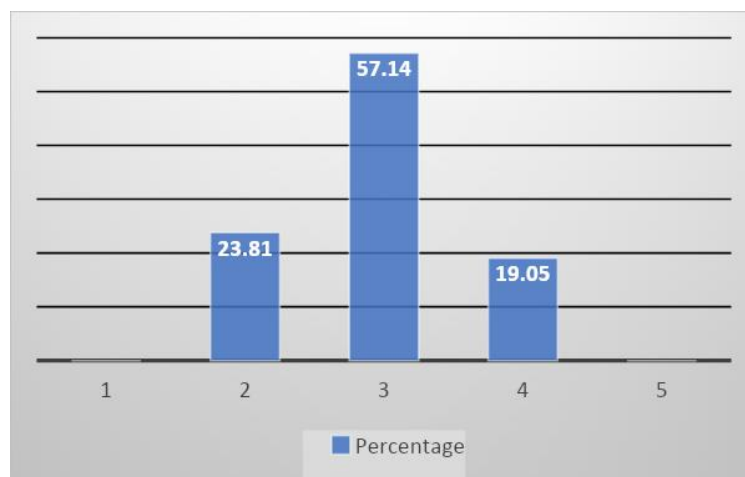
A crushing 100% responded positively when it comes to awareness of the impact that clothing production has on the environment, hoping that with the acquisition of that knowledge, there will be the relevant motivation.

3. I am familiar with at least 3 circular design strategies regarding garment design.



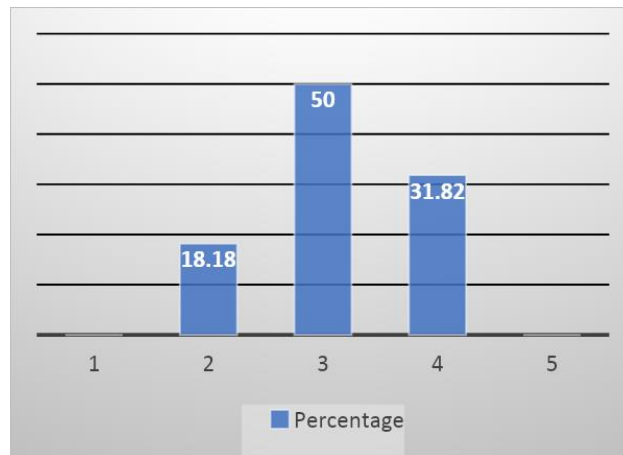
More than 59% of the respondents claimed that they are familiar with at least 3 circular design strategies regarding garment design, an indicator that can possibly be translated as an opportunity to turn that knowledge into practice.

4. I am aware of digital innovations that can reduce the environmental impact at design stage.



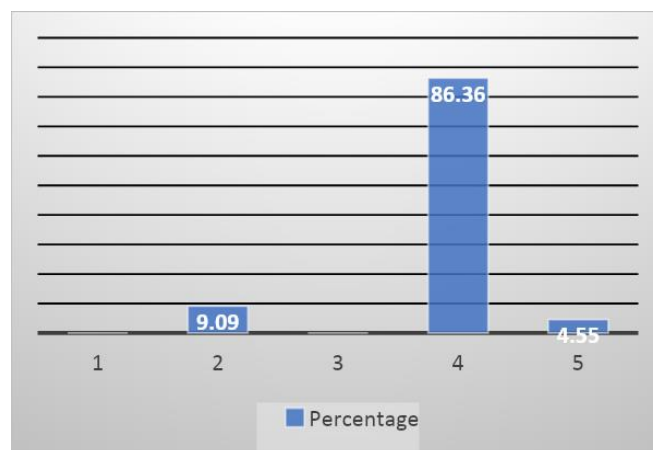
57.14% of the responses to the question if there is awareness on digital innovations that can reduce the environmental impact at design stage, were neutral. That shows lack of confidence in that sector, a fact that is quite discouraging, since the use of digital technologies could be a primary factor of sustainability in the fashion and textiles industry.

5. I know what design for longevity in garment design means and what are the main principles.



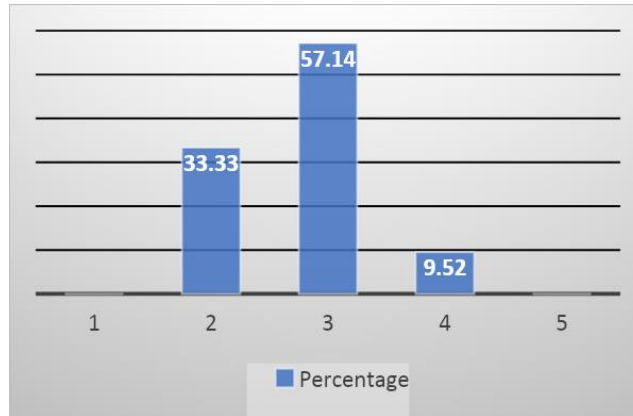
Answering the question regarding design for longevity in garment design and its main principles, the responses, one could say, are quite expected for the Greek status, since only 31.82% responded positively, 50% were neutral, and 18.18% claimed to have no knowledge on the topic.

6. I understand the impact that choices at the design stage can have on the entire production cycle.



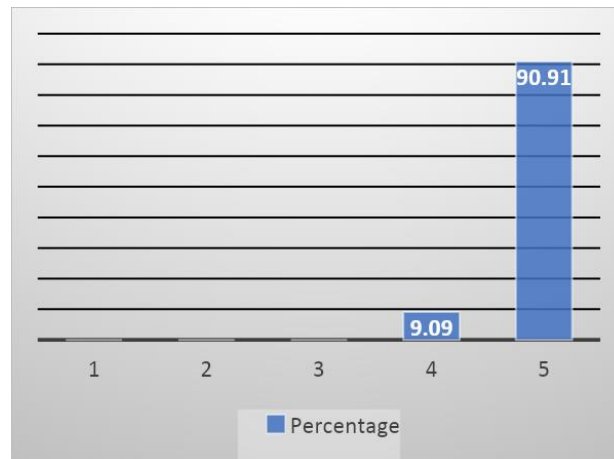
86.36% of the interested in the survey parties responded affirmatively on the question of whether they understand the impact that our choices at the design stage make on the entire production cycle, so, one would expect a relevant, more sustainable behavior.

7. I am aware of optimization of pre-consumer resources through virtual collaborative design techniques.



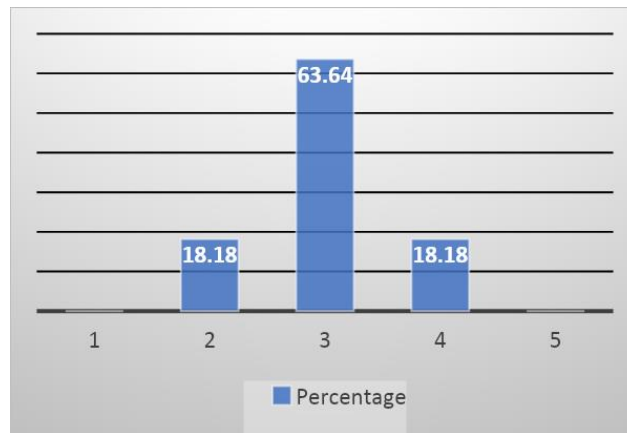
57.14% responded neutrally when it comes to awareness of optimization of pre-consumer resources through virtual collaborative design techniques, techniques that could be unknown to the general population, but professionals on the field are expected to have basic, at least, knowledge.

8. I am interested in learning more about sustainable garments design.



More than 90% of the responses indicated a willingness in learning more about sustainable garments, in order for the respondents to develop, or enhance their knowledge, and embrace more sustainable fashion behaviours.

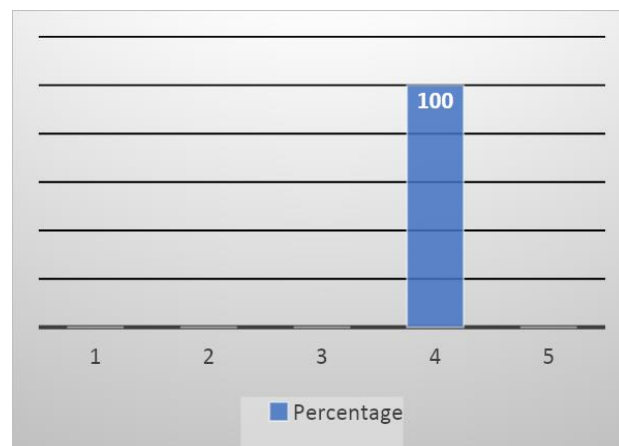
9. I know about tools for Sustainable Fashion Design (example: Sustainable Fashion Design Model, Sustainable Fashion Bridges Ideation Toolkit).



An interesting statistic is the one demonstrating the existing knowledge concerning Sustainable Fashion Design tools. 63.64% of the respondents were uncertain of their capacities, or most probably considered their knowledge extremely basic.

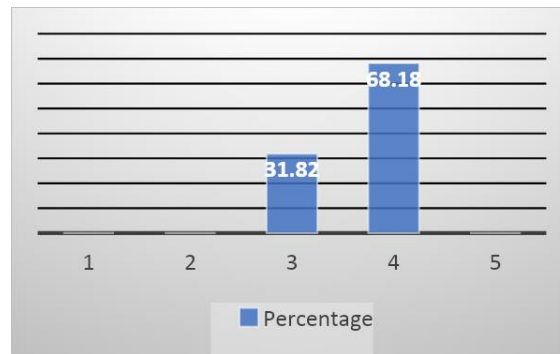
TOPIC 4: Sustainable production practices (Textile and Clothing production)

1. I am aware have knowledge of the steps of the within fashion supply chain.



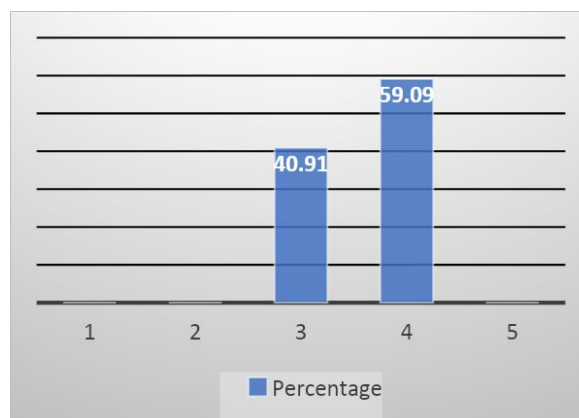
The total number of the responses to the question regarding the ability of identifying the steps within the fashion supply chain was affirmative, fact that highlights the existence of fundamental -at least- knowledge.

2. I am aware I have knowledge of sustainable production practices that can be implemented at each step of the supply chain.



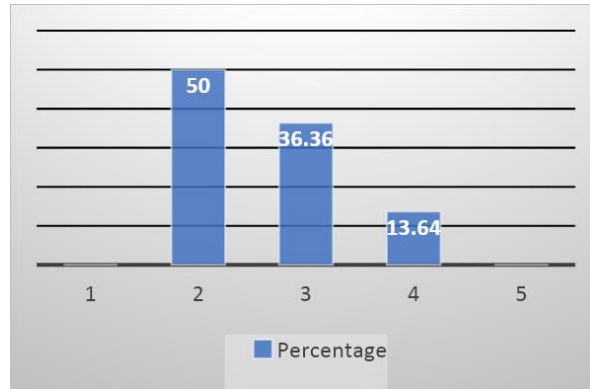
68.18% of the participants in our survey appeared confident concerning knowledge of sustainable production practices that can be implemented at each step of the supply chain, a fact that comes in contradiction with answers to previous questions, which indicated an uncertainty regarding sustainability practices and strategies.

3. I have knowledge about the Best Available Techniques requirements in the textile industry.



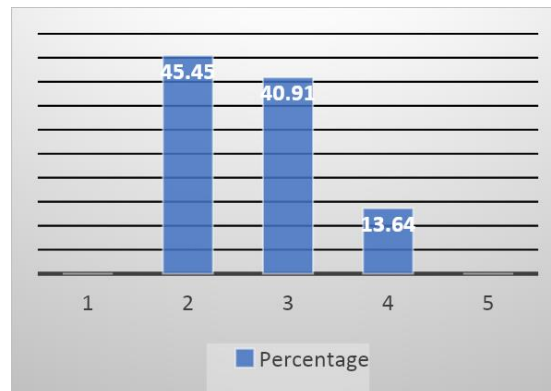
More than 59% of the responses were in agreement when it comes to knowledge about the Best Available Techniques requirements in the textile industry, a statement that also does not conform with negative or neutral responses to previous questions.

4. I am able to carry out a resource efficiency and cleaner production assessment study for the T&C processes.



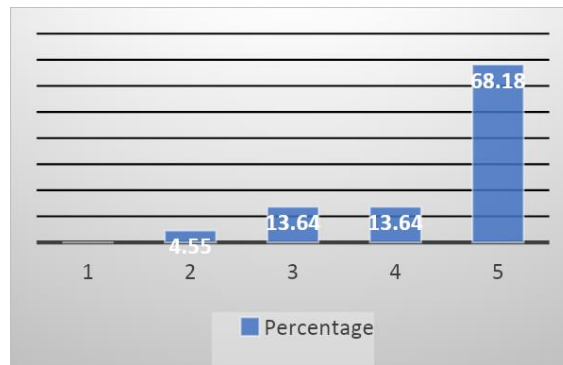
50% of the responses to the question regarding the ability to carry out a resource efficiency and cleaner production assessment study for the T&C processes were negative, a response that comes as expected one could say, since the carry out of relevant studies seems quite complex, even for people in the industry.

5. I am able to identify and manage the waste streams associated with fashion and textile production.



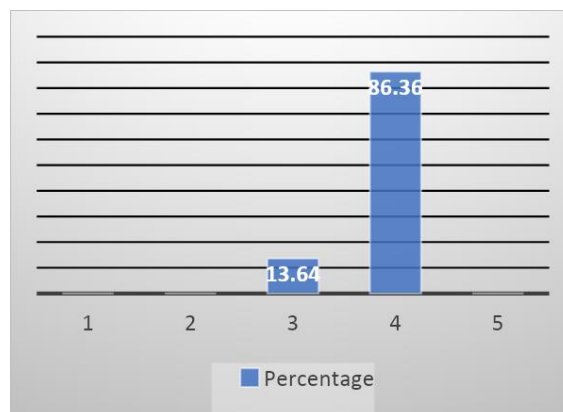
45.45% of the responses to the question regarding the identification and management of the waste streams associated with fashion and textile production were negative, while 40.91% of the responses to the same question appear neutral, fact that can be characterized as lack of knowledge concerning these topics, topics that seem significant when it comes to waste management.

6. I am interested in learning more about sustainable fashion and textile production practices, including general pollution prevention approaches.



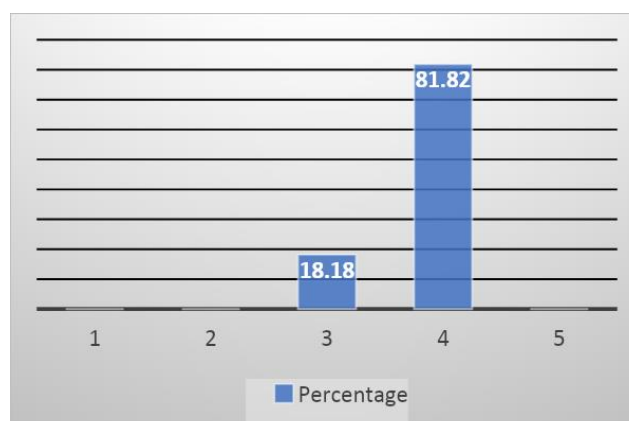
More than 68% of the respondents seem eager when it comes to learning more about sustainable fashion and textile production practices, including general pollution prevention approaches.

7. I have knowledge about the violation of working rights and abuses existing in fast F&T sector.



A very motivating indicator is the 86.36% of the respondents, who responded that they have knowledge about the violation of working rights and abuses existing in fast F&T sector, a phenomenon that is met mostly outside of the European Union, but fast fashion supporters are mainly inside EU, and all should be aware of the actual process needed for their garments to be made.

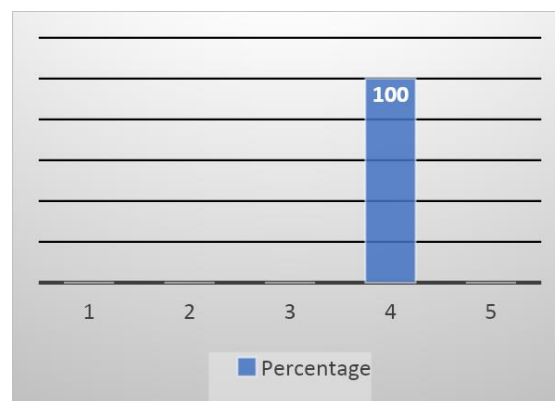
8. I know what means the concept of sweat shop.



A sweatshop or sweat factory is a crowded workplace with very poor, socially unacceptable, or illegal working conditions. The knowledge of that term is of primary importance, and the fact that 81.82% of the respondents already know its meaning, is relieving.

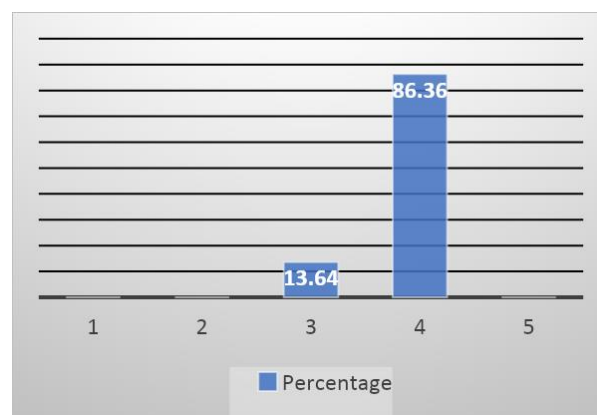
TOPIC 5: Enhancing product durability and garment life cycle

1. I am familiar with the clothing life cycle.



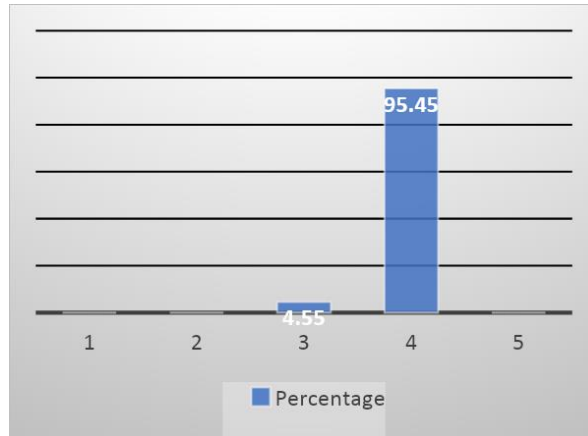
100% of the responses to the question regarding familiarization with the clothing life cycle were positive, a percentage that cannot be realistic at its whole, since it is a common belief that there are always unknown, and more complex aspects to this specific life cycle.

2. I am familiar with the clothing methods that extend my garment's lifespan.



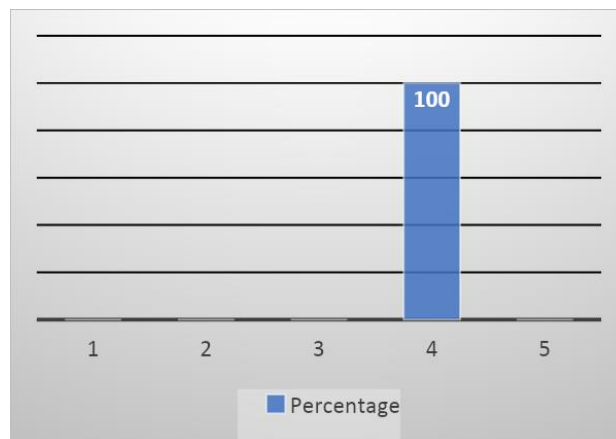
86.36% believe that they know the clothing methods that extend their garment's lifespan, a sustainability practice to enhance the durability of garments, and augment the time of their usage.

3. I try to implement sustainable fashion behaviors in my daily life, as well as my friends & family.



An overwhelming percentage of 95.45% of the answers declared that there is an attempt of implementation of sustainable fashion behaviors in their daily life, as well as their friends and family. We have to keep in mind that major changes come from small, everyday actions.

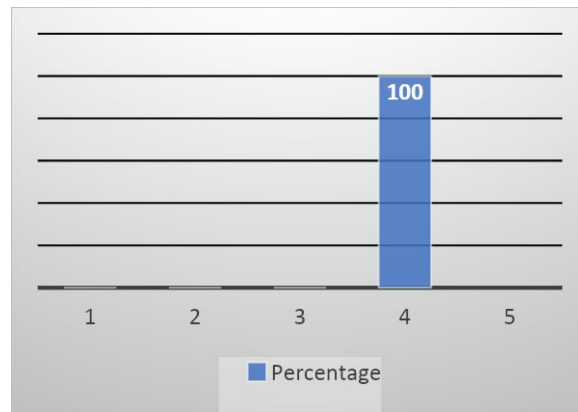
4. I try to keep up with trends/innovations regarding sustainable/circular clothing/textiles.



A motivating 100% tries to keep up with trends and innovations regarding sustainable and circular clothing and textiles, which is a very crucial fact, since the changes in the field are drastic nowadays, and the need for update is urgent.

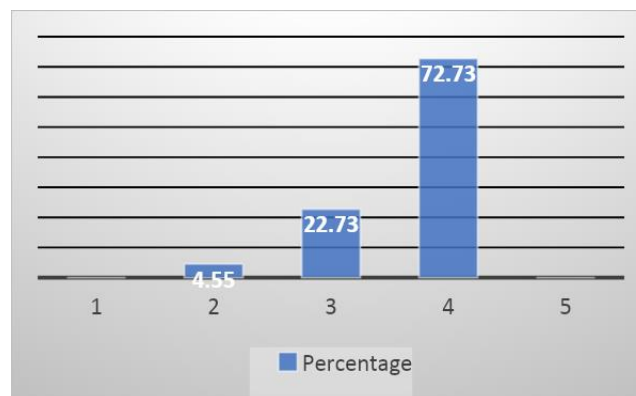
TOPIC 6: End-of-life management

5. I am aware of the end-of-life possibilities for my clothing.



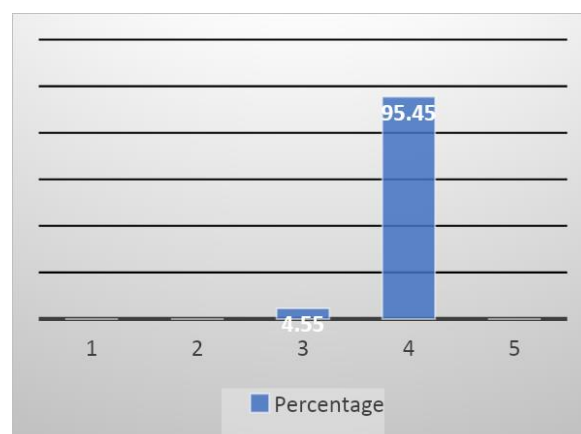
100% of the participants of the survey described themselves as aware of the end-of-life possibilities for their clothing, meaning that they are in position to reuse, alternate and regenerate their clothes, into other garments, or other usable fabrics.

6. I don't mind purchasing second-hand clothes over new ones.



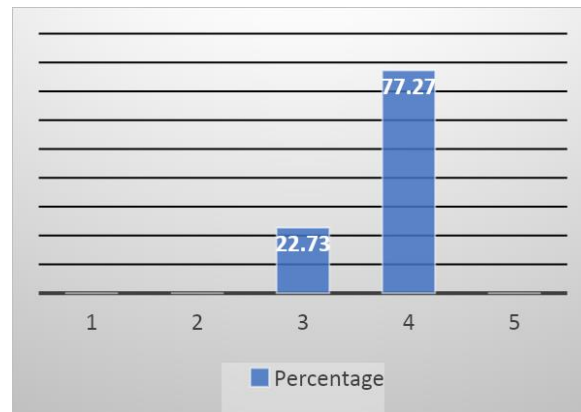
When it comes to purchasing second-hand clothes, 72.73% of the respondents answered affirmatively, while 22.73% was neutral, and 4.55% negative. In Greece, second-hand shops have started to spread only in the very last few years, and people seem quite reluctant.

7. I prefer purchasing clothes made from sustainable/recycled materials over regular ones.



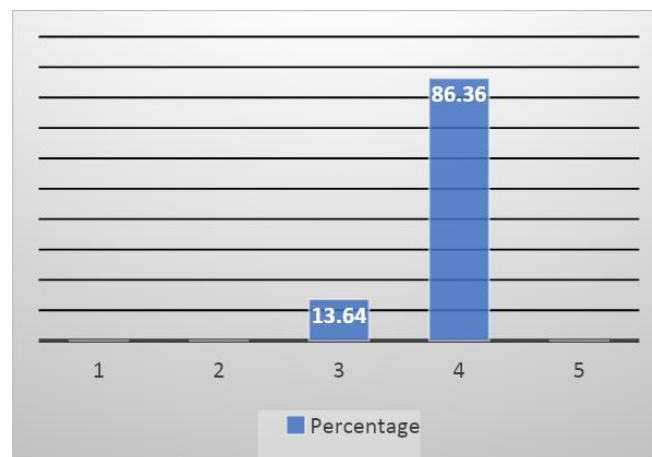
95.45% of the participants prefer purchasing clothes made from sustainable and recycled materials over regular ones, signifying that customers nowadays pay attention to the usage of sustainable materials and techniques when buying new clothes.

8. I am aware of sustainable clothing/textile end-of-life alternatives (e.g., remanufacturing, recycling, energy recovery, etc.)



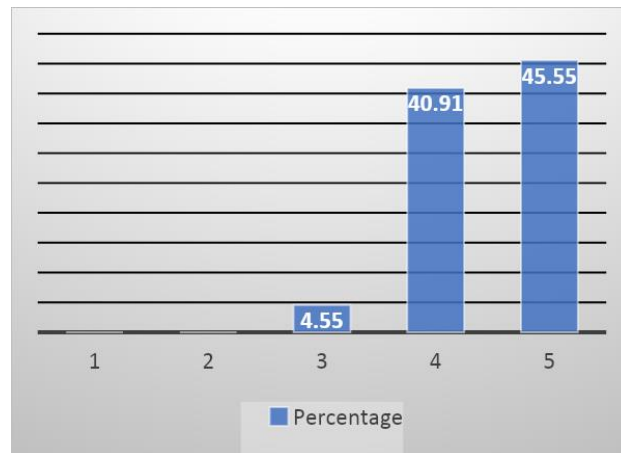
77.27% of the participants indicated that they are in position to name, and hopefully use, sustainable clothing and textile end-of-life alternatives, such as remanufacturing, recycling, energy recovery etc.

9. I can mention at least 3 sustainable brands.



More than 86% of the responses were positive when it comes to mentioning at least 3 sustainable brands, an indicator that highlights at first, the existence of such brands in Greece, and secondly, the interest of the customers to getting to know these brands.

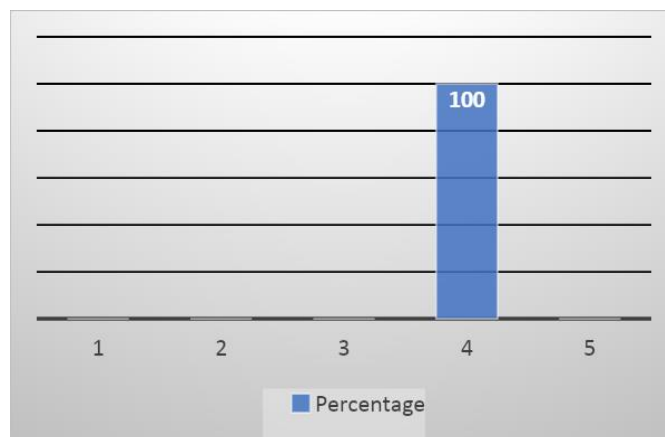
10. I would like to learn more about sustainable clothing/textile end-of-life management.



45.55% of the respondents totally agree with learning more about sustainable clothing and textile end-of-life management, developing in that way their sustainable fashion behavior, as a customer, and as a professional as well.

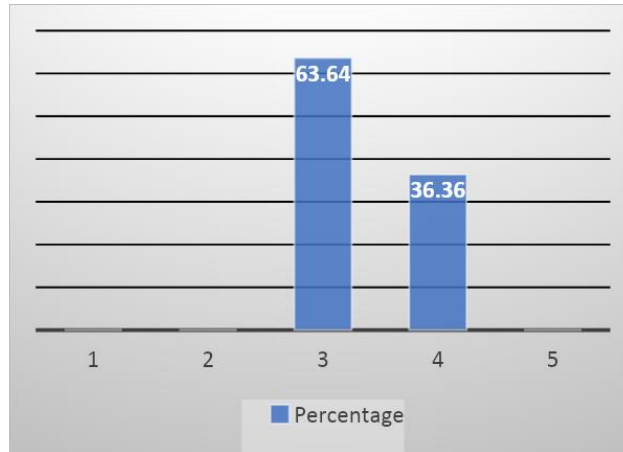
TOPIC 7: Implementing circularity & sustainability practices in F&T industry

11. I know what the term “circular economy” means.



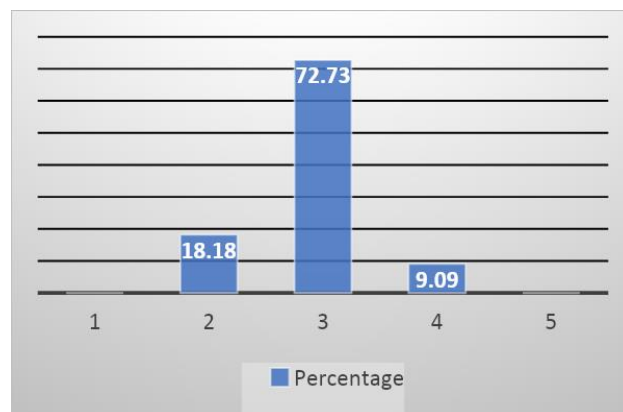
In terms of circular economy, the results are much clearer. 100% of the respondents were certain regarding their knowledge on circular economy.

12. I am aware of the importance of the circular economy in the F&T industry.



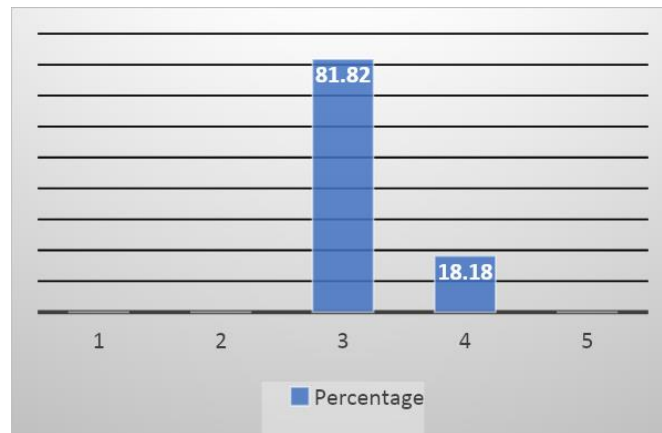
A disturbing factor is the fact that 63.64% of the answers regarding awareness of the importance of the circular economy in the fashion and textiles industry were unclear and uncertain.

13. I am aware of digital systemic design methods that are integrating end life of product assessments.



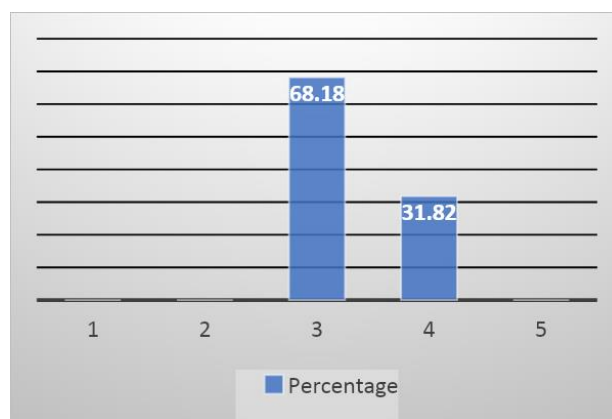
72.73% of the participants responded with uncertainty concerning the awareness of digital systemic design methods that are integrating end life of product assessments, which, as mentioned earlier, is one of the most valuable tools towards sustainability in fashion.

14. I am practicing circular economy principles in F&T industry.



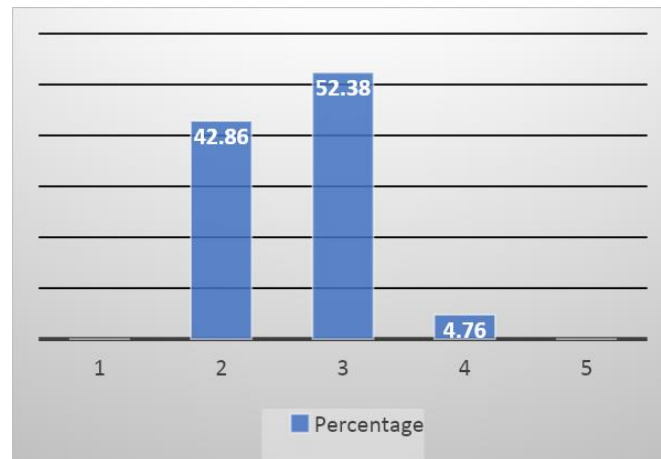
Another discouraging fact, is that 81.82% responded neutrally on whether they are practicing, or not, circular economy principles in the fashion and textiles industry, indicating that knowledge might exist, but it does not turn to practice, due to unwillingness, economic factors, etc.

15. I am aware of the circular solution in the textile value chain.



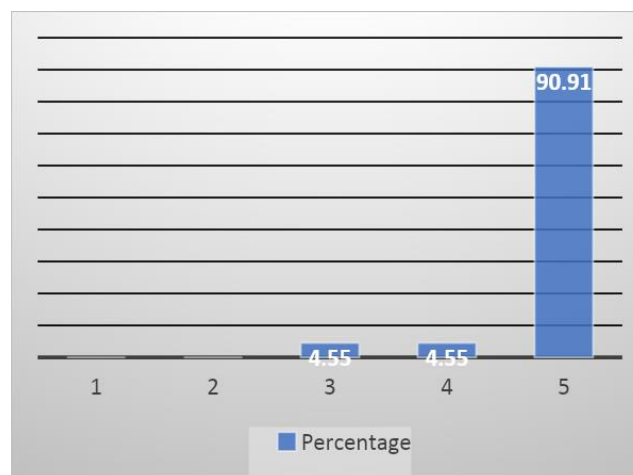
Moving towards the same direction, uncertainty follows in terms of finding circular solutions in the textile value chain, with a percentage of 68.18%, indicating that there might be a lack of knowledge, a lack of proper information, or lack of funds.

16. I am aware that digital tools enable circular economy principles integration in T&C sector.



42.86% claim that they have no knowledge in terms of digital tools that can enable the economy principles integration in the textiles industry, while 52.38% remain neutral. That gap seems significant, and should be filled, in order for a sustainability fashion behavior to be integrated.

17. I am interested in learning more about the implementation of circular economy practices in the F&T industry.



The most encouraging result is the fact that 90.91% of the participants seem more than eager to be informed about the implementation of circular economy practices in the F&T industry.

18. Is there any topic you are interested in and it has not been mentioned in the questionnaire?

No answers.

In conclusion, regarding understanding the origin and impact of raw materials, the responses of the participants could be characterized as more confident, and their knowledge concerning natural,

animal-based and artificial fibers, and the process of their production, is basic, yet existing. Awareness also exists in topics of the environmental impact of the production of textile fiber production, a very characteristic example of which is the thousands of microplastics that are released into the ocean and the environment in general, from the simple action of washing clothes made from artificial fibers.

Moving towards the second topic, which is the circular and sustainable fabrics, the knowledge gaps begin to make their appearance. There is no deep and thorough understanding and proper information when it comes to use of innovative sustainable textiles and materials, eco-friendly production processes, circular fashion strategies, as well as practices that could prolong the use of textile design.

Concerning the third topic of the questionnaire, which is the circular and sustainable garment design, a knowledge scarcity was also noted in more complex and current subjects, such as the use of digital innovations that can reduce environmental impact at design stage, awareness of optimization of pre-consumer resources through virtual collaborative design techniques, and tools for Sustainable Fashion Design (Sustainable Fashion Design Model, Sustainable Fashion Bridges Ideation Toolkit). A general conclusion that could be deduced is the fact that, in its majority, the Greek fashion reality is not so up-to-date, and needs to be informed and comply with the European green priorities.

The same pattern is met on topic 4, the sustainable production practices. There are competencies regarding the steps of the fashion supply chain, and basic sustainable production practices, but not on more sophisticated matters, such as the best available techniques requirements in the textile industry, the ability to carry out resource efficiency and cleaner production assessment study.

Elaborating further on enhancing product durability and garment life cycle, a great movement was noted through the results towards change, and fostering more sustainable and circular behaviors in everyday life, as well as a never-ending effort towards keeping up with the current innovations regarding sustainable and circular clothing and textiles.

When it comes to end-of-life management, as well as implementing circularity and sustainability practices in the fashion and textiles industry, it is of common agreement that the participants are aware of various end-of-life garment possibilities, are conformed with the idea of second-hand clothes purchase, and are familiar with sustainable clothing and textile end-of-life alternatives. Furthermore, the respondents are close to the circularity meaning and its principles, as well as practicing them in the fashion and textile industry.

As a general remark, the Greek reality, as envisioned through the responses of the ReFashion questionnaire, needs to be updated on the current, and dramatically changing status of the fashion and textiles industry, the requirements set by the new priorities of the European Union regarding

sustainability and digital transition, but the encouraging indicator is that, although knowledge is basic, yet fundamental, there is a great will for enhancement of that knowledge.

Sustainable fashion (also known as eco-fashion) is an all-inclusive term describing products, processes, activities, and actors (policymakers, brands, consumers) that aim to achieve a carbon-neutral, sustainable, and circular fashion industry, built on equality, social justice, animal welfare, and ecological integrity. The concept of sustainable fashion concerns more than just addressing fashion textiles or products. It embodies the entire manner in which garments are produced, who produces them, and how we could prolong the lifespan of a product before it reaches the end of its life. This rising sustainable movement minimizes the large carbon footprint that the fashion industry and fast fashion have created, and continue creating, by reducing greenhouse gas emissions. When minimizing the environmental impact of fashion, all types of pollution are combated, such as air, water, and overall climate change, giving our planet another chance.

Some of Greece's *good practices* in terms of fashion sustainability, great examples can be found of Greek, sustainable fashion brands. Having to name some of them, one could not exclude **KIMALE**, **Alchimia Vegan Shoes**, **MUSA**, and **the KNLs**.

KIMALE is a Greek fashion brand, and its motto is 'joie de vivre', meaning the joy of living. The brand is moving in terms of slow fashion, always in respect of sustainable fashion practices.

Alchimia Vegan Shoes is a Greek shoe brand that collects its raw material from natural materials from forests and farms. Combining these with plastic waste, and other possibly usable residues, it enhances its low waste, and small environmental footprint character.

MUSA is a Greek brand that creates pieces - statements from sustainable and ethical materials, while its clothes and accessories are handmade by Greek family businesses from all over the country.

The KNLs collection is characterized by its sensitivity to the environment and the planet. In addition to the natural materials that make up each garment, the company has also established a special program where they use leftovers to make various eye-catching accessories.

Another very innovative initiative from **RECYCOM**, is the recycling of clothes and shoes one does not need anymore, through the installment of special boxes in various spots of many Greek cities. After a short sorting process, the best quality clothes are offered free of charge to socially vulnerable groups in Greece in cooperation with community authorities, social grocery stores or other organizations. Further the clothing is made available to cover basic needs in emergency situations such as natural disasters. The remaining percentage is exported for re-use. Part of the material, the

clothing not suitable for reuse, is recycled to create cleaning clothes, shampoos, insulation and other material.

Overall, the Greek fashion and textiles reality is aware, new innovative initiatives are taking place, there is a significant movement towards fostering sustainable behaviors, circular economy strategies, enforcement of digital innovations in the design phase, but, most importantly, there is an overwhelming willingness on learning, training, and keeping up with the fast pace of the European fashion sustainability standards.

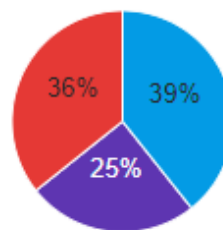
3.2 Italy

This section represents the results obtained from the questionnaires in Italy. The results are presented with the results of individual questions. 35 responses to the questionnaire were obtained in Italy.

General questions

Age group

● > 39 ● 29 - 39 ● < 29



The graph shows a quite homogeneous percentage of people in the three age groups considered, with just a slight difference between respondents above 39 years old and those under 29 years old. The smallest percentage is between 29 and 39 years old.

Country

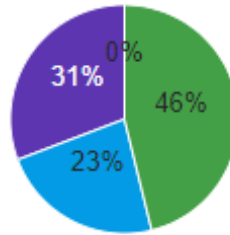
● Greece ● Slovenia ● Italy ● Romania



100% of the respondents are Italian.

Educational Background

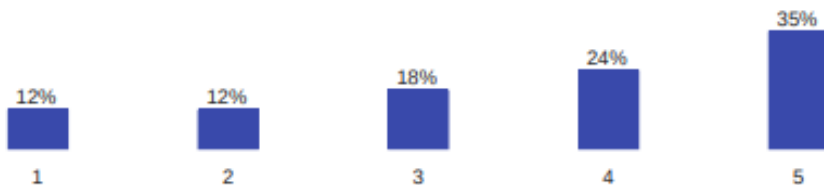
● higher education ● VET ● secondary ● primary



Most respondents are higher education graduates, while 31% of them have a VET background and 23% have graduated from high school.

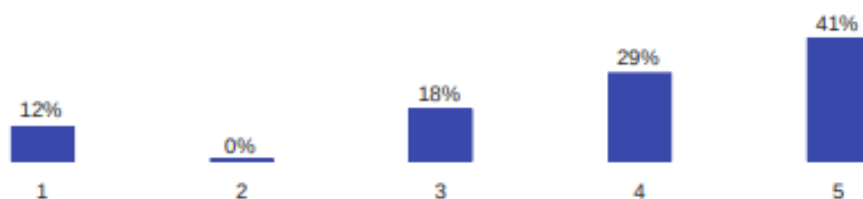
TOPIC 1: Understanding the origin and impact of raw materials

1. I can classify textile raw materials in more main categories.



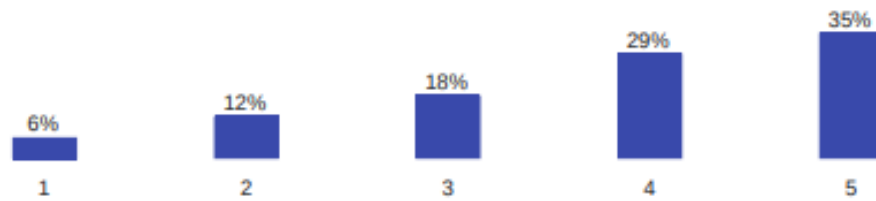
The first topic addressed by the questionnaire concerns the origin and impact of raw materials. The majority of respondents (35%) strongly agree on their ability to classify raw materials in more main categories, while 24% agree and 18% are neutral. The percentage of respondents who disagree or strongly disagree is even: 12%.

2. I can mention at least 3 natural textile fibres plant based.



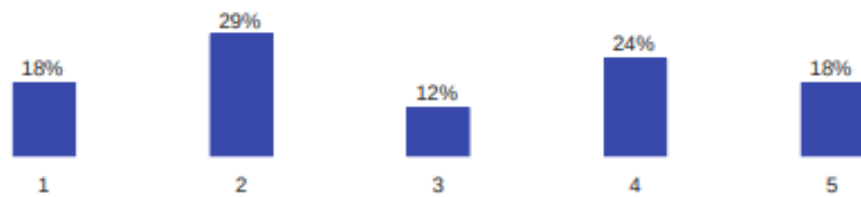
When questioned about their ability to mention at least 3 plant-based natural fibres, the majority of respondents state to be able to do so, as 41% strongly agree and 29% agree. Just 18% answer to be neutral towards this matter, while 12% admit they would not be able to do it at all.

3. I know exactly what animal textile fibres are. I can mention at least 3 natural textile fibres animal based.



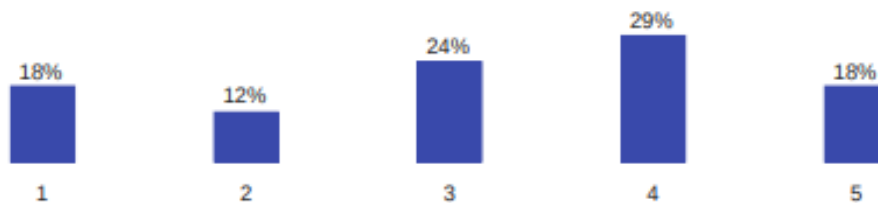
Same goes for the natural textile fibres animal based. In this case, those who strongly agree with the statement are 35%, while 12% of respondents disagree and just 6% strongly disagree.

4. I have knowledge about the natural fibres production processes.



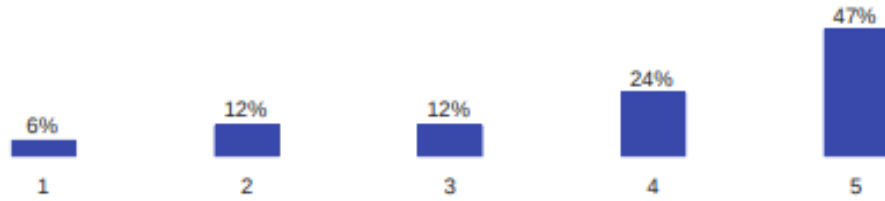
Regarding the knowledge about the production processes of natural fibres, most respondents disagree with the statement, 24% agree, while 18% both strongly agree and strongly disagree. Only 12% of respondents remain neutral.

5. I have knowledge about man-made fibres production processes.



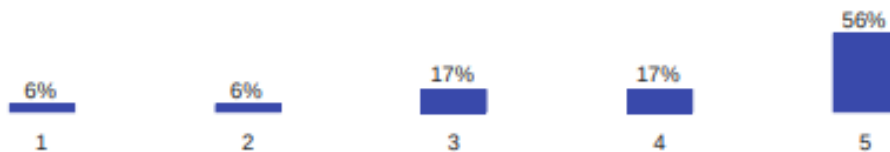
The graph above shows a more widespread knowledge of the production processes of manmade fibres. Although the percentage of respondents who strongly agree and strongly disagree is equal to that of *statement 4*. (18%), a way smaller percentage state to disagree (12%) while the number of respondents who agree reached 29%. 24% remain neutral.

6. I am aware of the environmental impacts generated by the textile fibre production.



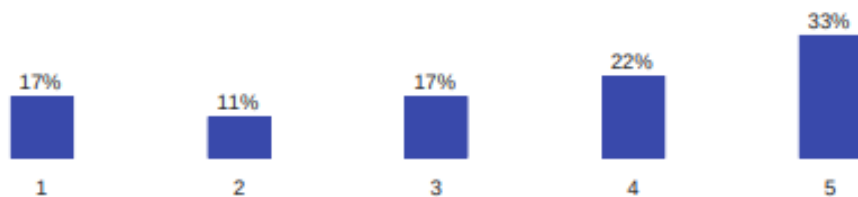
A positive figure emerges from the graph above: as many as 71% of respondents are aware of the footprint of the textile fibre production, indeed 47% of them strongly agree and 24% agree with the statement. 12% of respondents either remain neutral or disagree, while just 6% strongly disagree.

7. I am aware that washing clothes made from artificial fibres releases hundreds of thousands of microplastics fibres into the ocean and environment.



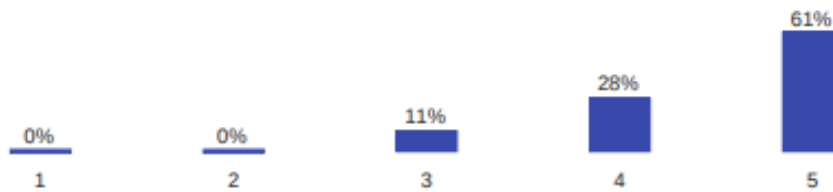
Same goes for the awareness of the marine and environmental pollution generated by micro plastics fibres. As many as 56% of respondents strongly agree with the statement and 17% either agree or remain neutral. Just 6% disagree or strongly disagree.

8. I am aware of the areas in which I can improve my sustainable fashion behaviours.



Although a general good level of knowledge about the environmental impact of production and consumption of textile fibres, the graph shows almost half of respondents are not really sure on how to change their wrong fashion behaviours. Albeit 33% strongly agree and 22% agree, yet 17% either remain neutral or strongly disagree and 11% disagree.

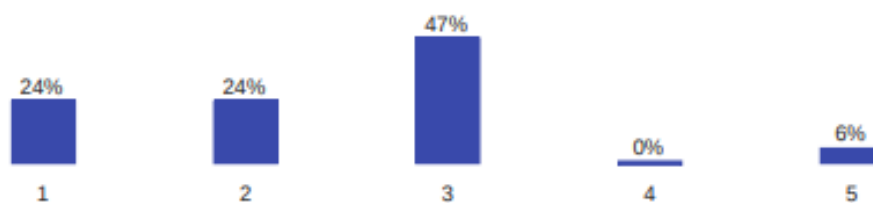
9. I am interested in learning more about raw materials.



When asked about their interest in learning more about raw materials, 61% of respondents state to have a strong interest towards this topic, as well as 28% that agree with the statement. Only 11% remain neutral. It is important to highlight that none of the respondents is disinterested; on the contrary, all prove to be concerned and responsible.

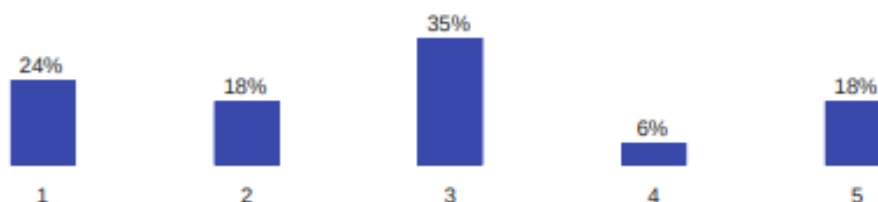
TOPIC 2: Circular / Sustainable Fabrics

1. I am familiar with at least 3 innovative sustainable textiles materials (e.g. Pinatex).



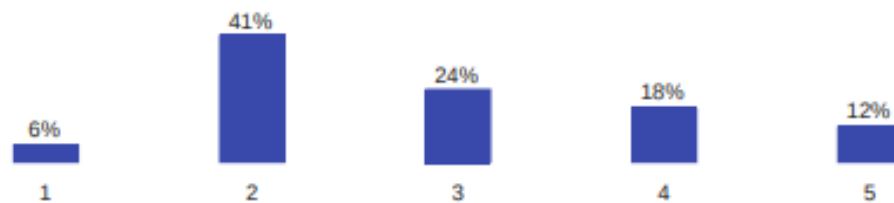
The second topic addressed by the questionnaire concerns circular/sustainable fabrics. The graph shows nearly all respondents do not know any sustainable textile material. Indeed, 47% of respondents remain neutral, while 24% either strongly disagree or disagree with the statement. Therefore, just 6% of respondents have some kind of familiarity with innovative green materials.

2. I am familiar with eco-friendly fabrics production processes.



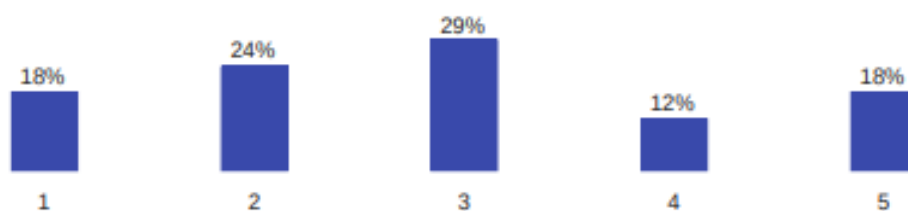
When it comes to production processes, the figures are a little more positive. Although the percentage of respondents who disagree is equal to that of *statement 10.*, the number of those who disagree dropped to 18%, while the number of those who strongly agree reached 18% and 6% those who agree. However, the majority of respondents (35%) state to be neutral towards this matter.

3. I am informed of circular/sustainable strategies in fabrics production.



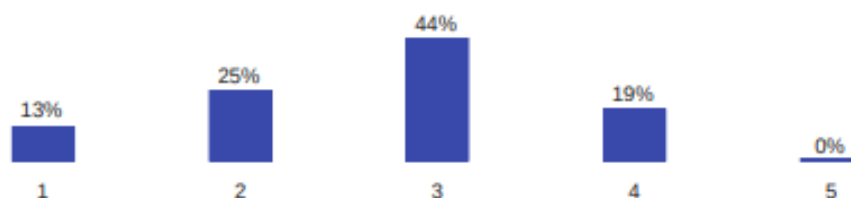
Most respondents (47%) are not informed of circular/sustainable strategies applied for the production of fabrics. While 24% of them remain neutral, 18% agree and the remaining 12% strongly agree.

4. I am familiar with 3 circular design strategies which are applied in the textile industry.



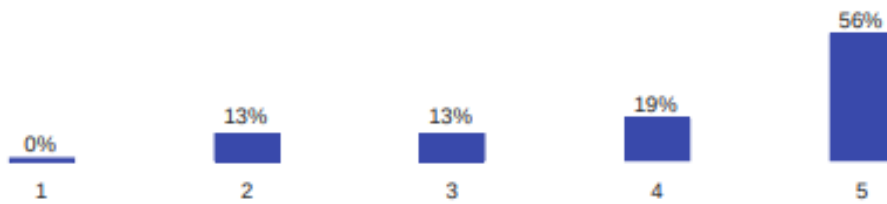
Following the *statement 12*, just 18% of respondents who strongly agree along with 12% who agree seem to be familiar with at least 3 circular textile-design strategies. 29% of respondents remain neutral, while 24% disagree and 18% strongly disagree.

5. I know what design for longevity in textile design means and what are the main principles.



The graph shows a general lack of knowledge of what is meant by “design for longevity”. Indeed, 44% of respondents prefer to remain neutral, while 25% of those who disagree followed by 13% of those who strongly disagree seem to have no knowledge about it. Just 19% of respondents know what design for longevity in textile design is.

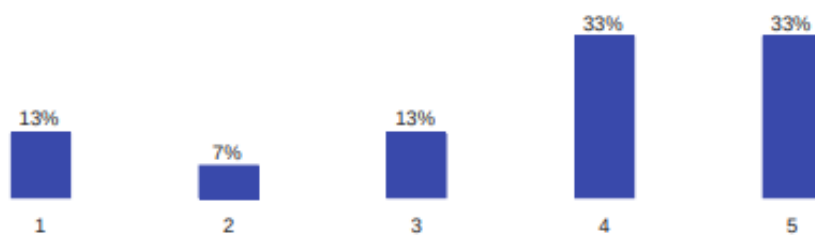
6. I am interested in learning more about circular / sustainable textile design.



Given their lack of knowledge on this matter, more than half of respondents are interested in learning more about it. Just 13% of them either disagree or remain neutral.

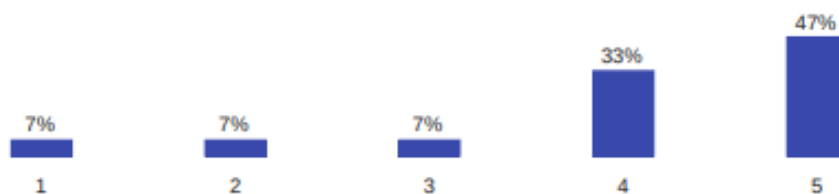
TOPIC 3: Circular/ Sustainable garment design (this section strictly refers to clothing)

7. I know what slow fashion is.



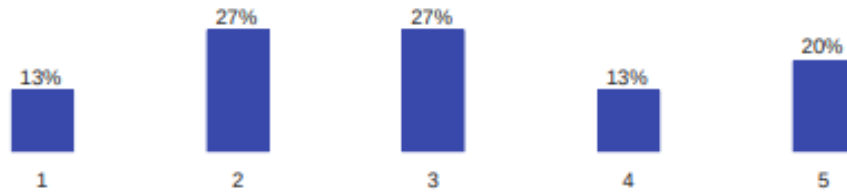
The third topic addressed by the questionnaire concerns circular/sustainable clothing design. The graph above shows a very good level of knowledge about slow fashion. 33% of respondents either strongly agree or agree, while an even percentage of them (13%) strongly disagree or prefer to remain neutral. Just 7% disagree.

8. I am aware of the impact that clothing production has on the environment.



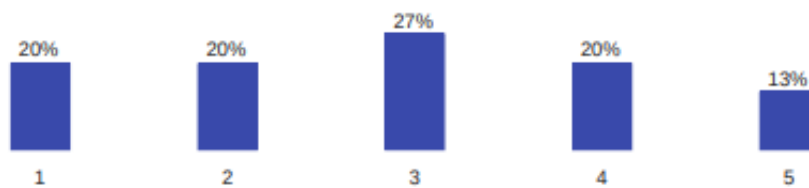
A very positive figure emerges from the graph above: as many as 80% of respondents are aware of the footprint of clothing production, indeed 47% of them strongly agree and 33% agree with the statement. 7% of respondents either remain neutral, disagree or strongly disagree.

9. I am familiar with at least 3 circular design strategies regarding garment design.



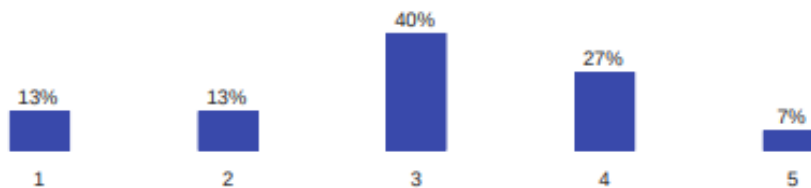
Most respondents are not very familiar with circular/sustainable strategies applied for garment design or prefer to remain neutral. While 20% of them strongly agree and the remaining 13% agree.

10. I am aware of digital innovations that can reduce the environmental impact at design stage.



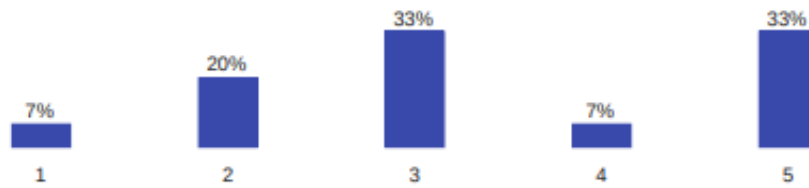
The graph shows a general lack of awareness of the merit of digital innovation in cutting off the footprint of garments' production already in the design phase. Indeed, 27% of respondents prefer to remain neutral, while 20% of them disagree or strongly disagree. Yet there is a good 20% of respondents who agree with the statement followed by 13% who strongly agree.

11. I know what design for longevity in garment design means and what are the main principles.



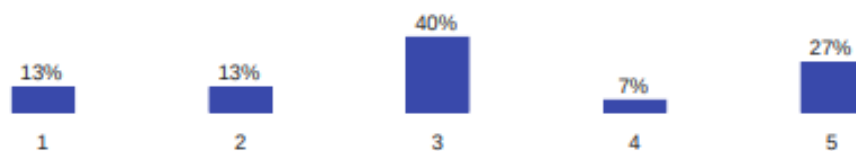
Once again, the graph shows a general lack of knowledge of what is meant by "design for longevity". Indeed, 40% of respondents prefer to remain neutral, while 13% either disagree or strongly disagree, proving to not have knowledge on the matter. Just 27% of those respondents who agree and 7% who strongly agree, know what design for longevity in garment design is.

12. I understand the impact that choices made at the design stage can have on the entire production cycle



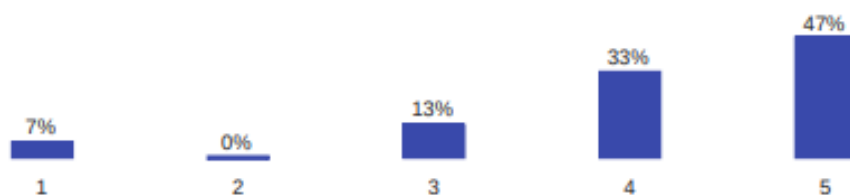
When questioned about their actual understanding of the harmful consequences of the decisions taken during the design phase, 33% of respondents either strongly agree - stating therefore to be aware of it - or prefer to remain neutral. 20% of those who disagree, followed by 7% of those who disagree, instead seem to be unaware of the problem.

13. I am aware of optimisation of pre-consumer resources through virtual collaborative design techniques.



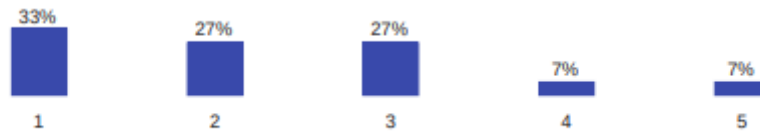
The majority of respondents (40%) remain neutral towards the topic, while 13% of them either disagree or strongly agree. Yet a good percentage of respondents seems to have some knowledge on the possibility of optimising the resources by using digital techniques within the design phase.

14. I am interested in learning more about sustainable garments design.



When asked about their interest in learning more about sustainable garments design, 47% of respondents stated to have a strong interest towards this topic, as well as 33% that agree with the statement. Only 13% are neutral and the remaining 7% would appear to be not at all interested.

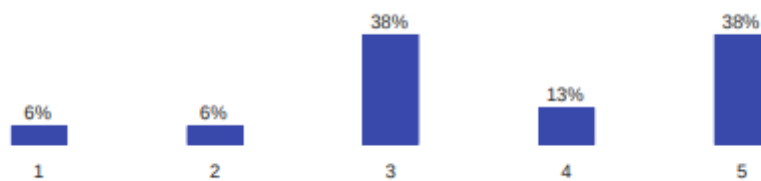
15. I know about tools for Sustainable Fashion Design (example: Sustainable Fashion Design Model, Sustainable Fashion Bridges Ideation Toolkit).



The graph shows that among respondents there is a very low level of knowledge of tools for Sustainable Fashion Design. Indeed just 7% of them strongly agree or agree, while the majority strongly disagree and the remaining percentages disagree or remain neutral.

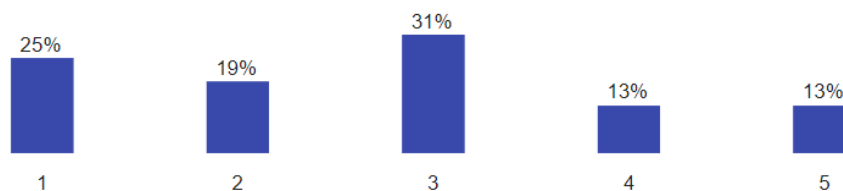
TOPIC 4: Sustainable production practices (Textile and Clothing production)

16. I am aware have knowledge of the steps within fashion supply chain.



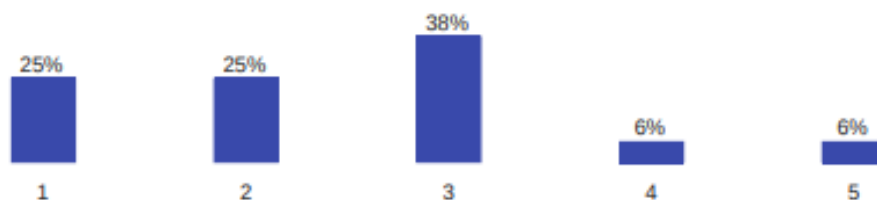
The fourth topic addressed by the questionnaire concerns sustainable production practices. The graph above shows a general good knowledge of the steps into which the supply chain is divided. 38% of respondents either strongly agree or prefer to remain neutral, while 13% of them agree with the statement. Just 6% disagree or strongly disagree.

17. I am aware of sustainable production practices that can be implemented at each step of the supply chain.



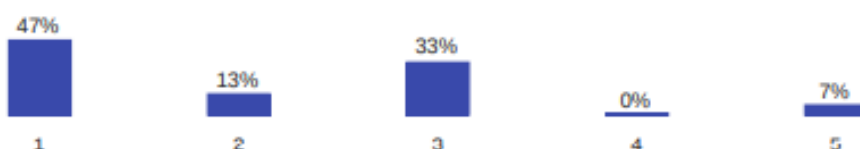
Following the *statement 25.*, when questioned about their awareness of sustainable practices that can be implemented at each step of the supply chain, just 13% of respondents who strongly agree along with 12% who agree seem to be familiar with green production practices. 31% of respondents remain neutral, while 25% strongly disagree and 19% disagree.

18. I have knowledge about the Best Available Techniques requirements in the textile industry.



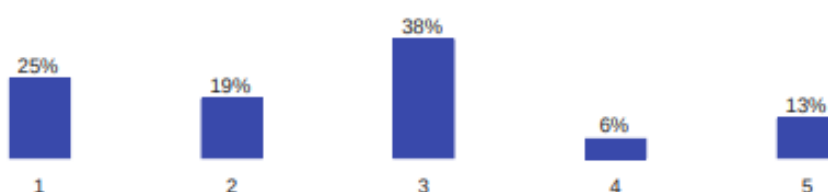
Same goes for the Best Available Techniques requirements in the textile industry, on which respondents prove to have very little knowledge. Although 38% of them remain neutral towards this matter, yet half of respondents either strongly agree or agree with the statement.

19. I am able to carry out a resource efficiency and cleaner production assessment study for the T&C processes.



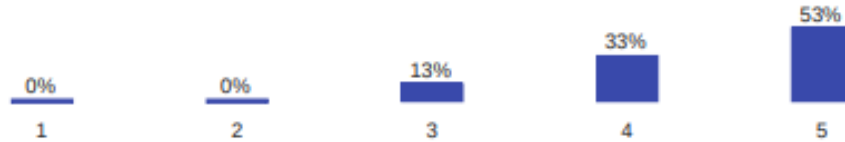
When questioned about their actual ability to carry out a resource efficiency and cleaner production assessment for the T&C processes, the figures get even worse. Almost half of the respondents would not be able to carry out such an assessment study, as stated by as many as 47% of them who strongly agree and 13% who disagree. Yet 33% remain neutral and the remaining 7% strongly agree.

20. I am able to identify and manage the waste streams associated with fashion and textile production.



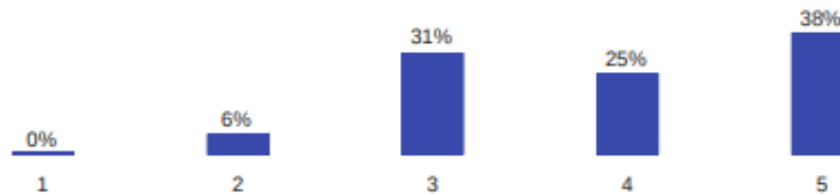
Same goes for their actual ability to identify and manage the waste streams associated with fashion and textile production. In this case, the majority of respondents (38%) remain neutral, while both those who strongly disagree (25%) and those who disagree (19%) seem like they would not be able to do it. Albeit small, there is a percentage of respondents who is able to identify and manage the waste streams associated with fashion and textile production.

21. I am interested in learning more about sustainable fashion and textile production practices, including general pollution prevention approaches.



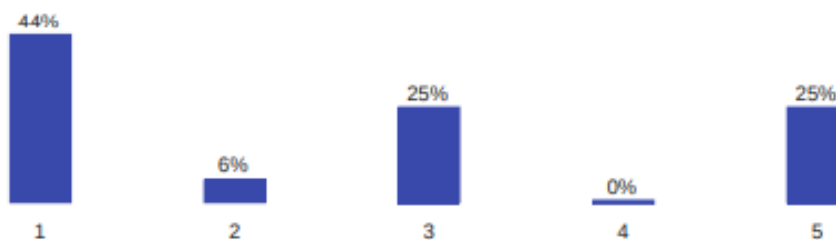
Given their lack of knowledge on this matter, more than half of respondents are interested in learning more about it. Just 13% of them remain neutral. It is important to highlight that also in response to this statement, none of the respondents were disinterested; on the contrary, all prove to be concerned and responsible.

22. I have knowledge about the violation of working rights and abuses existing in fast F&T sector.



More than half of respondents are aware of the violation of working rights and abuses perpetrated against garment workers. 31% of respondents remain neutral, and only 6% of them are not aware of this on-going issue.

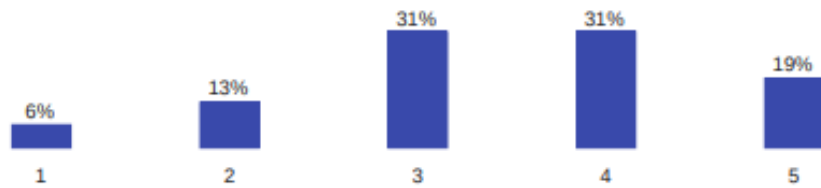
23. I know what means the concept of sweatshop.



The graph above shows that almost half of the respondents do not know what it meant by “sweatshop”. While 25% of them either remain neutral or strongly agree.

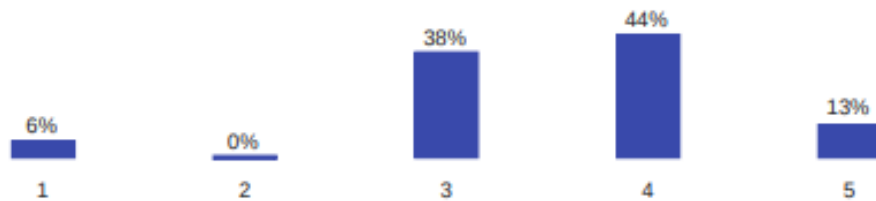
TOPIC 5: Enhancing product durability and garment life cycle.

24. I am familiar with the clothing life cycle.



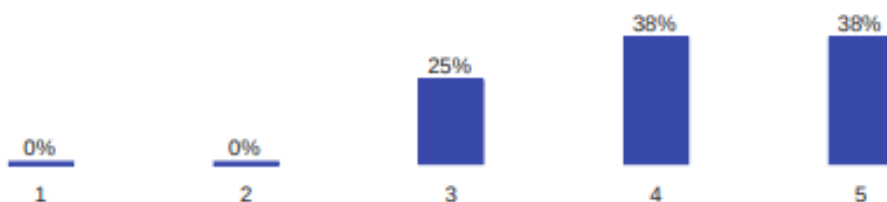
The fifth topic addressed by the questionnaire concerns the product durability and garment life cycle and the possibility of enhancing it. The percentages of respondents who remain neutral and those who agree are equal (31%). Therefore, overall respondents have a good level of familiarity with the clothing life cycle. Indeed, just 13% disagree and 6% strongly disagree.

25. I am familiar with the clothing methods that extend my garment's lifespan.



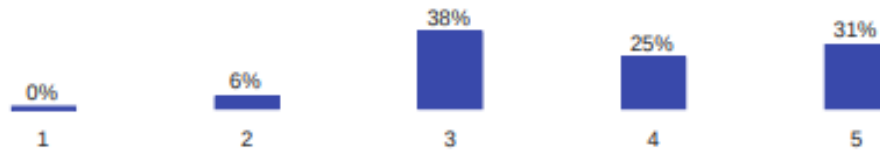
Following the *statement 34*, more than half of the respondents are familiar with the clothing methods useful to extend garments' lifespan. Just a small percentage (6%) seem to not be aware of such methods.

26. I try to implement sustainable fashion behaviours in my daily life as well as my friends & family.



A very positive figure emerges from the graph above: as many as 76% of respondents are trying to implement sustainable fashion behaviours on a daily basis. Just 25% of them remain neutral towards this matter.

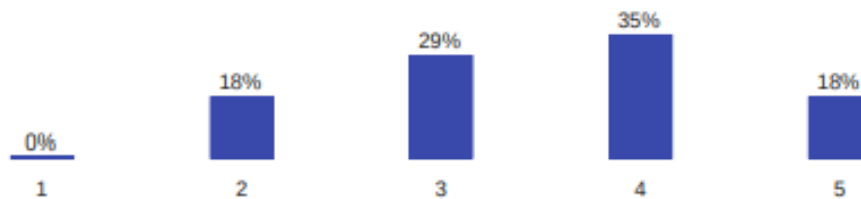
27. I try to keep up with trends/innovations regarding sustainable/circular clothing/textiles.



The graph shows that the majority of respondents either tries to keep up with trends and innovation in this field or remain neutral. Only 6% of respondents disagree with the statement.

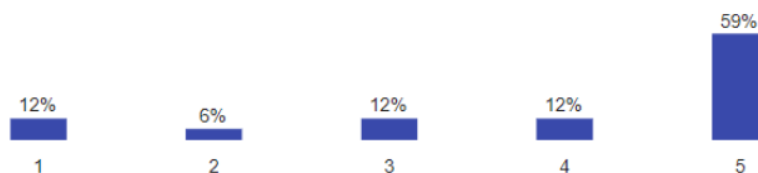
TOPIC 6: End-of-life management.

28. I am aware of the end-of-life possibilities for my clothing.



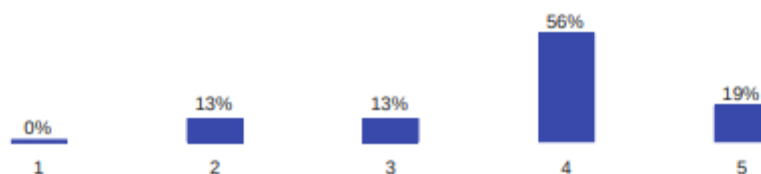
The sixth topic addressed by the questionnaire concerns garments' end-of-life management. Although most respondents (35%) are aware of the end-of-life possibilities of their clothes, yet the percentage of those who disagree with the statement is equal to that of those who strongly agree. 29% remain neutral towards this topic.

29. I don't mind purchasing second-hand clothes over new ones.



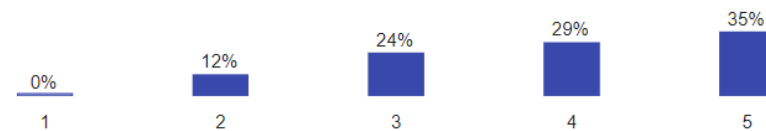
A very positive figure emerges from the graph above: as many as 71% of respondents are used to shop second-hand/vintage clothes instead of new ones, proving mindful consumption behaviours.

30. I prefer purchasing clothes made from sustainable/recycled materials over regular ones.



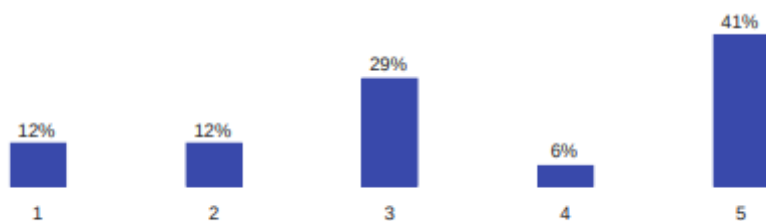
Same goes for their preference of sustainable clothes over regular ones, e.g. clothes made from synthetic textile materials. A high percentage of respondents proves to be attentive to the materials their garments are made of, while just 13% of them either remain neutral or disagree.

31. I am aware of sustainable clothing/textile end-of-life alternatives (e.g. remanufacturing, recycling, energy recovery, etc.)



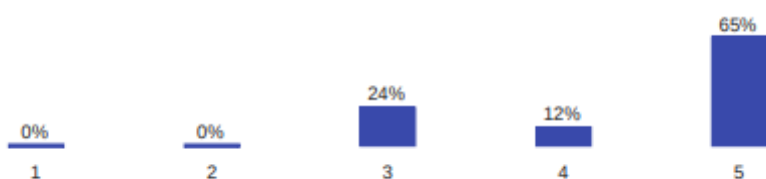
Overall, respondents have a good level of awareness of sustainable clothing/textile end-of-life alternatives. Indeed, 35% of them strongly agree with the statement and 29% agree. 24% prefer to remain neutral, while just 12% of respondents disagree.

32. I can mention at least 3 sustainable brands.



When questioned about their ability to mention at least 3 sustainable brands, the majority of respondents state to be able to do so, as 41% strongly agree and 6% agree. 29% answer to be neutral towards this matter, while 12% admit they would not be able to do it at all.

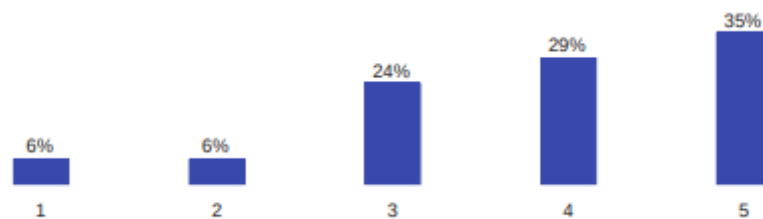
33. I would like to learn more about sustainable clothing/textile end-of-life management.



When asked about their interest in learning more about sustainable clothing/textile end-of-life management, 65% of respondents state to have a strong interest towards this topic, as well as 12% that agree with the statement. Only 24% remain neutral. Once again, it must be noted that none of the respondents is disinterested; on the contrary, all prove to be concerned and responsible.

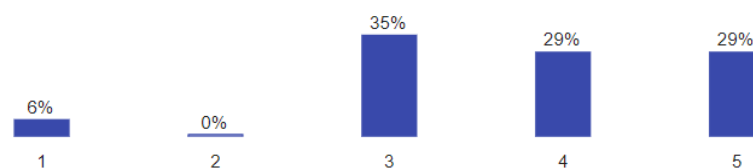
TOPIC 7: Implementing circularity & sustainability practices in F&T industry

34. I know what the term “circular economy” means.



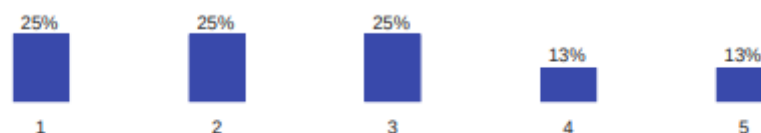
The last topic addressed by the questionnaire concerns the implementation of circular and sustainable practices in the Fashion and Textile industry. The graph shows a general good level of knowledge of what is meant by “circular economy”. Indeed, 35% of respondents strongly agree with the statement, followed by 29% that agree. While 24% remain neutral, just 12% of respondents seem to not know what a “circular economy” is.

35. I am aware of the importance of the circular economy in the F&T industry.



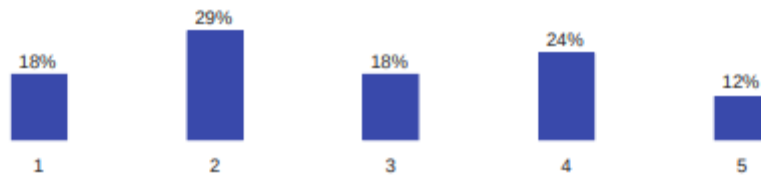
More than half of respondents are aware of the importance of the circular model in this sector. However, the majority (35%) prefers to remain neutral. Just a small percentage of respondents strongly disagree with the statement, proving to be unaware of such relevancy.

36. I am aware of digital systemic design methods that are integrating end life of product assessments.



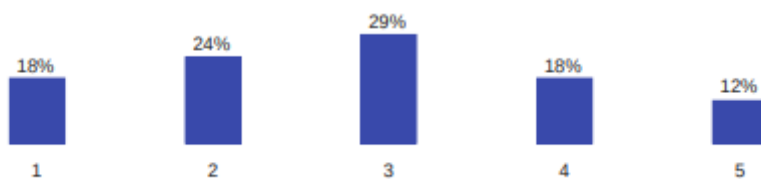
The graph shows a general lack of knowledge of digital systemic design methods followed to assess the end-of-life of a product. 25% of respondents either strongly disagree, disagree or prefer to remain neutral. Yet there is a small percentage of respondents who are aware of the integration of these methods.

37. I am practising circular economy principles in F&T industry.



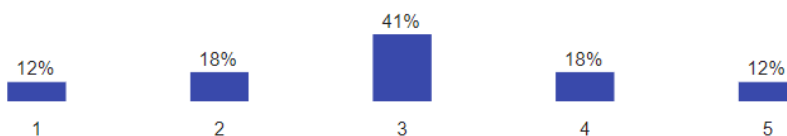
Most respondents are not putting in place the circular economy principles, as stated by 29% of them who disagree and 18% who strongly disagree. However the percentage of respondents who agree is still quite high (24%) hence highlighting a positive figure.

38. I am aware of the circular solution in the textile value chain.



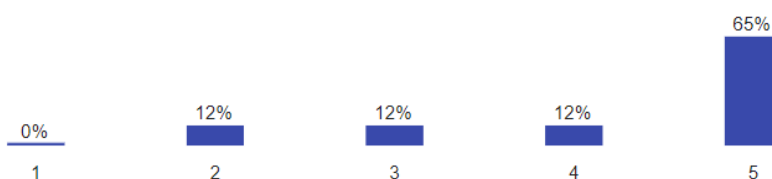
There is evidence of poor knowledge among respondents of the circular solution in the textile value chain. As many as 29% of them prefer to remain neutral, while the second highest column of the graph represents the respondents who disagree with the statement (24%). The percentage of those who strongly disagree and those who agree is even (18%).

39. I am aware that digital tools enable circular economy principles integration in T&C sector.



When asked about their awareness of the possibility to use digital tools to integrate circular economy principles to this sector, the majority of respondents (41%) prefer to remain neutral. The percentage of those who disagree is equal to that of those who agree. As well as the percentage of those who strongly disagree is equal to that of those who strongly agree.

40. I am interested in learning more about the implementation of circular economy practices in the F&T industry.



Finally, when asked about their interest in learning more about the implementation of circular economy practices in the F&T industry, as many as 65% of respondents state to have a strong interest towards this topic, as well as 12% that agree with the statement. Only 12% either remain neutral or disagree.

41. Is there any topic you are interested in and it has not been mentioned in the questionnaire?

Respondents answered the open question as follows:

- *Use of fabric dyes for clothing;*
- *Tools and suggestions to implement these good practices in schools;*
- *How feasible can it be to apply digital tools to small and handcrafted reality with short supply chain?;*
- *Communication and dissemination of sustainability topics related to F&T industry also addressing people who are not professional in this field.*

In conclusion, the several topics covered by the questionnaire piqued everyone's interest. All our respondents acknowledged the urgency of addressing such issues. Indeed some believe it would be important to extend this kind of research to those who are not experts/workers in the field, to see how they perceive the problem of pollution from the production, consumption and end-of-life of garments.

Going through the seven topics displayed above, conclusions can be drawn. The answers collected regarding the understanding of the origin and impact of raw materials, paint an overall positive picture. There is a higher number of negative responses in the case of statement 5. related to knowledge of man-made fibre production processes and statement 8. related to changing fashion behaviours, highlighting some confusion among respondents as to how they can actually be an active part of the process of change toward a green-er F&T sector. To the contrary, the answers collected regarding sustainable fabrics, are quite negative. There is a general lack of knowledge about eco-friendly fabrics, their innovative production processes and circular strategies applied in F&T industry. This is the first major gap identified in our target group, which nevertheless expressed a strong interest in learning more about these topics. Moving forward to the third topic, circular/sustainable garment design, it can be seen the low level of knowledge of sustainable strategies applied in the design phase, but more broadly, the lack of awareness of the environmental impact of this phase and the innovative digital tools applied to address this issue. The fourth topic: sustainable production practices received

a majority of negative responses. This gap identified in our target group, despite being workers/experts in the field, highlights how these practices are not widely used.

With regard to the ways in which product durability and garment life cycle can be enhanced, respondents showed to be not only well prepared, but also very mindful, and the same is evident from the answers given on the topic of the management of the end-of-life of garments. The final topic addressed by the questionnaire concerns the implementation of circularity & sustainability practices in F&T industry. Besides some negative answers provided in response to the statement 45., 46., and 47., respondents prove to have good competencies in the field of circular economy and recognize the need to deepen those related to the implementation of digital tools.

The findings disclosed in this report may be explained in view of Italy's ancient tradition of craftsmanship and manufacturing. "Made in Italy" is indeed a brand itself, a symbol of quality and excellence worldwide. Therefore, the approach that is handed down is in fact very often too traditional and outdated, as it does not keep pace with digital innovations that not only simplify and speed up production processes but also limit their environmental impact. It should be further emphasized that most respondents are over 39, which might explain the limited knowledge on this topic. Nevertheless, with the advent of new technologies and the increasingly pressing need to address environmental issues, the F&T industry is changing, albeit in small steps.

Gaia Segattini "Knotwear" is a play on words that emphasises the unconventional characteristics of their products; not only from an ideological and aesthetic point of view, but from the design, production and commercial side as well. The yarns used are high-quality production leftovers, this both for the purpose of sustainability as well as to limit supply waste. This way, the yarn suggests the style and not vice versa. They take to heart the quality of the yarn and the workmanship as an act of honesty and respect towards our customers, as well as a guarantee of durability, and therefore respect for the environment. They garments combine both knitting machine techniques and hand-made details to ensure the highest levels of manufacturing and craftsmanship, and to guarantee iconic garments. Each garment is therefore produced as a single piece or one of a select few.

EcoGeco brand, specialized in the production of women/men jeans in organic cotton dyed with vegetable indigo originated in 2010 thanks to the idea of Claudia Lubrano and Giampaolo Bianchi, experts of the textile sector. They have been working in the clothes business for over thirty years as sales agents and have always been active and sensitive towards environmental themes. Jeans nowadays are a very polluting and globalized product, often imbued with chemical substances in contact with our skin. People often forget that jeans are a symbol of freedom, the second skin of who wants a better world so they have decided to make them become a reality. Besides organic cotton,

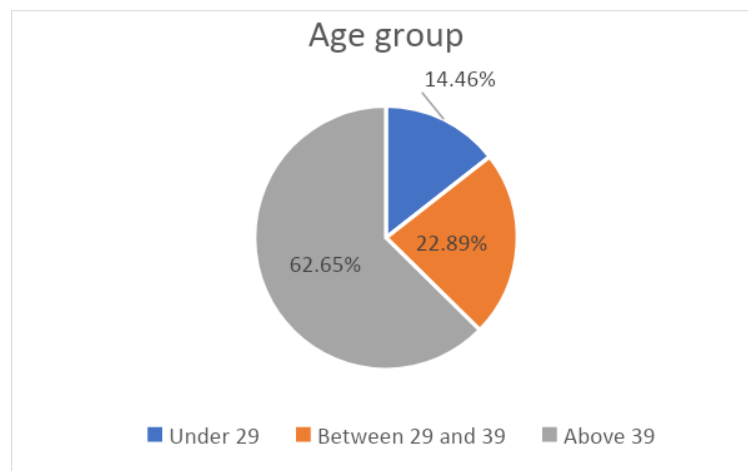
they have chosen to use vegetable indigo dye, one of the most ancient pigments, obtained from the maceration of *indigofera tinctoria* that confers a shade of colour which distinguishes it from chemical dyes both for its brightness and intensity. They want to propose an idea of quality that combines environmental and ethical aspects, promoting through our local production, a sustainable product, both from the environmental and social point of view, by recovering and improving the productive know-how that distinguishes the Venetian area in the production of jeans. They use cotton that comes from organic cultivations dyed with vegetable indigo that holds the Gots certification. They pay great attention also in the laundry treatment, respecting the environment and using ecological processing and/or products. All applied accessories are animal free. Furthermore, the productive chain is carefully selected and controlled by experts of a sector that has been at the top of the Italian economy, contributing to affirm the made in Italy worldwide. The samples are carefully studied to give maximum comfort in wearability, two for women (Altair and Kochab) and two for men (Genel and Thabit) and are well finished in the minimum details to offer comfortable jeans, beautiful, seductive and fit for any occasion or age.

3.3 Romania

This section represents the results obtained from the questionnaires in Romania. The results are presented with the results of individual questions. 92 responses to the questionnaire were obtained in Romania.

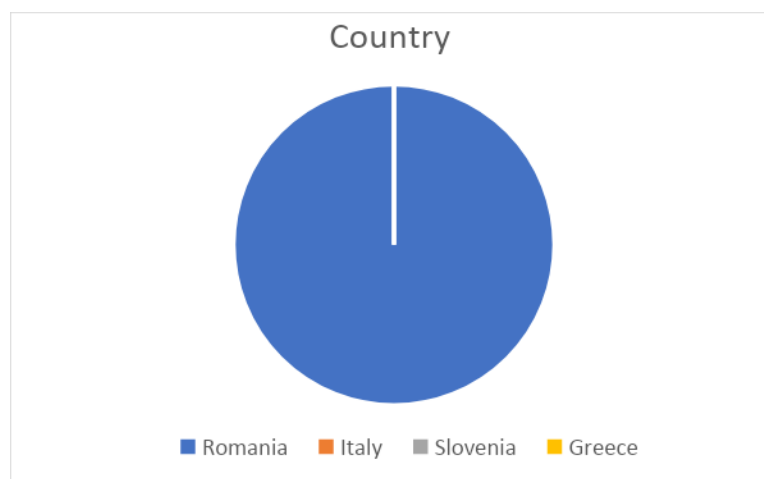
Demographical questions

The graph below shows that the main age group of the respondents is above 39 years old (62,65%), while 22,9% are between 29 and 39 years old, and 14,5% are under 29.



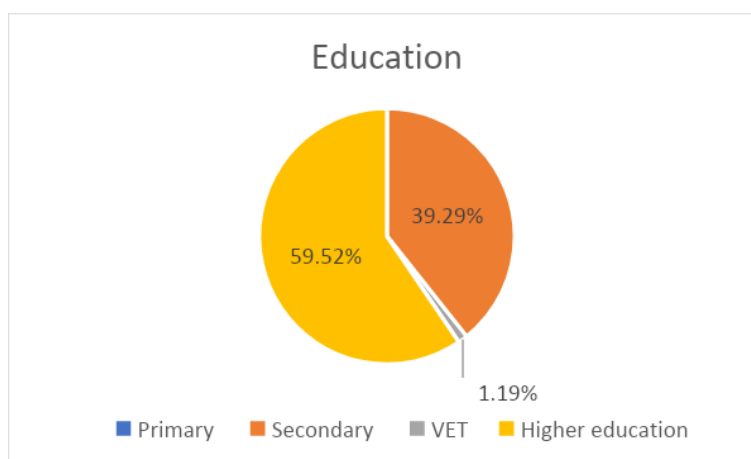
Graph 1 Age group

As for the nationality, all the respondents are Romanian.



Graph 2 Country

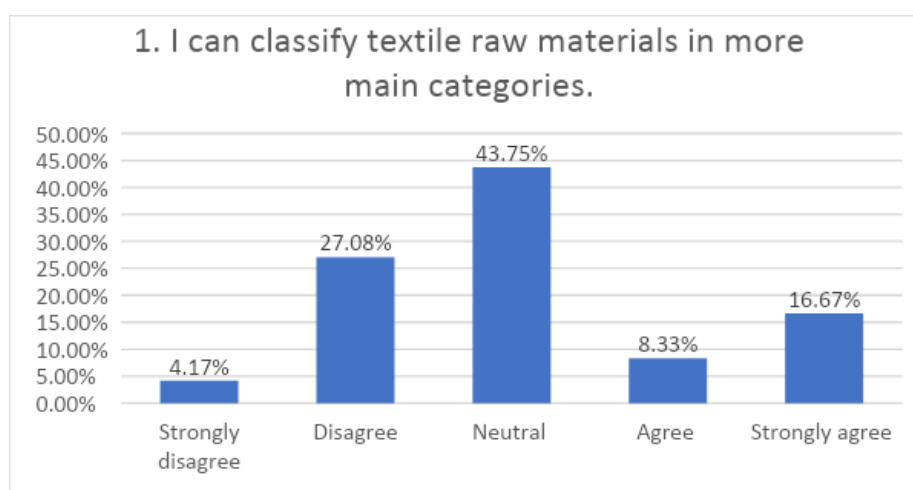
The educational level of the majority is University (59,5%); however, 39,3% of respondents have graduated a secondary education level. Only 1,2% of respondents have VET education as a background.



Graph 3 Education

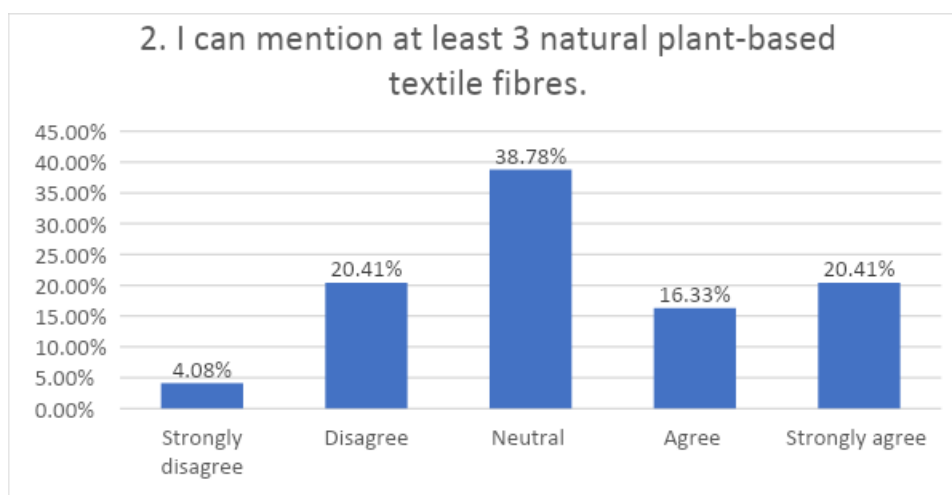
Topical questions - Understanding the origin and impact of raw materials

Graph 4 shows that 43,7% of respondents are neutral towards being able to classify textile raw materials in main categories; while 27% disagree and 4% strongly disagree with this statement. Only 8,33% agree and 16,6% strongly agree.



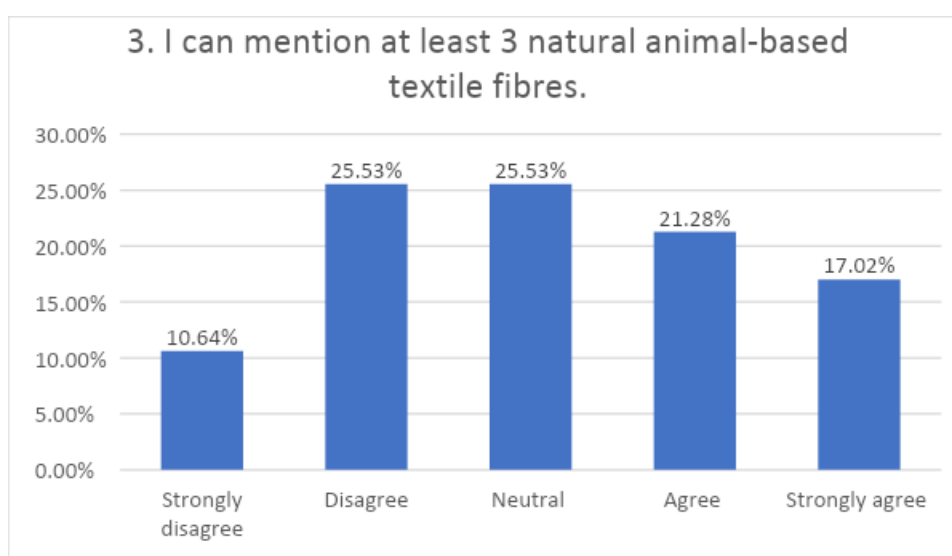
Graph 4 Classifying textile raw materials

When asked if they can mention at least 3 cellulose fibers, the majority has responded with neutral, while around 37% agree and strongly agree with this statement and 24,5% disagree or strongly disagree.



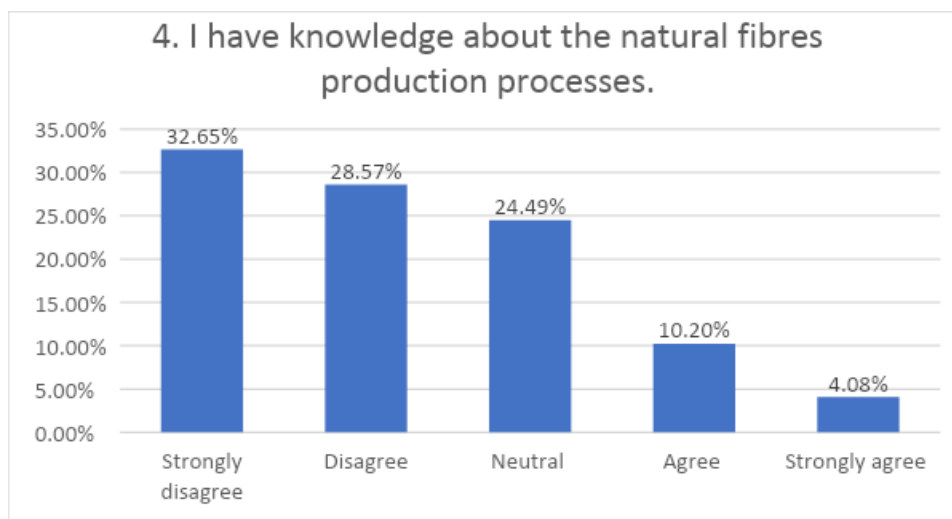
Graph 5 Natural plant-based textile fibres

Graph 6 shows that 25,5% disagree and another 25,5% are neutral when asked if they are able to mention 3 animal-based fibers. 21,3% agree and 17,02% strongly agree with the statement.



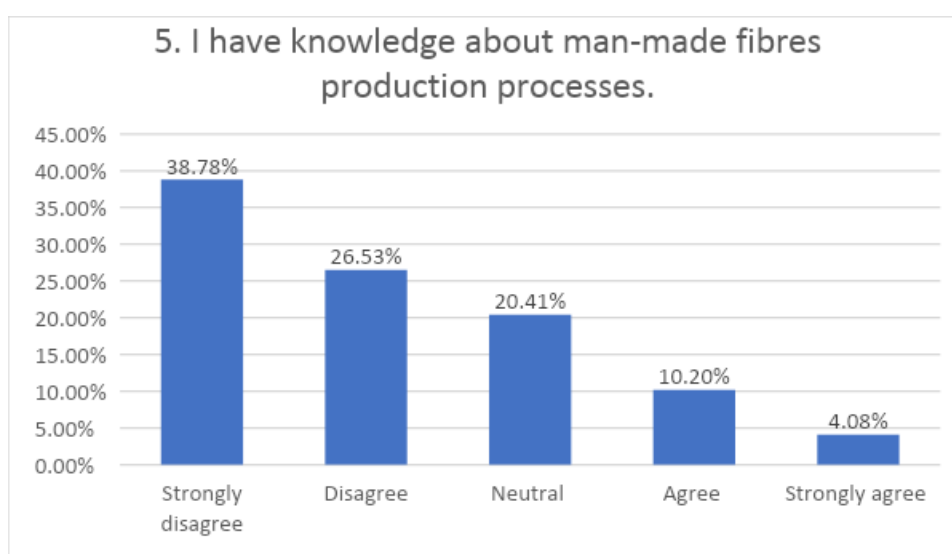
Graph 6 Natural animal-based textile fibres

Regarding the knowledge about the production of natural fibers, a majority of 32,6% of the respondents have none, and 28,5% very little. Only 10,2% agree that they do have knowledge on this matter and 4% strongly agree.



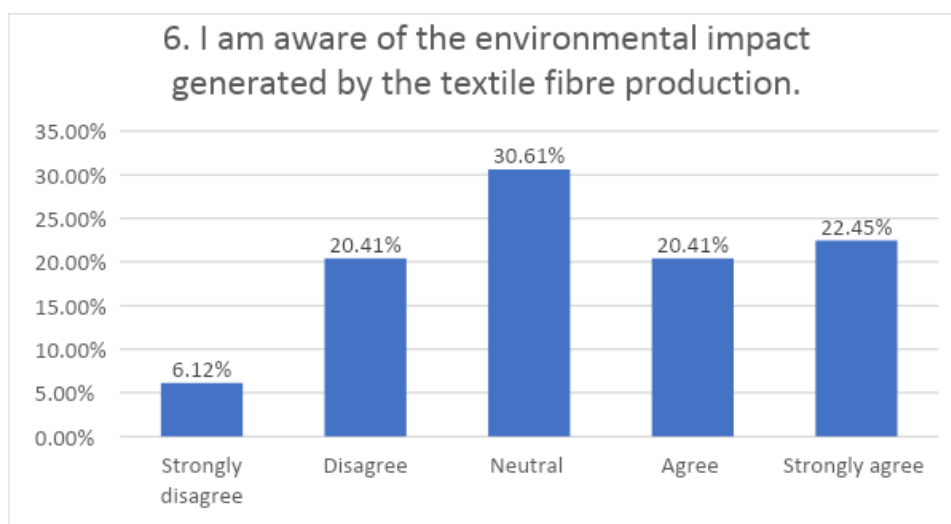
Graph 7 Knowledge about the natural fibres production processes

Similarly, to Graph 7, Graph 8 asks about the level of knowledge regarding the production of man-made fibers, and the responses are almost the same: 65,3% have very little to no knowledge at all, 20,4% have basic knowledge, 14,2% have knowledge about the topic.



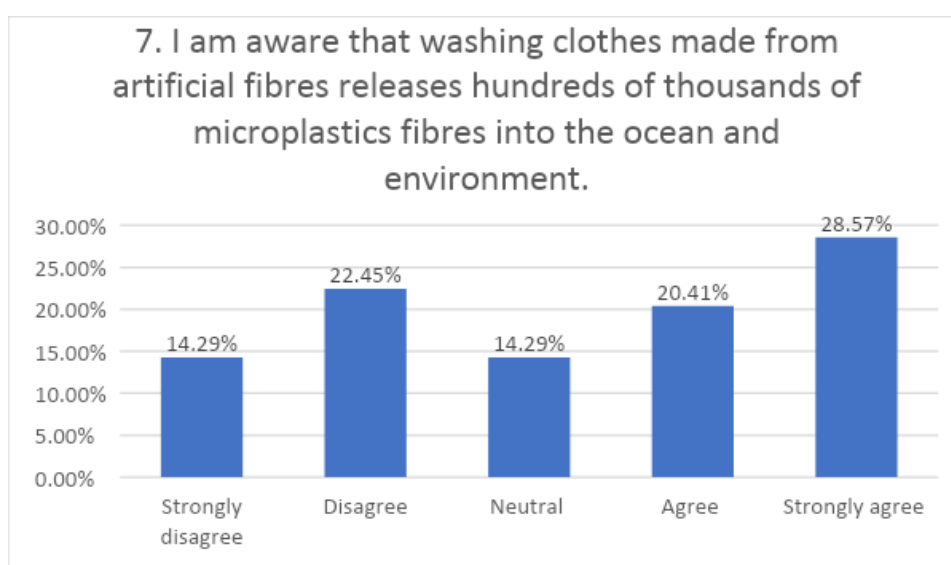
Graph 8 Knowledge about man-made fibres production processes

On the topic of awareness regarding the impact of fiber production on the environment, 45% of people are aware of it, while 30,6% remain neutral and 26,5% are not aware.



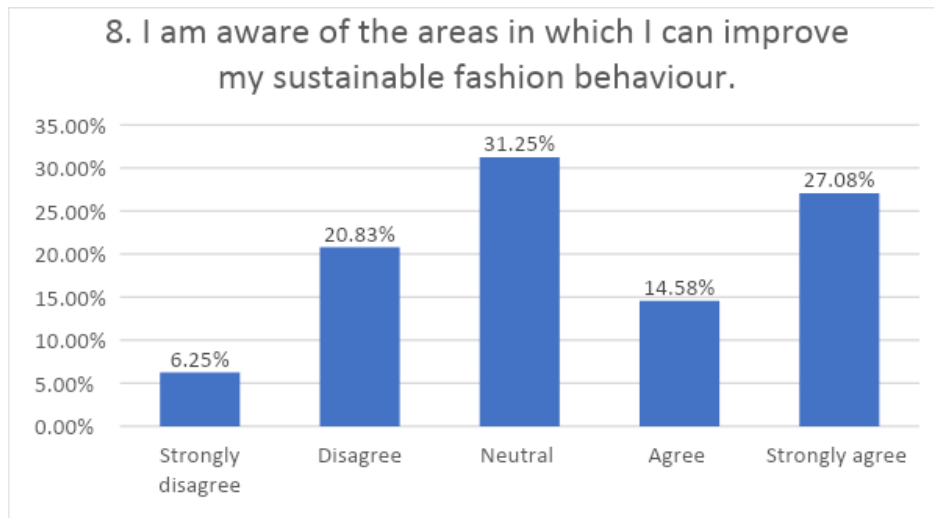
Graph 9 Awareness of the environmental impact of textile fibre production

Opinions on the issue of microplastics that are released through washing are split, as seen in Graph 10, with 49% agreeing or strongly agreeing that they are aware of this issue, and 36,8% are not aware or barely aware of this issue. 14,3% remain neutral.



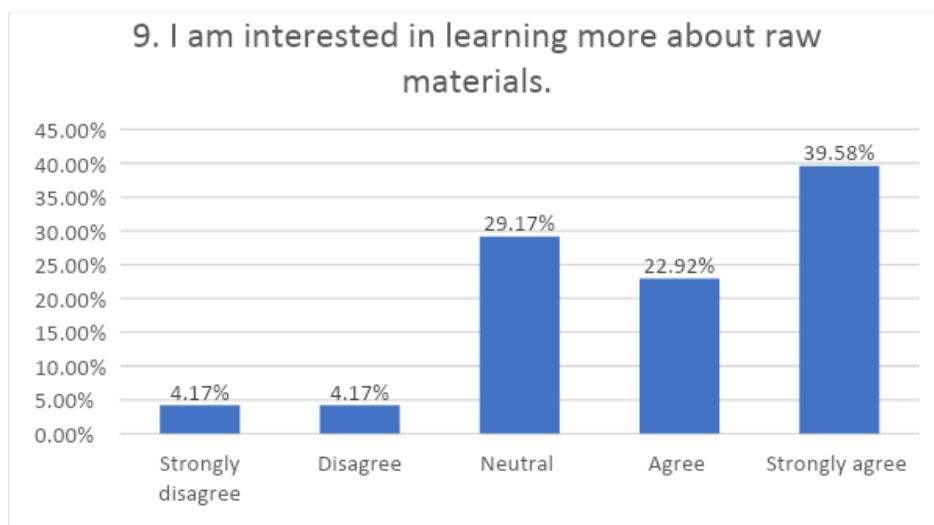
Graph 10 Awareness of microplastics fibres

When asked if they are aware about areas they can improve their sustainable fashion behavior, the majority have at least some idea (27,08% strongly agree, 14,5% agree and 31,2% are neutral) about how they can do this. 20,8% disagree and 6,2% strongly disagree on having knowledge on how to improve sustainable fashion behavior.



Graph 11 Improving sustainable fashion behaviour

Graph 12 shows that a majority of 39,5% have a strong interest towards learning more about textile raw materials. The other 52% show at least some interest, while only 8,3% of respondents show no interest in this topic.

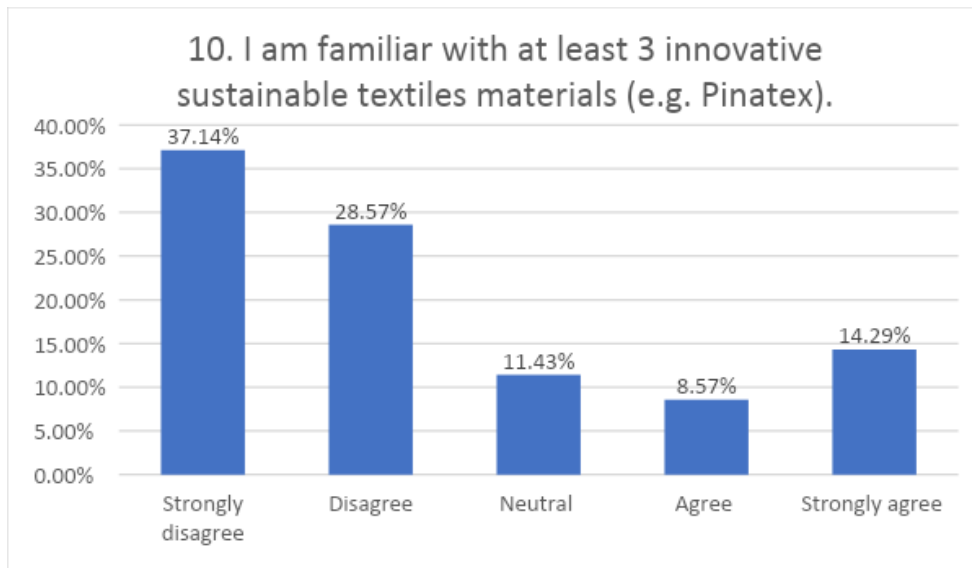


Graph 12 Learning more about raw materials

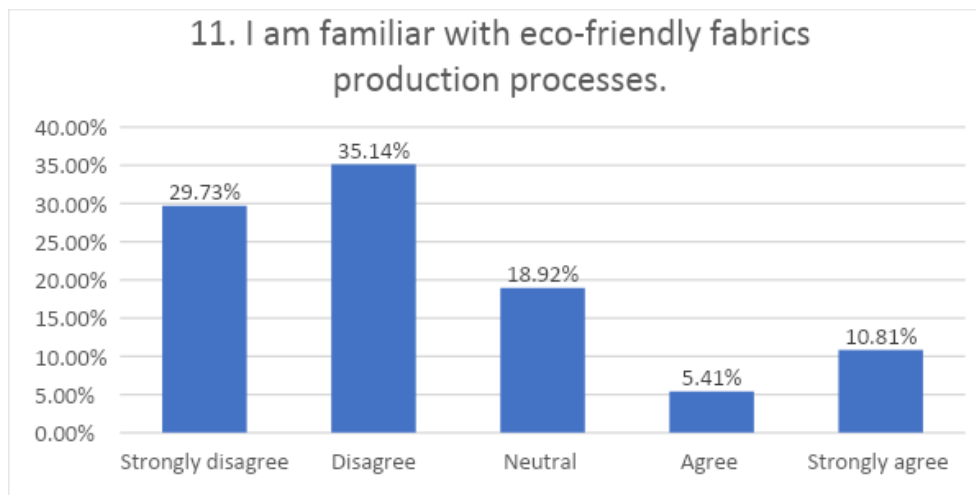
Topical questions – Sustainable fabrics use

This section of the survey concerns the level of knowledge about production and use of sustainable fabrics in the F&T sector.

The first question of this block shows that a majority of 65,7% respondents have very little to no knowledge about innovative sustainable fibers. Similarly, Graph 14 shows that the same majority also has very little to no knowledge about eco-friendly fabric production processes.

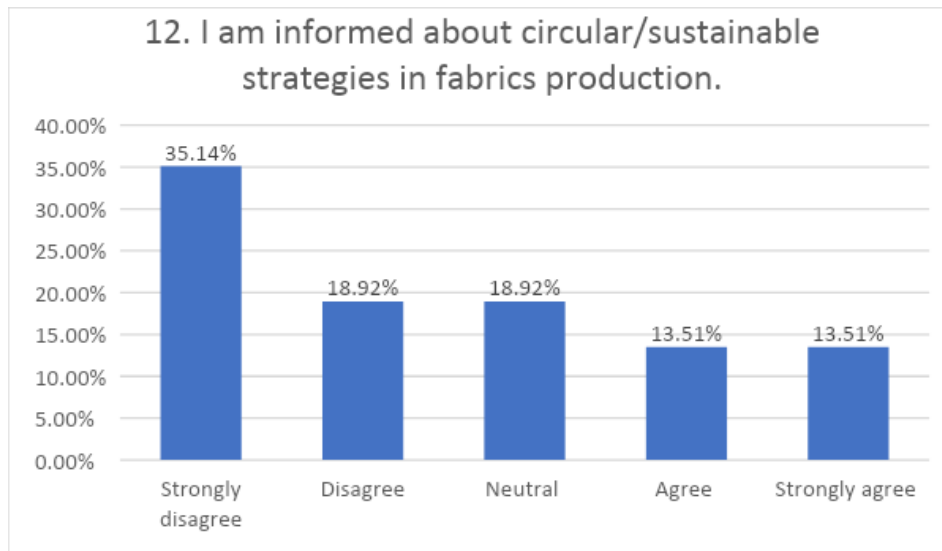


Graph 13 Innovative sustainable textile materials



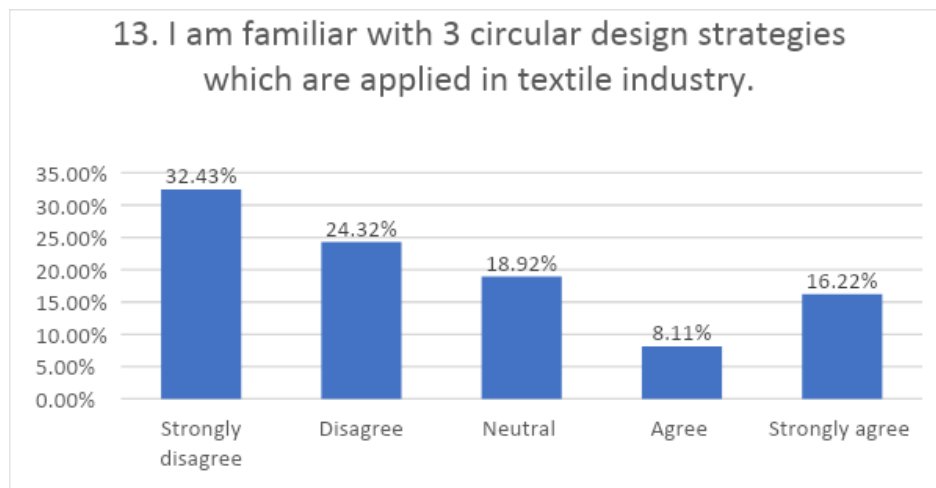
Graph 14 Eco-friendly fabrics production processes

Graph 15 shows that a majority of 54% are not informed about circular/sustainable strategies of fabric production, while 27% agree or strongly agree with the statement.



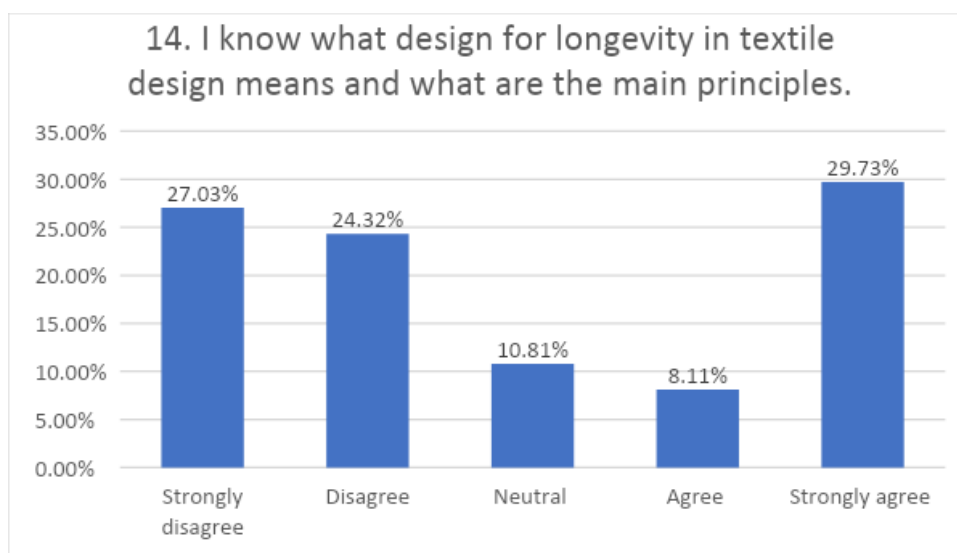
Graph 15 Knowledge about sustainable strategies in fabrics production

Graph 16 shows that 56,7% of respondents are not familiar with 3 circular design strategies applied in the textile industry, while 20,3% are not.



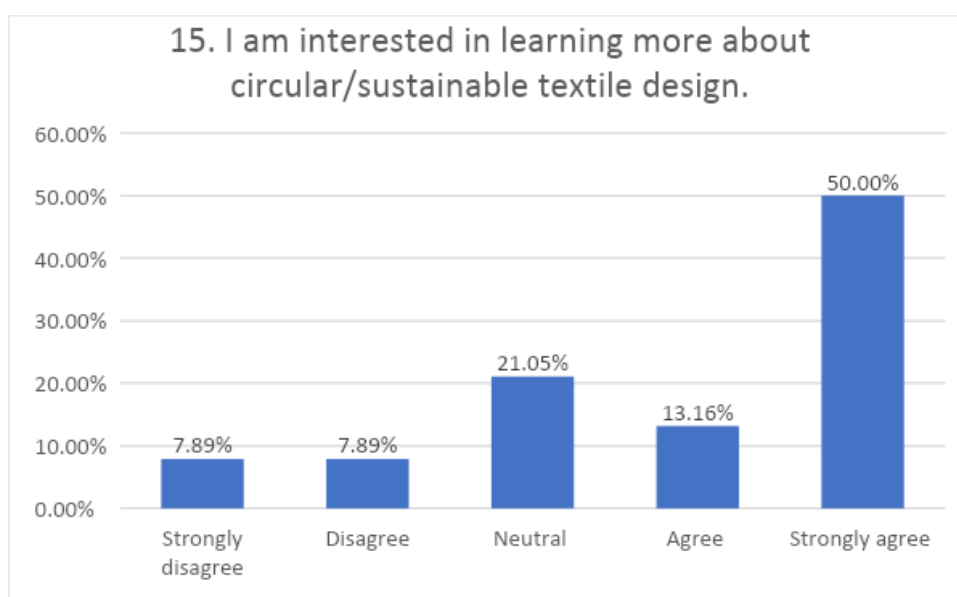
Graph 16 Circular design strategies in textile industry

As for Graph 17, which shows the level of awareness towards the principle of design for longevity, 51,3% of respondents are not aware (or have little awareness), while 29,7% are strongly aware of this principle.



Graph 17 Design for longevity in textiles

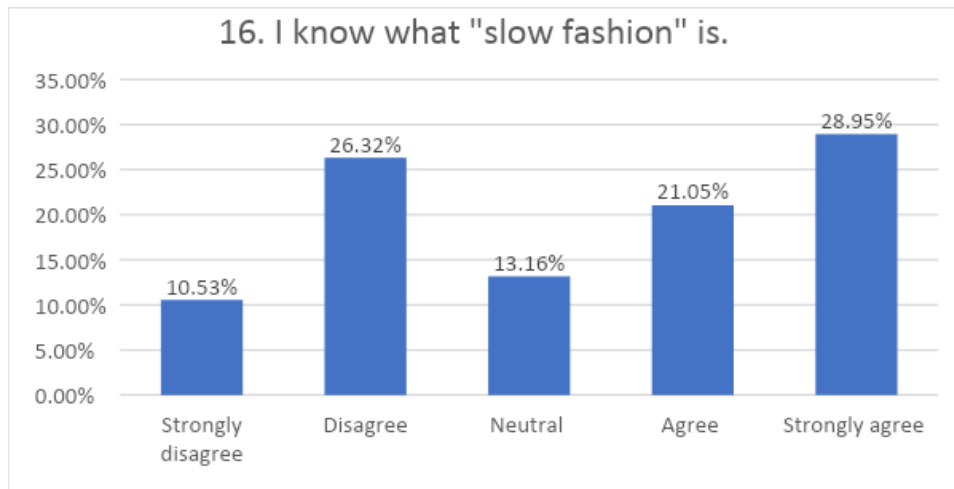
Graph 18 shows that 50% of respondents show a strong interest towards learning more about sustainable textile design, while 24% also show interest in this topic. The rest of 16% have no interest in circular textiles.



Graph 18 Learning more about sustainable textile design

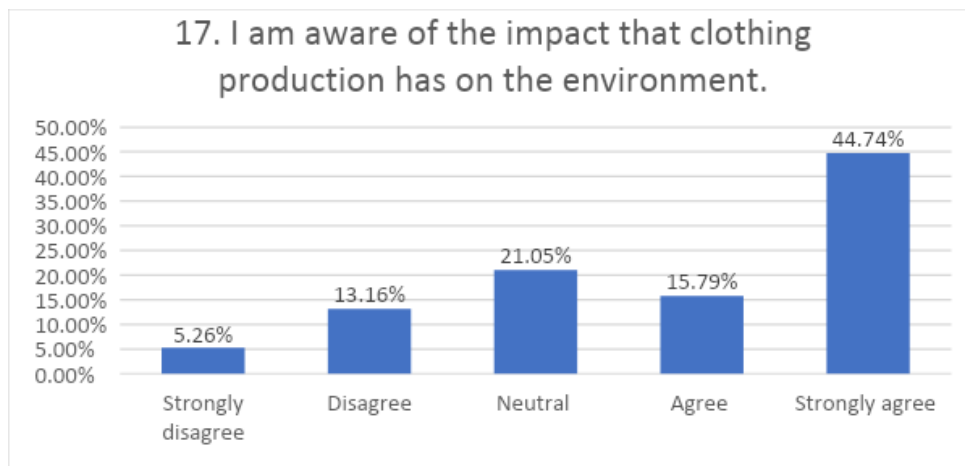
Topical questions – Sustainable garment design

Graph 19 shows that, when asked what slow fashion is, a category of people shows a clear understanding of the topic (28,9% strongly agree and 21% agree), while a 36,8% of the respondents show a lack of understanding of the concept. 13,16% remain neutral.



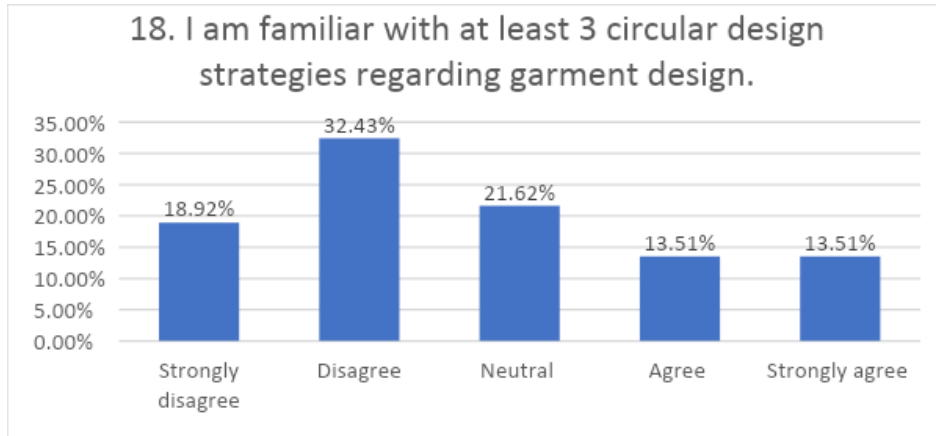
Graph 19 Understanding slow fashion

Nevertheless, Graph 20 shows that 80% of respondents understand, at least at a moderate level, understand the impact of clothing production on the environment. Out of the 80%, 44,7% have a thorough understanding of the problem. Only 18% of respondents don't understand the impact.



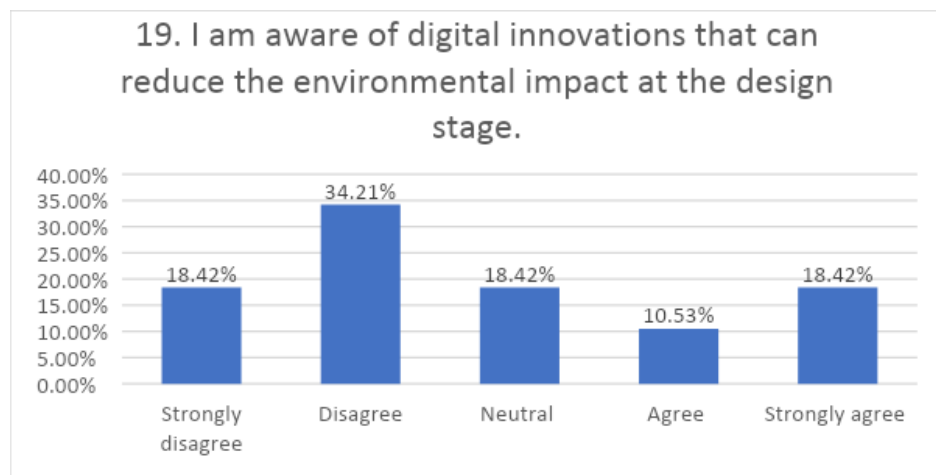
Graph 20 Awareness about the impact of clothing production

Graph 21, shows that only 13,51% of respondents are familiar with at least three circular design strategies, while the majority meaning 51,35% are not familiar at all with the design strategies.



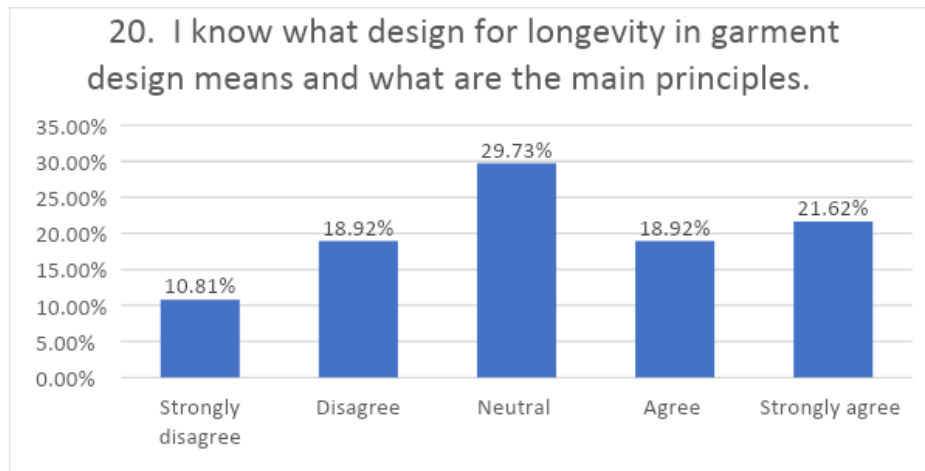
Graph 21 Circular garment design strategies

While only 28,95% are aware of digital innovations that can reduce the environmental impact in the design stage, as presented in graph 22, the majority of respondents (52,32%) are not aware of those digital innovations.



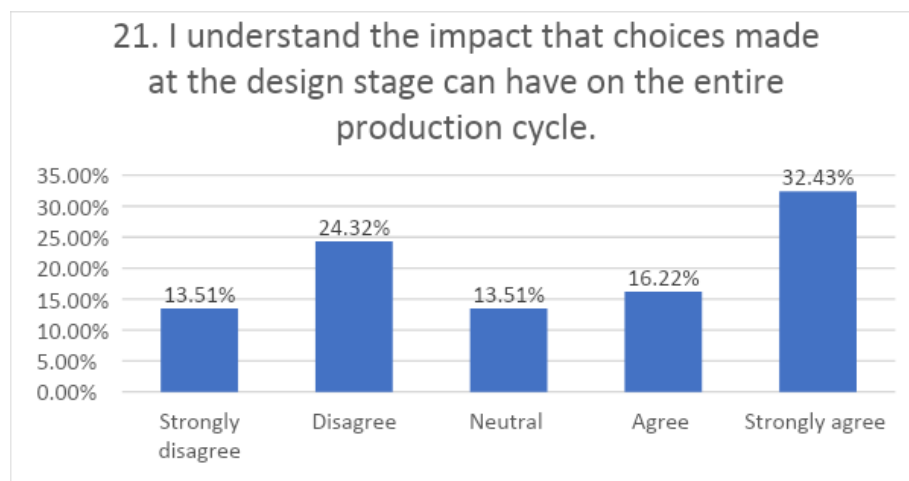
Graph 22 Digital innovations

As presented in graph 23, about 40,54% of respondents are aware about what design for longevity in garment design means, 29,73% are neutral, probably not knowing about the subject, and 29,73% are not aware of this practice.



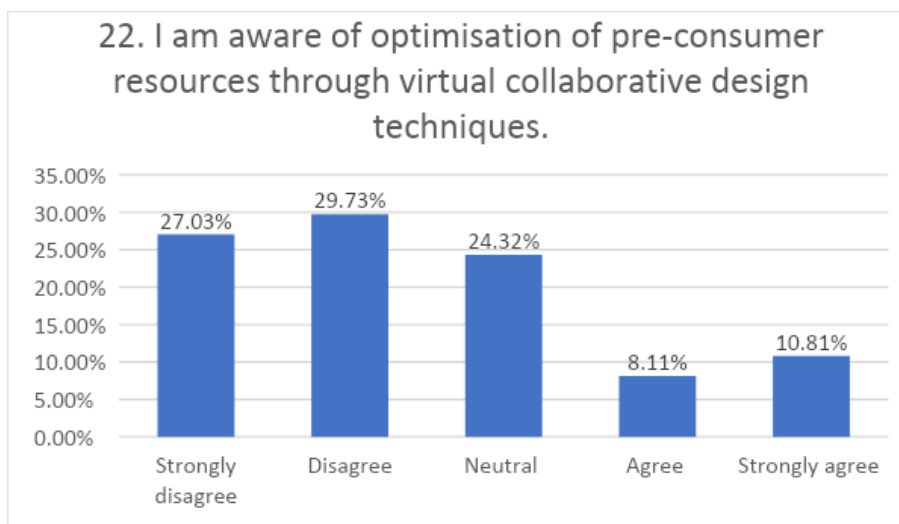
Graph 23 Design for longevity in garment design

Graph 24 shows that 48,65% of the respondents understand the impact of choices made at the design stage on the entire production cycle, while 37,83% are aware and 13,51% are neutral, probably not having knowledge about the subject.



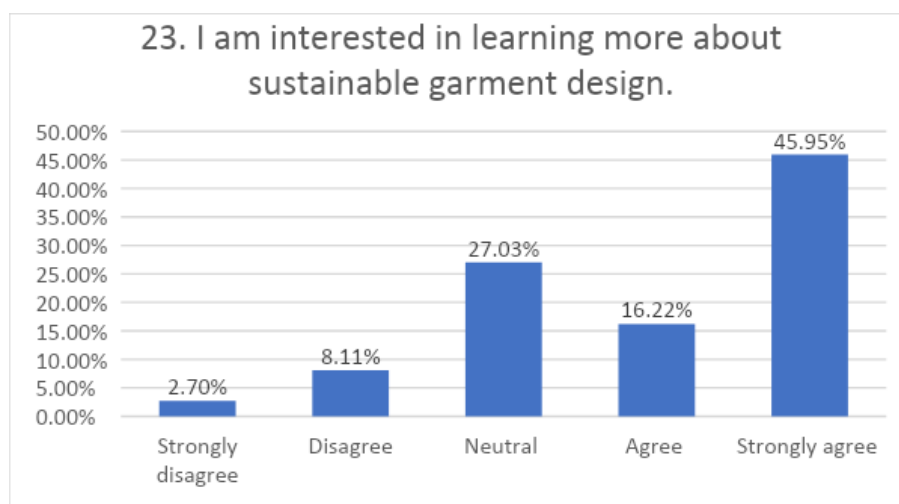
Graph 24 Impact of the design stage on production cycle

Next question regarding awareness of the pre-consumer resources through virtual collaborative design techniques has only 18,92% positive answers, while 56,76% are not aware and 24,32% are neutral. (graph 25)



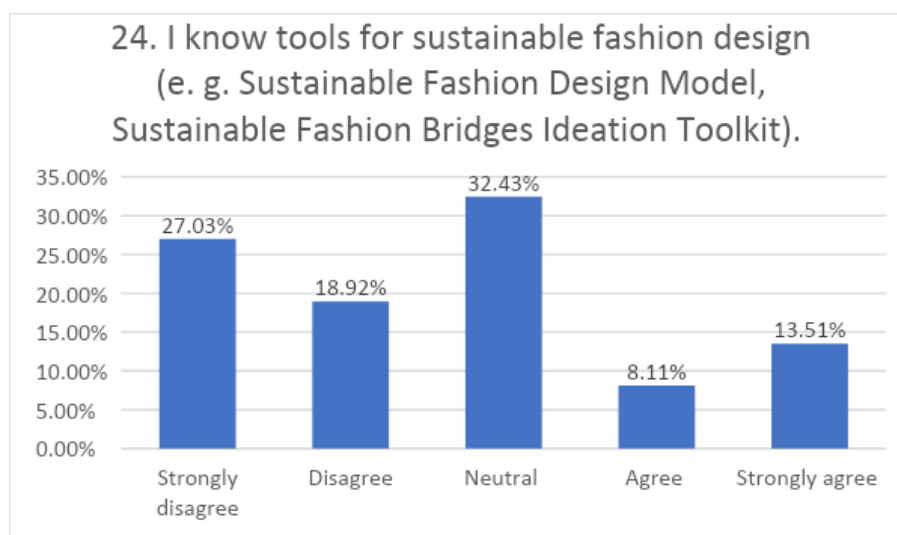
Graph 25 Awareness of optimisation of pre-consumer resources

Graph 26 shows that 62,14% are interested in learning more about sustainable garment design while 27,03% is neutral.



Graph 26 Learning about sustainable garment design

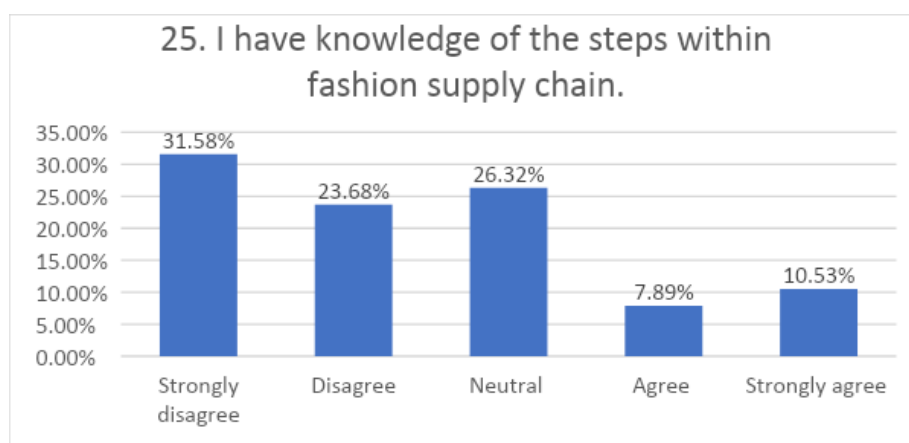
As presented in graph 27, very few respondents, only 21,62% know about tools for sustainable fashion design, while 45,92% do not know and 27% are neutral.



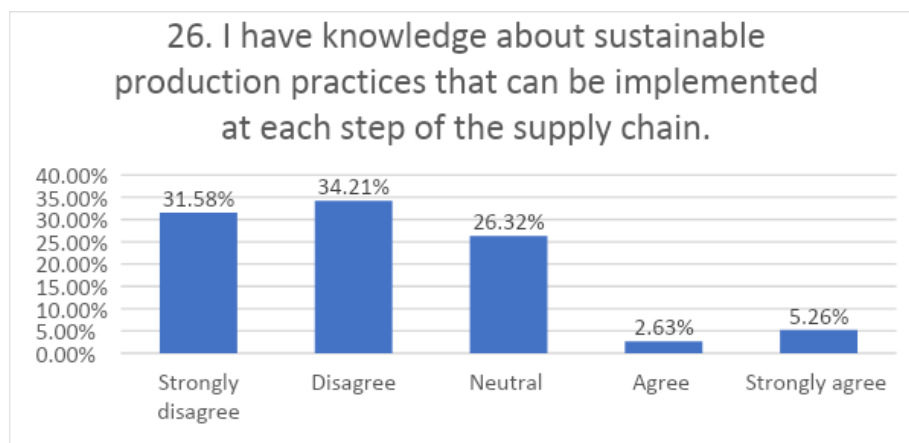
Graph 27 Tools for sustainable fashion design

Topical questions – Sustainable production practices

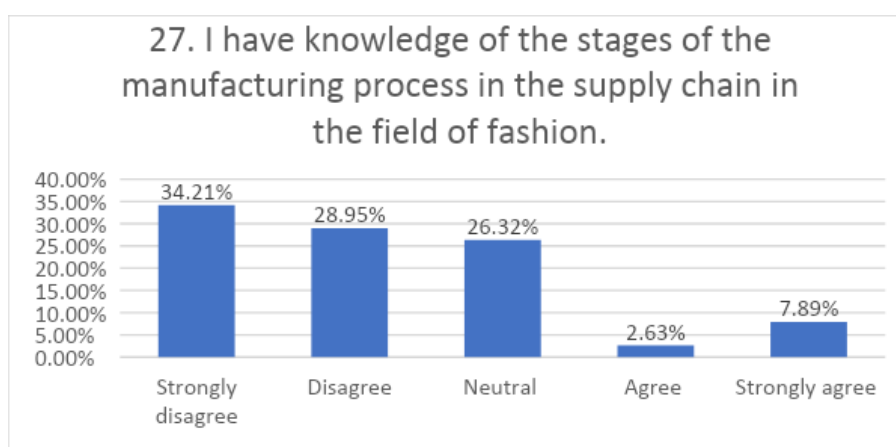
Graph 28 shows that the majority of respondents (79,58 % including neutral responses) do not have knowledge of the steps within fashion supply chain and even more respondents meaning 92,11% do not have knowledge about sustainable production practices in the supply chain (graph 29) , neither of the stages of manufacturing process in the supply chain (graph 30)



Graph 28 Knowledge of the steps within fashion supply chain

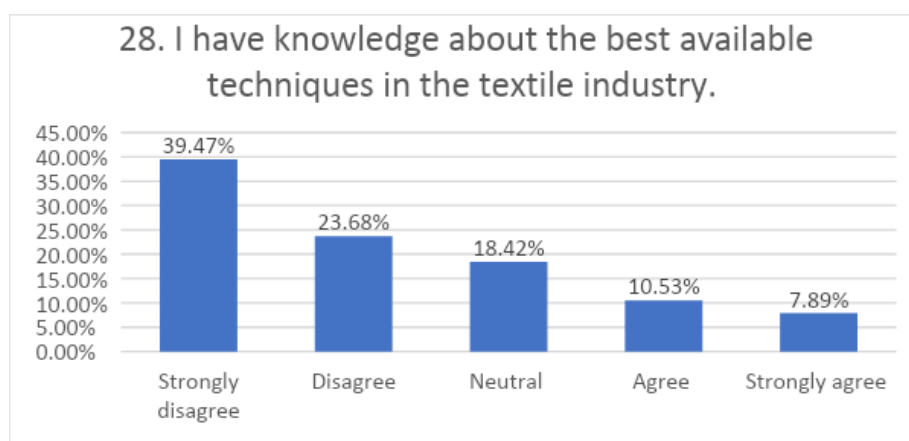


Graph 29 Knowledge about sustainable production practices in the supply chain



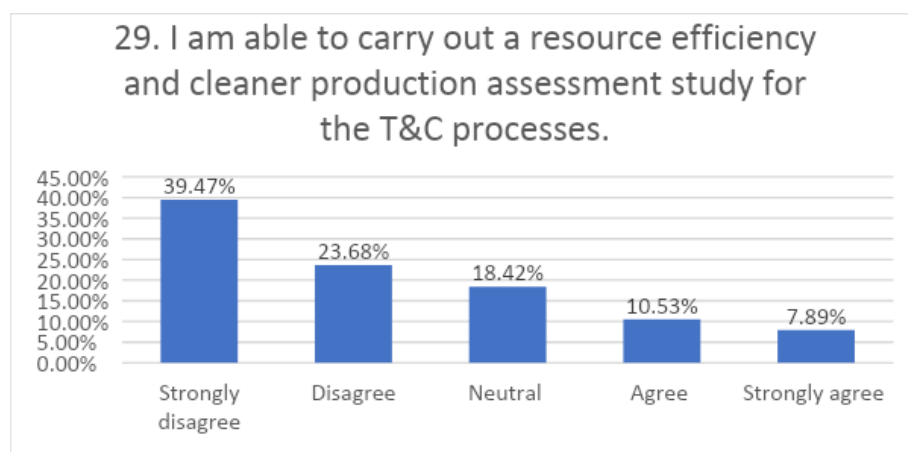
Graph 30 Knowledge about manufacturing processes

Graph 31 shows that only 18,42% have knowledge about best available techniques in the textile industry and the same number of respondents are able to carry on resource efficiency and cleaner production assessment analysis in the textile and fashion sector (graph 32) and to identify and manage waste streams associated with fashion and textile production (graph 33).

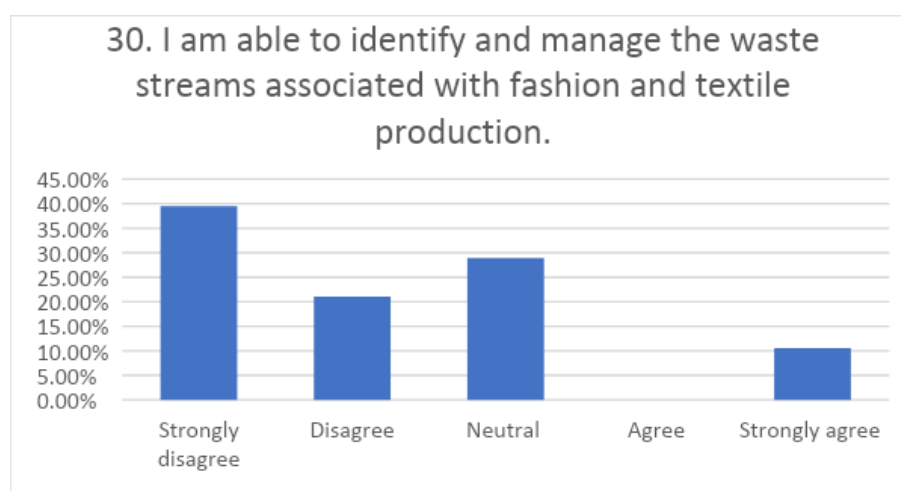


Graph 31 Knowledge about best available techniques in the textile industry



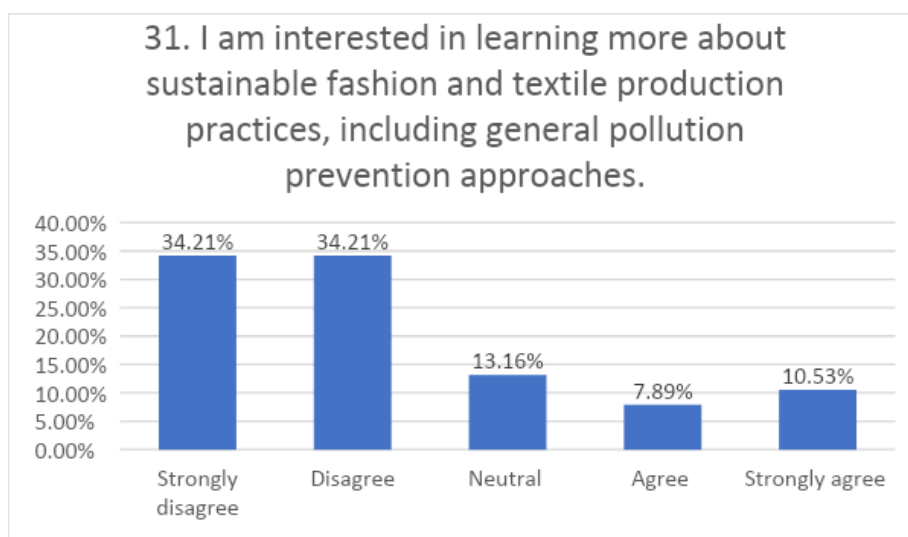


Graph 32 Resource efficiency and cleaner production assessment study



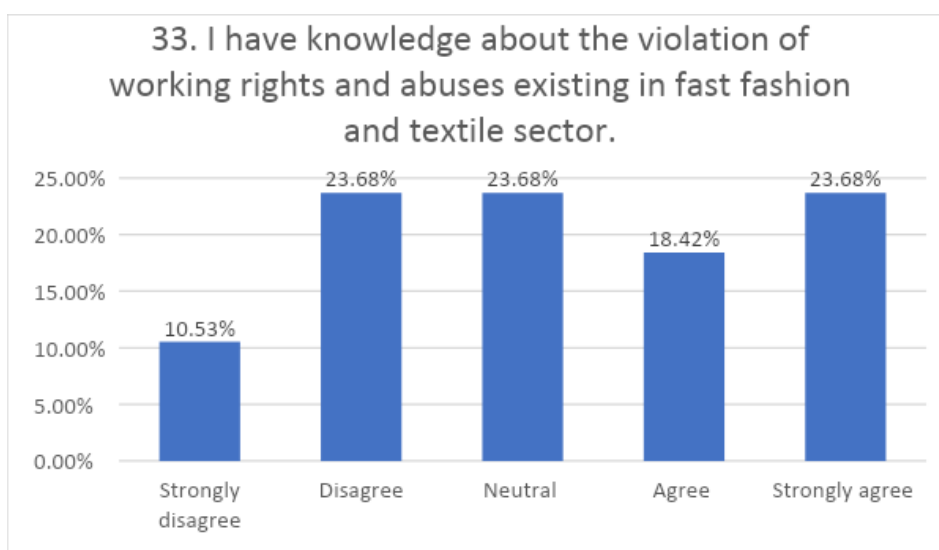
Graph 33 Management of waste streams

In spite of this lake of knowledge, only 18,42% are interested in learning more about sustainable fashion and textile production practices, including pollution prevention approaches (graph 34).



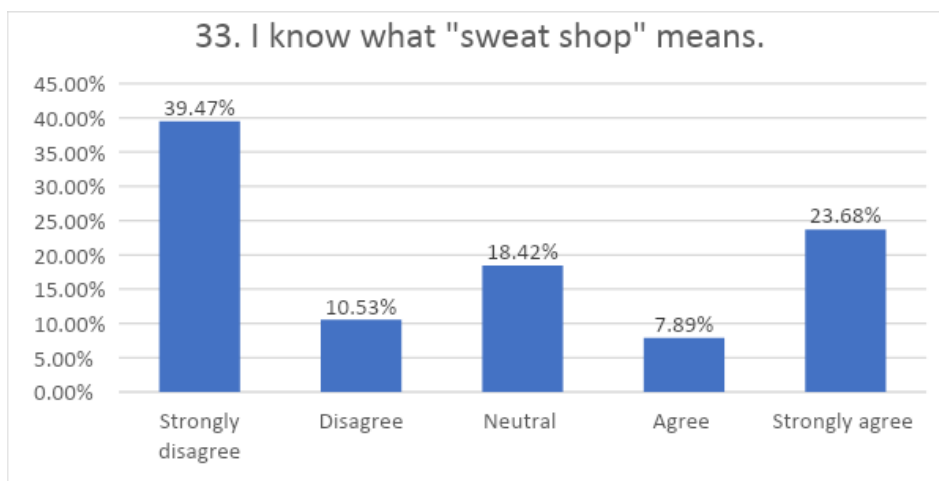
Graph 34 Learning more about sustainable fashion and textile production practices and pollution prevention approaches

Graph 35 shows that 42,10% have knowledge about the violation of working rights and abuses in the textile and fashion industry, 23,68% are not interested while 34,21 % do not know about those practices.

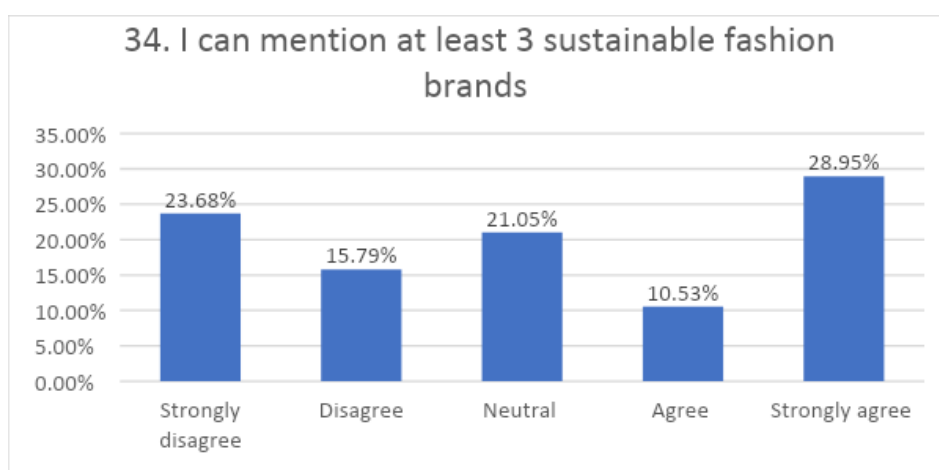


Graph 35 Knowledge about the violation of working rights and abuses

While 50% of the respondents do not know what a sweat shop is (graph 37), only 39,48% can mention three sustainable fashion brands. (graph 38).



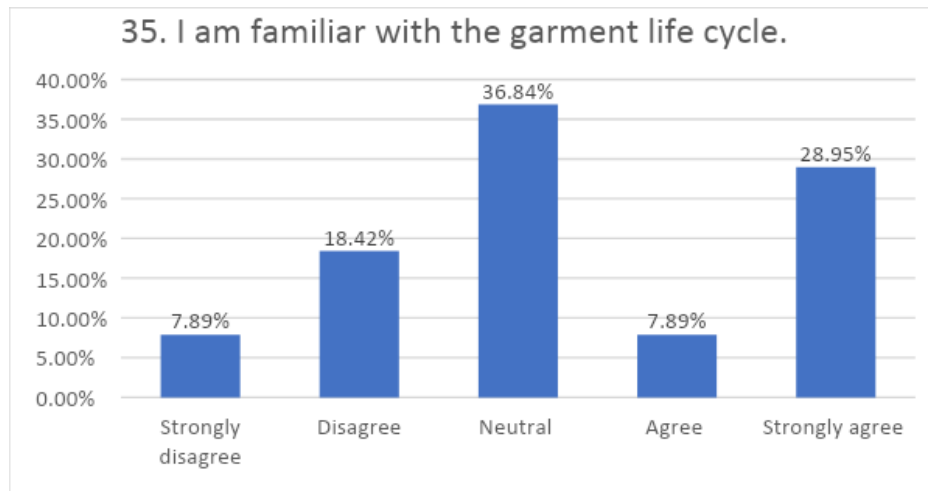
Graph 37 Sweat shop



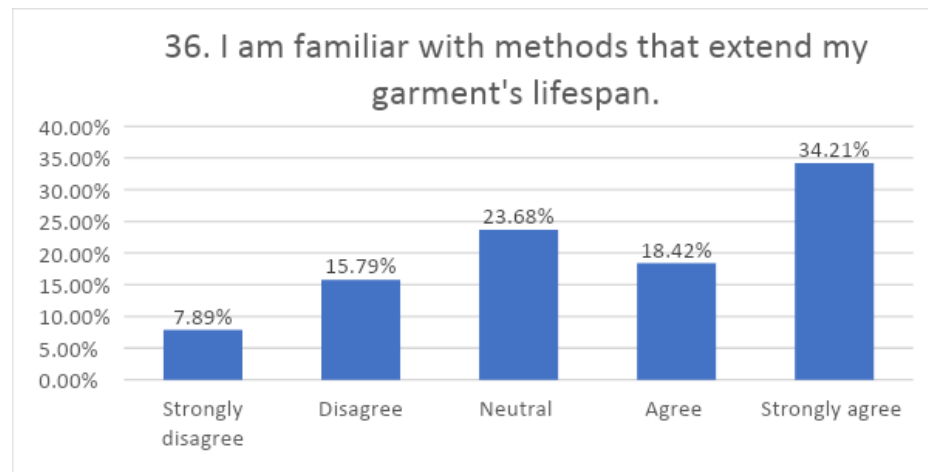
Graph 38 Sustainable fashion brands

Topical questions – Enhancing product durability and garment life cycle

Only 36,84% of respondents are familiar with the garment's life cycle steps (graph 39), somehow the same amount have heard about the topic but do not have knowledge and 52,64% are familiar with methods that extend their own garment life span. (graph 40).

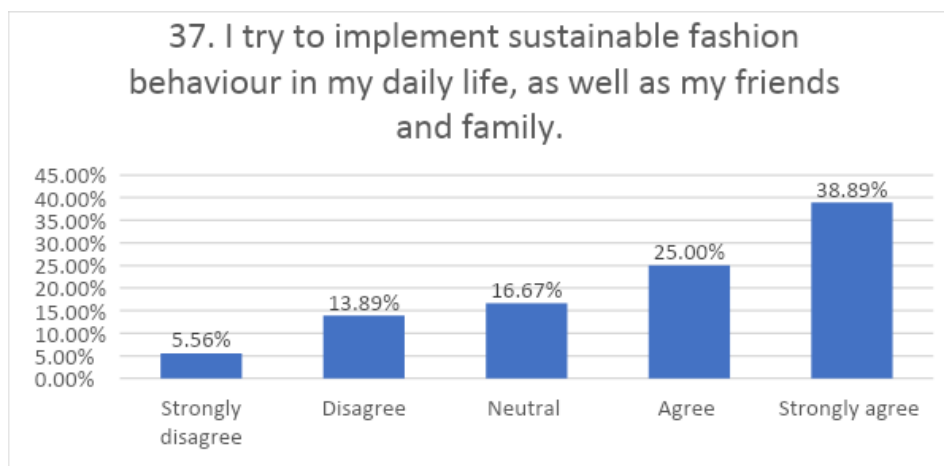


Graph 39 Garment lifecycle

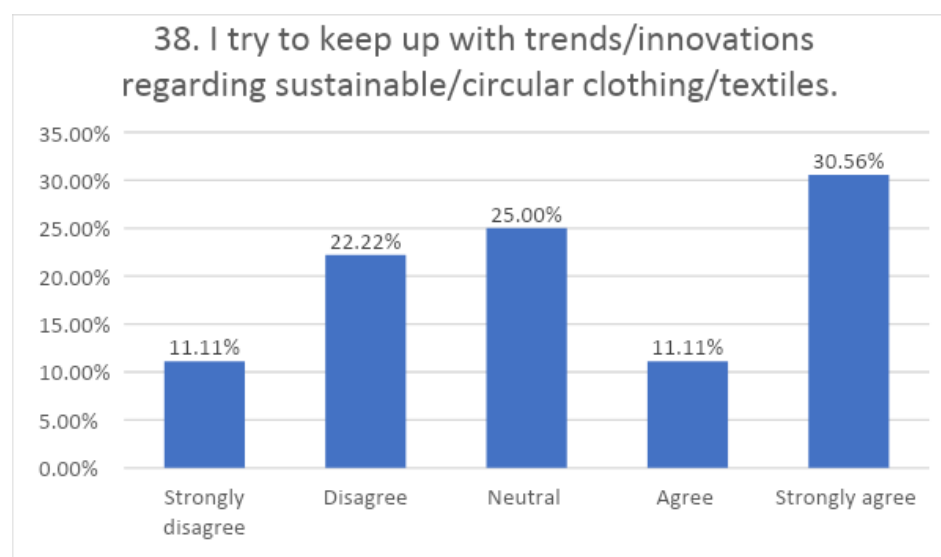


Graph 40 Methods that extend garment's lifespan

The majority of the respondents (63,89%) responded that they try to implement sustainable fashion in their daily life (graph 41) while 41,66 % responded that they keep up with trends regarding sustainable clothing/textiles (graph 42) , somehow in contradiction with the responses provided to questions 35), 36) showing that they have little knowledge about the basics of garment sustainability.



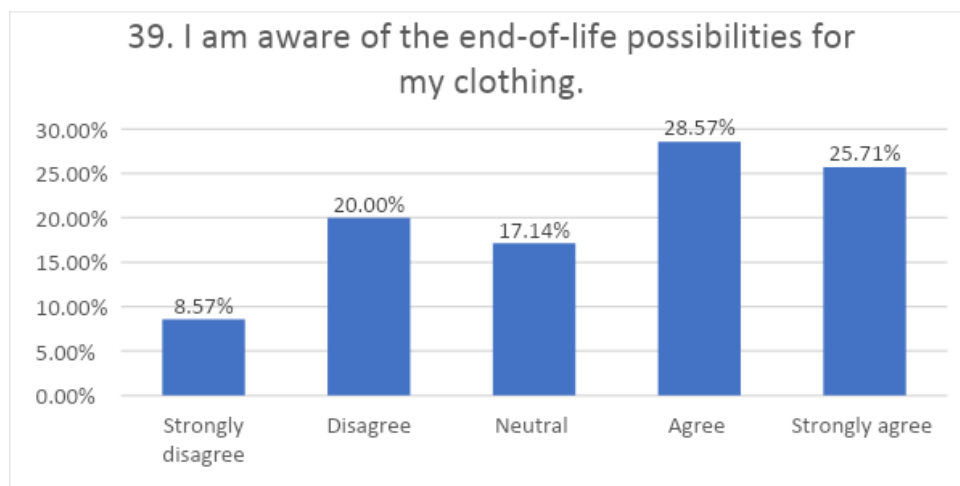
Graph 41 Implementation of sustainable fashion behavior in daily life



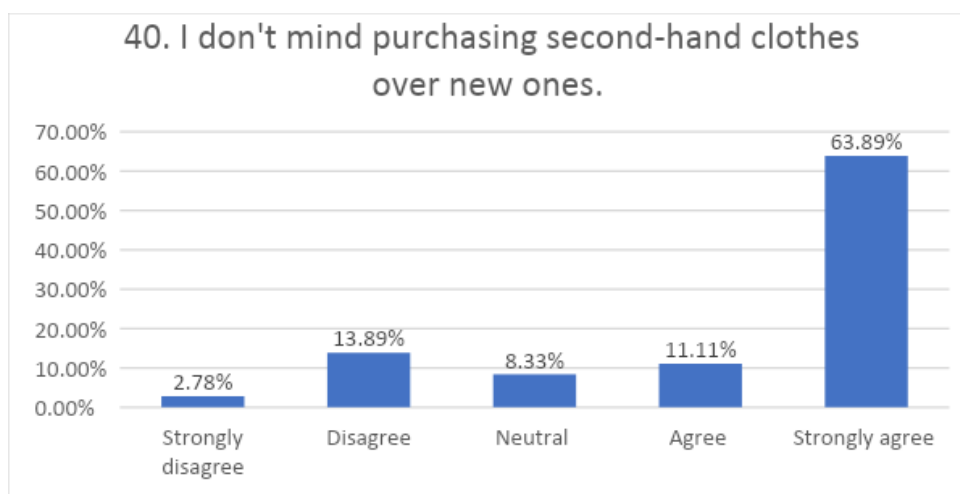
Graph 42 Keeping up with trends regarding sustainable clothing/textiles

Topical questions – End-of-life management

As comes out from graph 43, 54,28% of participants are aware of the end-of-life possibilities for their clothing (graph 43) 75% do not mind purchasing second hand clothes over the new ones. (graph 44).

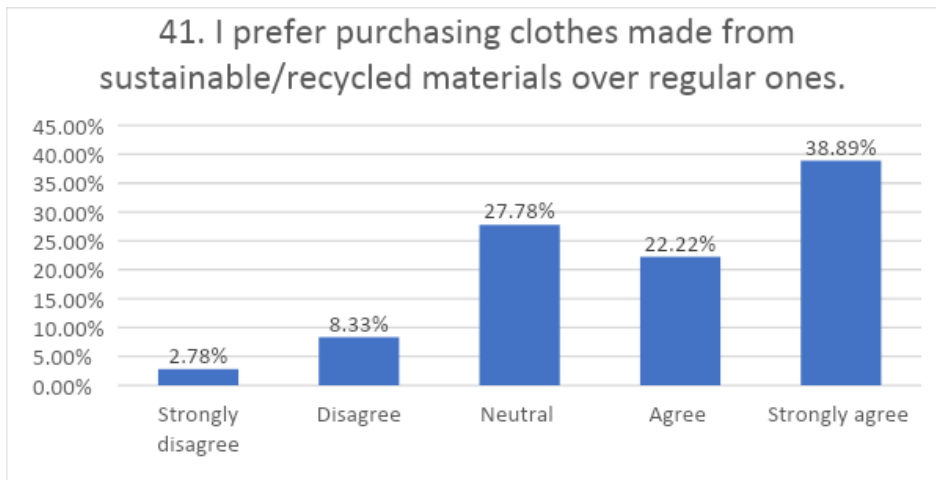


Graph 43 End-of-life possibilities for my clothing

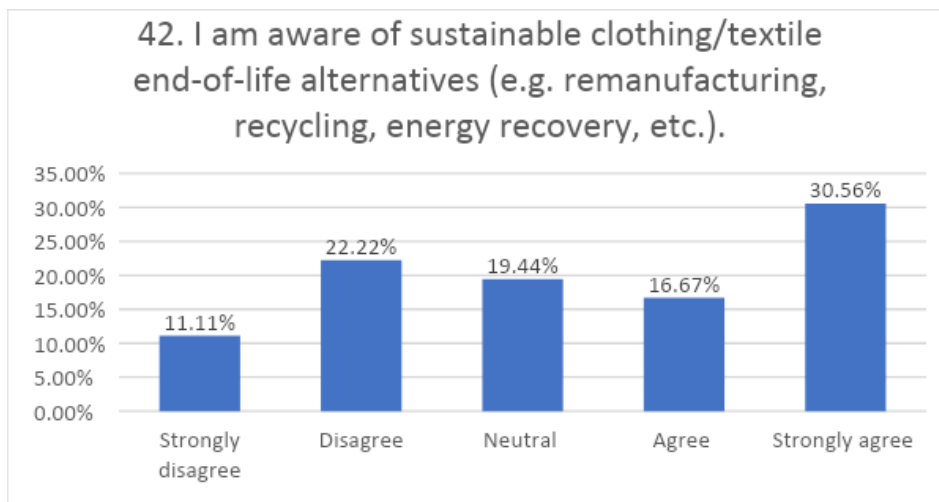


Graph 44 Second-hand clothes over new ones

Graph 45 shows that 61,11% prefer purchasing clothes made out of sustainable /recycled fibers, while 47,23 % are aware of sustainable clothing/textile end-of-life alternatives (graph 46)

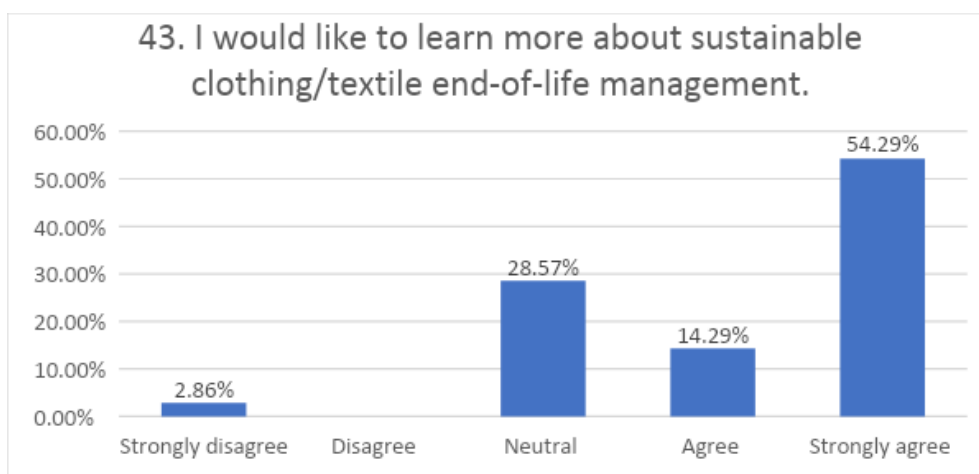


Graph 45 Sustainable/recycled materials over regular ones



Graph 46 Awareness of sustainable clothing/textile end-of-life alternatives

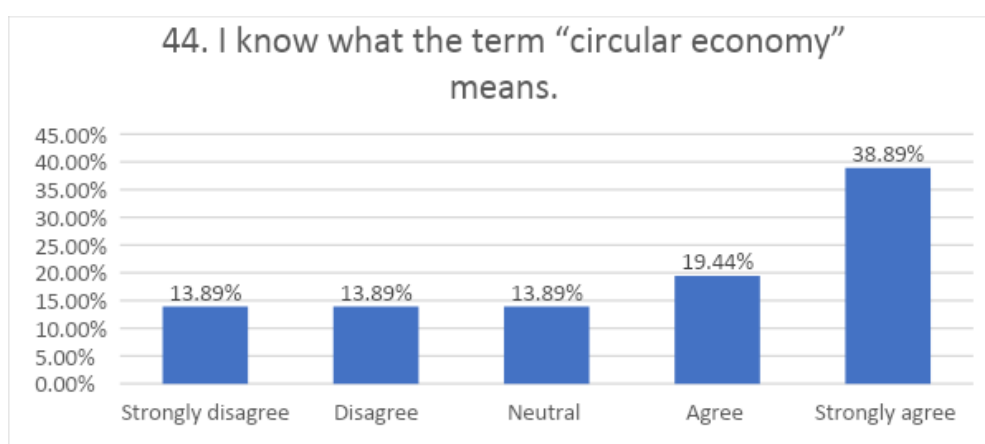
The answers represented in graph 47 shows a large majority (68,58%) interested in learning more Learning more about sustainable clothing/textile end-of-life management.



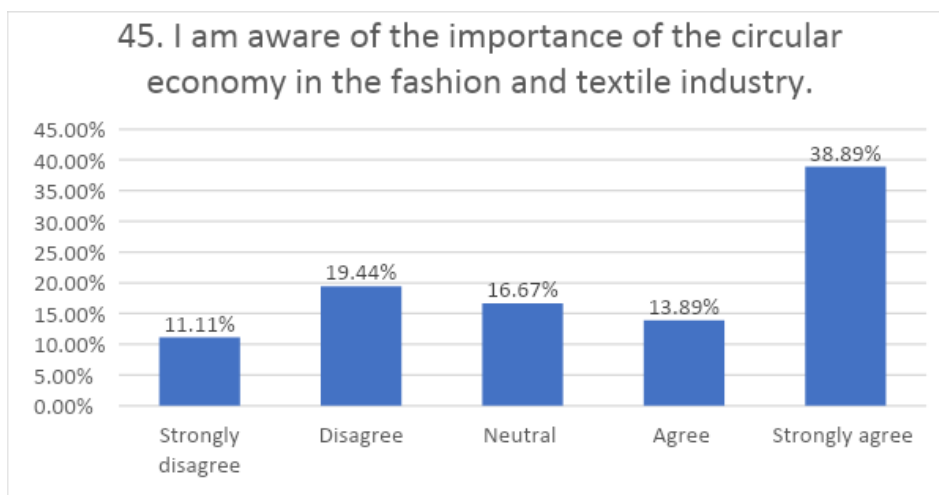
Graph 47 Learning more about sustainable clothing/textile end-of-life management

Topical questions – Implementation of circularity and sustainability practices in fashion and textile industry

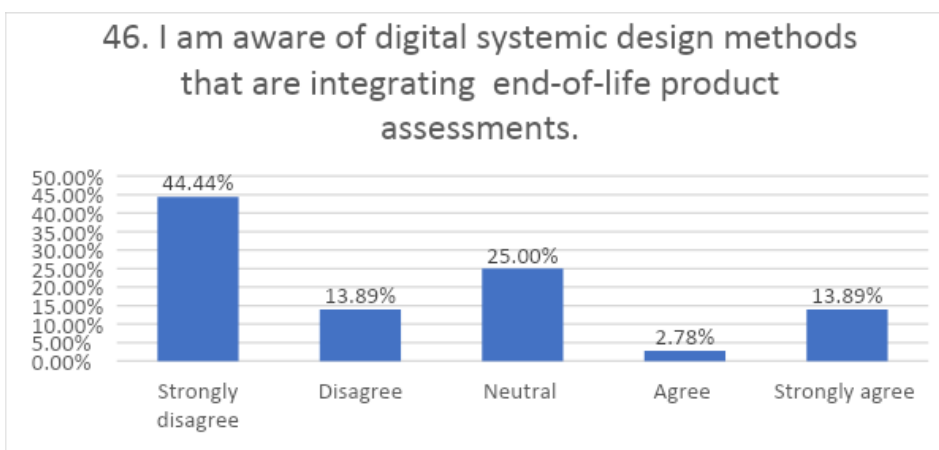
The next set of responses to questions referring to the implementation of circularity and sustainability practices in fashion and textile industry, shows that 58,33% of respondents know what the term circularity means (graph 48) , even more specific, 52,78% are aware of the importance of circularity in fashion (graph 49), while only 16,67% know about the digital systemic design methods (graph 50) and only 34,28% are aware of the circular solution in the textile value chain. (Graph 51).



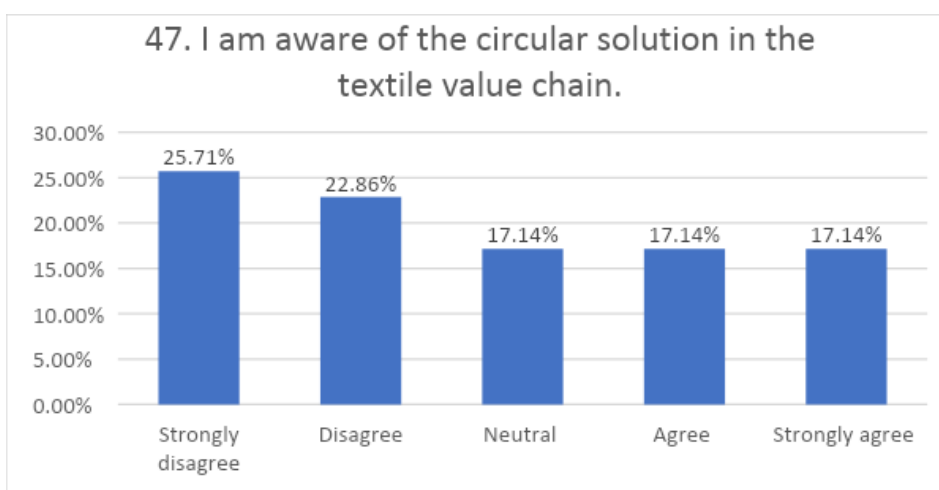
Graph 48 Circular economy



Graph 49 Awareness of importance of the circular economy in the fashion industry

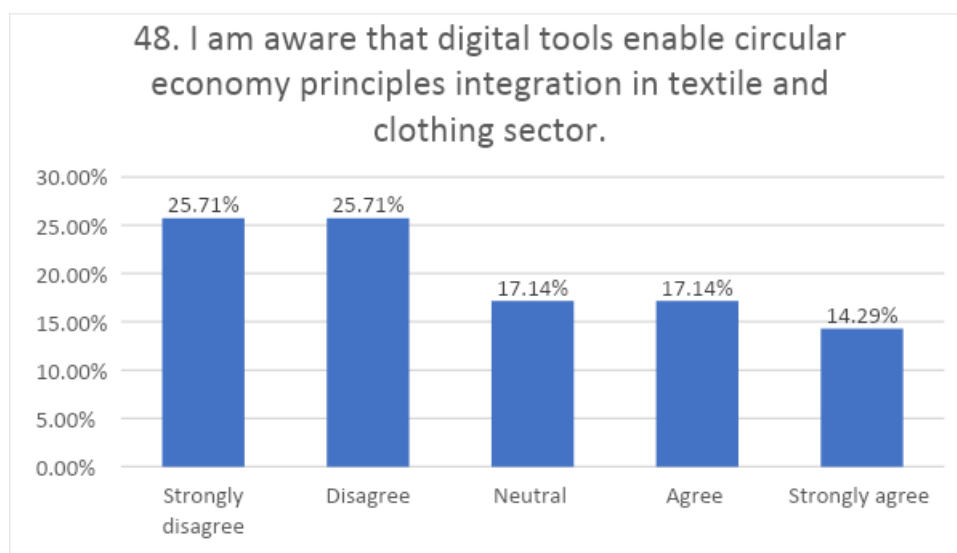


Graph 50 Awareness of digital systemic design methods



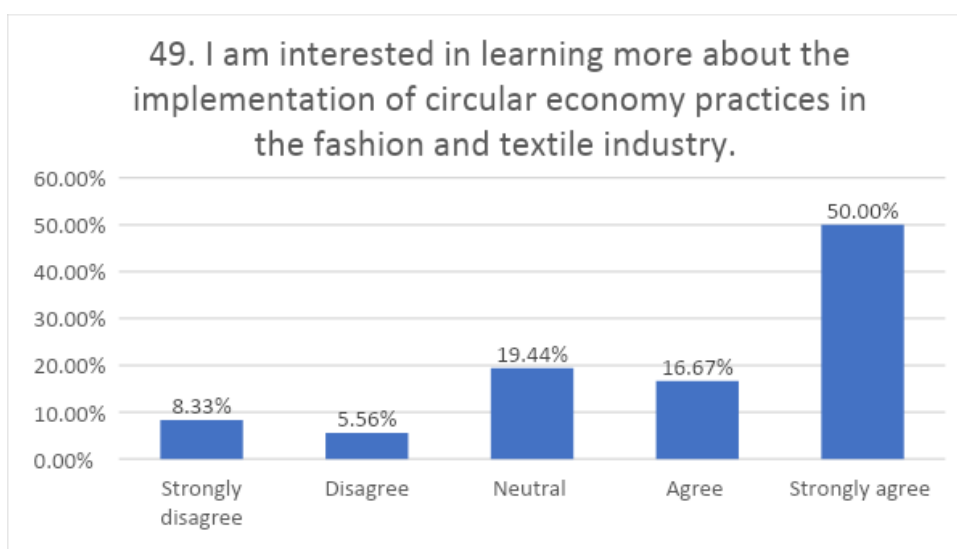
Graph 51 Awareness of the circular solution in the textile value chain

More specifically, Graph 53 shows that only 31,43% of respondents are aware of digital tools that enable circular economy principles integration in clothing sector.



Graph 53 Awareness of digital tools that enable circular economy principles integration in clothing sector

The positive aspect for our project is that 66,67% are interested to learn more about implementation of circular economy practices in the fashion and textile industry (graph 52)



Graph 52 Learning more about implementation of circular economy practices

Open question

Do exist other topics related to fashion and textile industry that are of interest for you?

There were several responses to the open questions reflecting the respondents concerns and remarks referring to:

- Cloths overproduction and the way how unseal cloths are disposed of
- The natural fibers production is not discussed
- The balance between the good taste and the fashion design

- Fiber's recovery and recycling technologies
- Collaborative and social initiatives in the fashion and textiles sector.

In conclusion, the respondents showed low level of understanding of the origin impact of the textiles raw materials and are not making clear distinction between natural and artificial fibers, showing little knowledge about production processes of those fibers, although they are aware of the environmental impact of fibers production and of microplastics resulted from clothing washing. 62% are interested to learn more about materials in fashion and textile industry.

The majority of respondents have little knowledge about innovative fabrics and eco-friendly production of those fabrics and are not informed about circular design and production strategies. 50% of respondents show a strong interest towards learning more about sustainable textile design

When asked about slow fashion, responses showed little understanding of the concept but in the meantime are aware of the impact of the clothing consumption and production, while very few are familiar with the importance of cloth design strategies and of the usefulness of digital innovation in fashion and textile and its effect in reducing the environmental impact. 62, 14% are interested in learning more about sustainable garments design.

The majority of respondents do not have knowledge of the steps within the fashion supply chain and even more respondents do not have knowledge about sustainable production practices in the supply chain nor of the stages of manufacturing process in the supply chain.

Very few have knowledge about best available techniques in the textile industry, are able to carry on resource efficiency and cleaner production assessment analysis in the textile and fashion sector and to identify and manage waste streams associated with fashion and textile production.

In spite of poor knowledge, only 18,42% are interested in learning more about sustainable fashion and textile production practices, including pollution prevention approaches.

Enhancing product durability and life cycle is a topic familiar for one third of the respondents while the majority are familiar with methods that extend their own garment life span and try to implement sustainable fashion in their daily life, and keep up with trends regarding sustainable clothing/textiles. 68,58% are interested in learning more about sustainable clothing/textile end-of-life management

Majority of respondents know about circularity and sustainability practices in the fashion and textile industry and are aware of the importance of circularity in fashion, however, very few know about the digital tools that enable circular economy principles integration in the clothing sector and are aware

of the circular solution in the textile value chain. 66,67% are interested to learn more about implementation of circular economy practices in the fashion and textile industry.

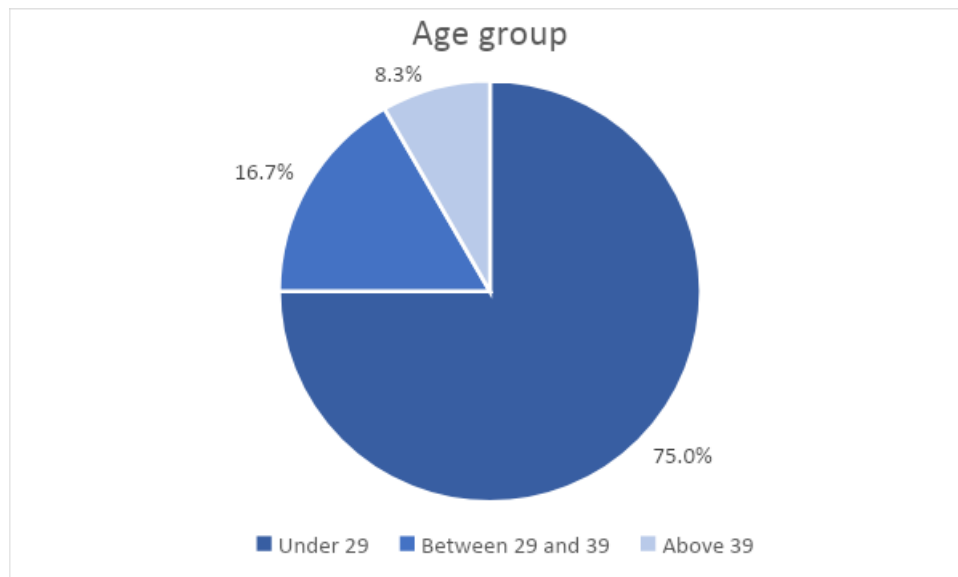
We may say that the general conclusion of this research is that the majority of the Romanian target group are interested in developing their education in sustainable fashion. Their specific input, along with the results of the state of the art analysis executed by the partners will represent the starting points in elaborating the course curriculum and learning outcomes.

3.4 Slovenia

This section represents the results obtained from the questionnaires in Slovenia. The results are presented with the results of individual questions. 24 responses to the questionnaire were obtained in Slovenia, 4 of which were only partially answered.

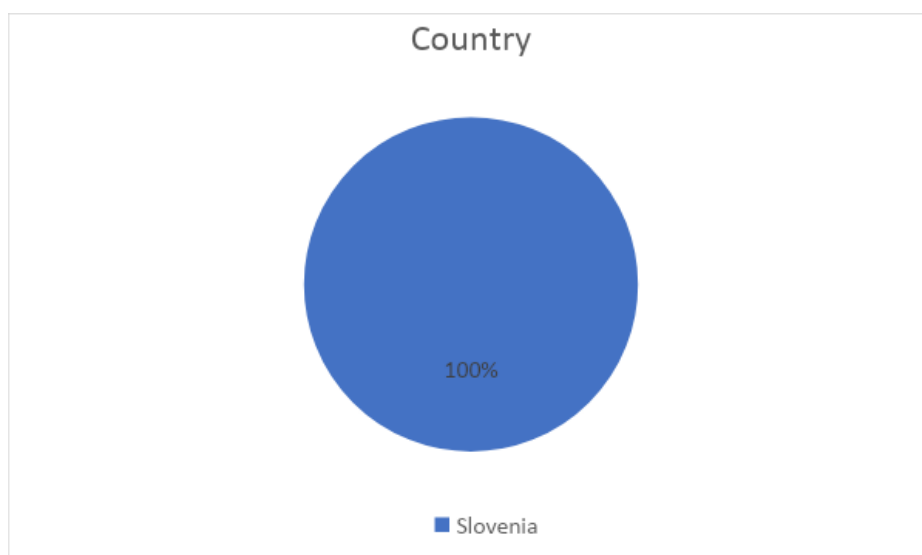
In this section, the results of the questionnaire are presented question by question.

Demographical questions



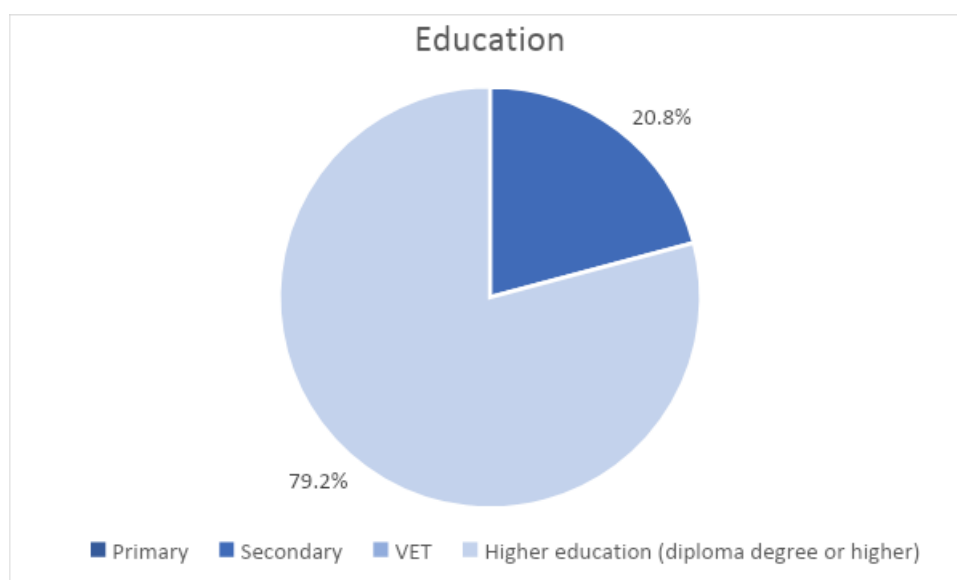
Graph 1: Age group

As seen above in Graph 1, the most represented age group was in the survey was the age group under 29 years with 75 %. It was followed by the age group between 29 and 39 years (16,7 %) and the age group above 39 (8,3 %).



Graph 2: Country

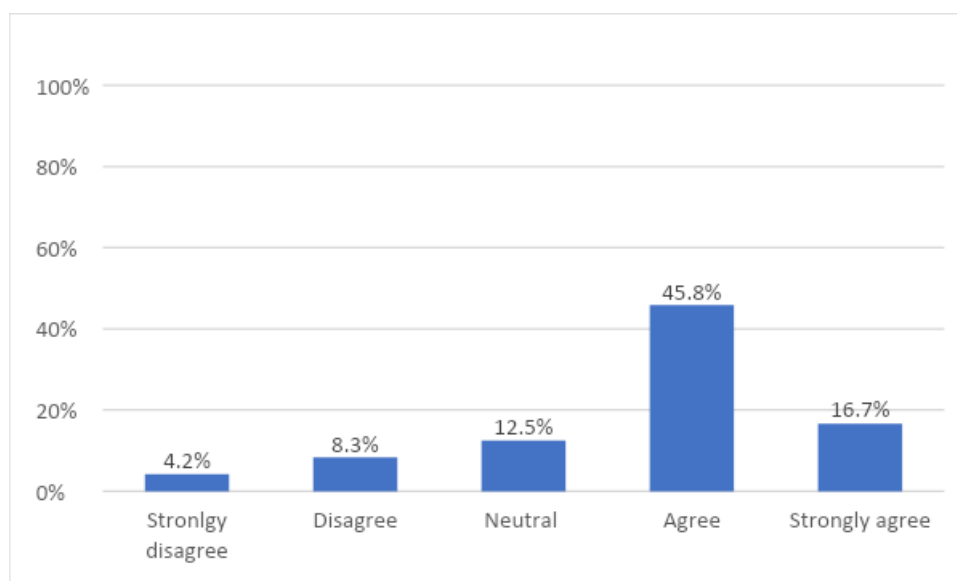
As seen above in Graph 2, all of the respondents were from Slovenia.



Graph 3: Education

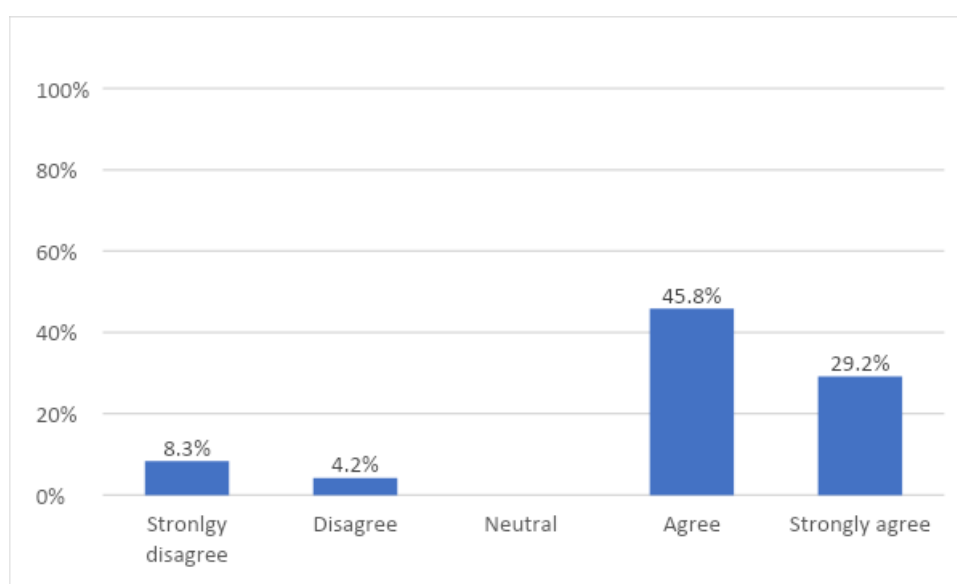
From Graph 3 it could be perceived that respondents 79,2 % of the respondents has at least a diploma degree and have therefore obtained higher education. Only 20,8 % of the respondents have only secondary education.

Topical questions - Understanding the origin and impact of raw materials



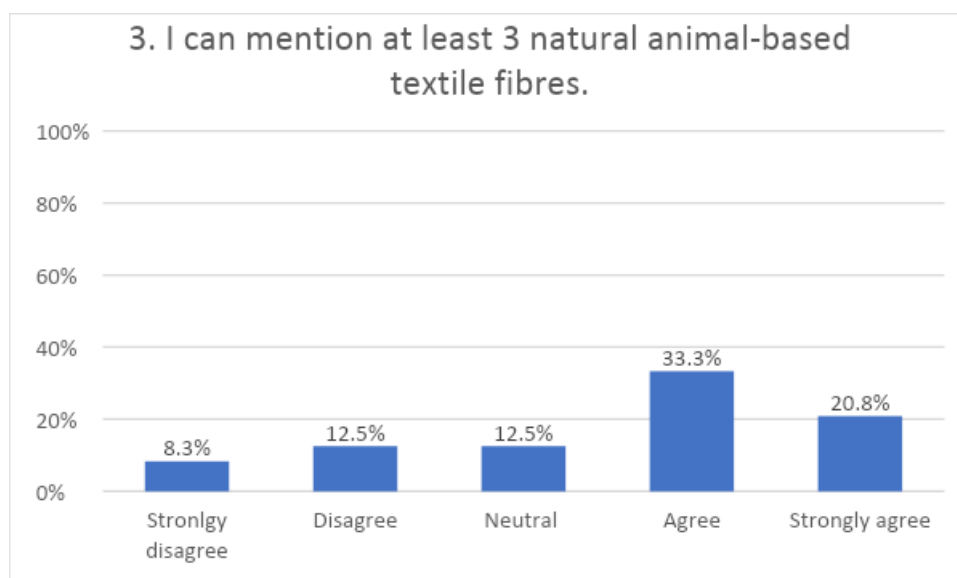
Graph 4: Classifying textile raw materials

As seen in Graph 4, the majority of the respondents (62,5 %) agree or strongly agree with the fact that they can classify raw materials in more main categories. 12,5 % are neutral or don't know. 12,5 % of the respondents cannot classify textile raw materials into categories. The rest of the respondents did not answer the question.



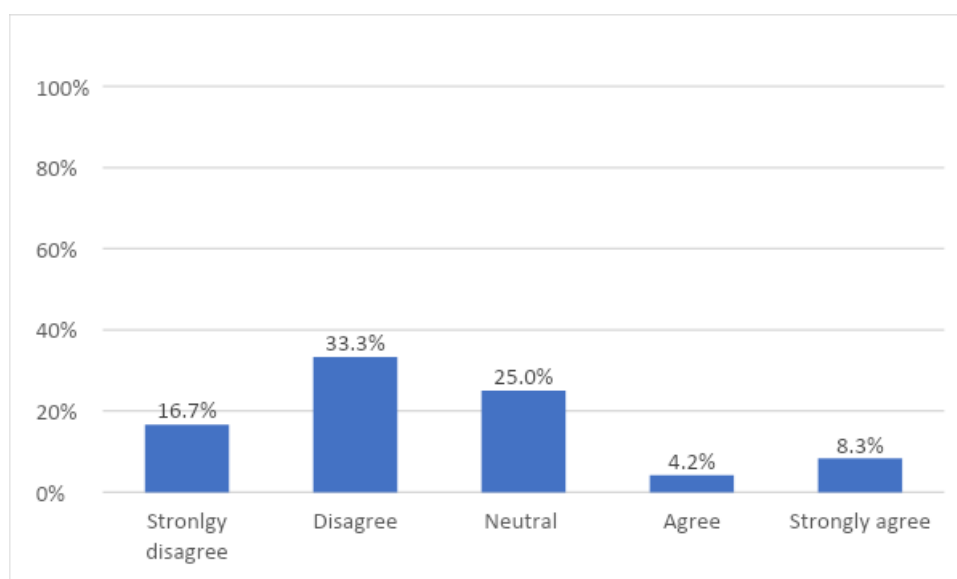
Graph 5: Natural plant-based textile fibres

As seen in Graph 5, 75 % of the respondents think they can name at least 3 natural plant-based textile fibres. 12,5 % do not think they can name such fibres.



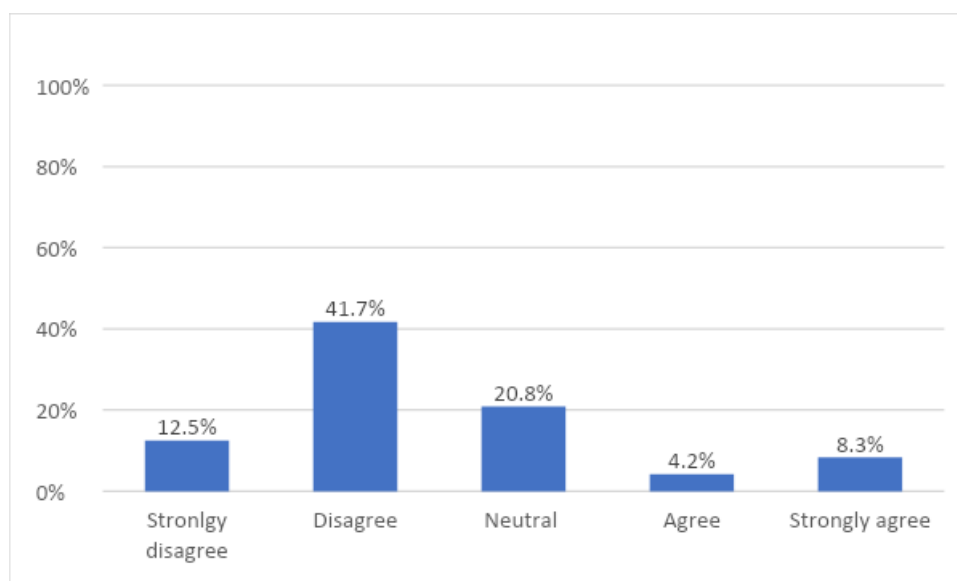
Graph 6: Natural animal-based textile fibres

As seen in Graph 6, 54,1 % of the respondents think they can name at least 3 natural animal-based textile fibres. 12,5 % of the respondents are neutral on this topic. 20,8 % disagree or strongly disagree.



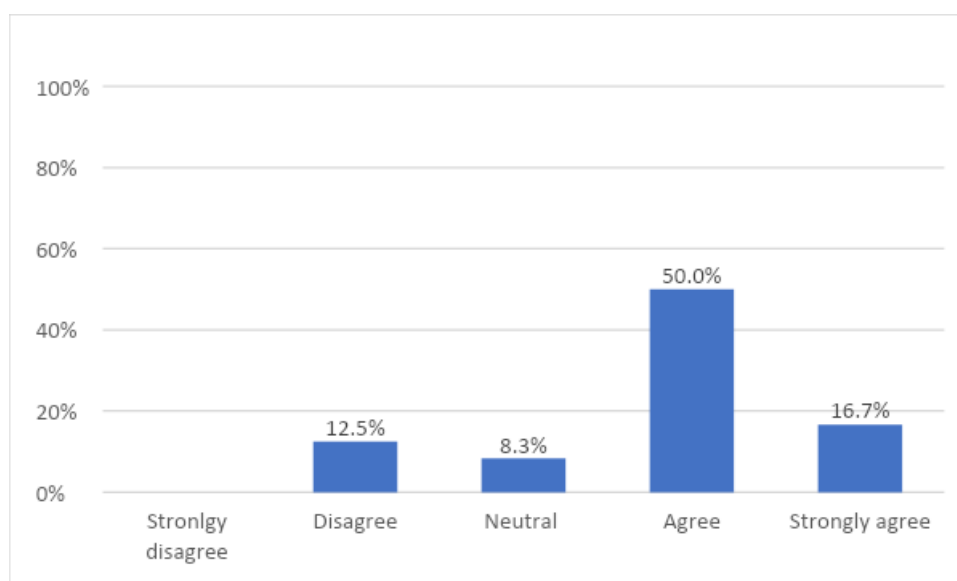
Graph 7: Knowledge about the natural fibres production processes

As seen in Graph 7, only 12,5 % of the respondents thinks they have knowledge about natural fibres production processes. 25 % are neutral. Half of the respondents (50 %) disagrees or strongly disagrees with the statement.



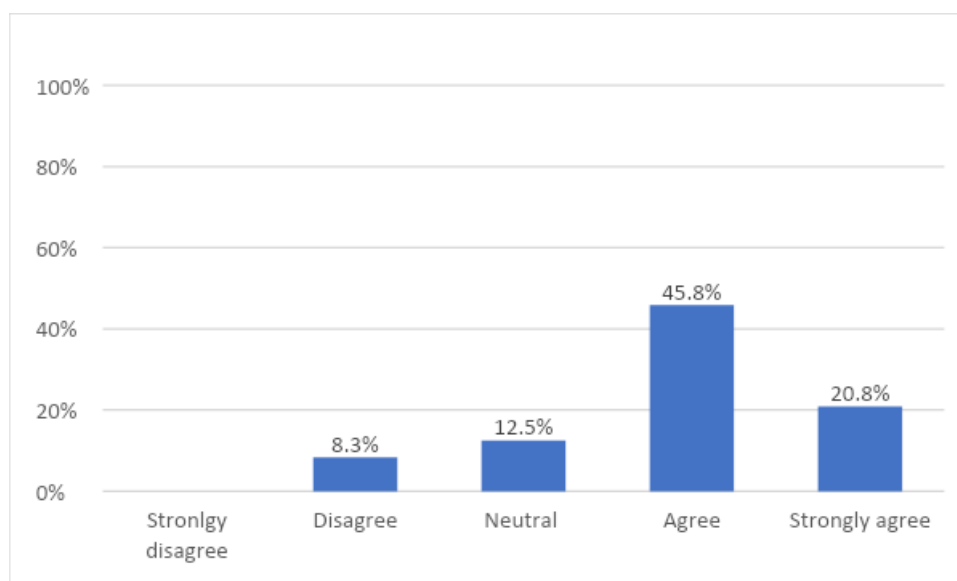
Graph 8: Knowledge about man-made fibres production processes

From Graph 8 it could be perceived that respondents, 12,5 % of the respondents think they have knowledge about man-made fibres production processes. 20,8 % are neutral. More than half of the respondents (54,2 %) disagree or strongly disagree with the statement.



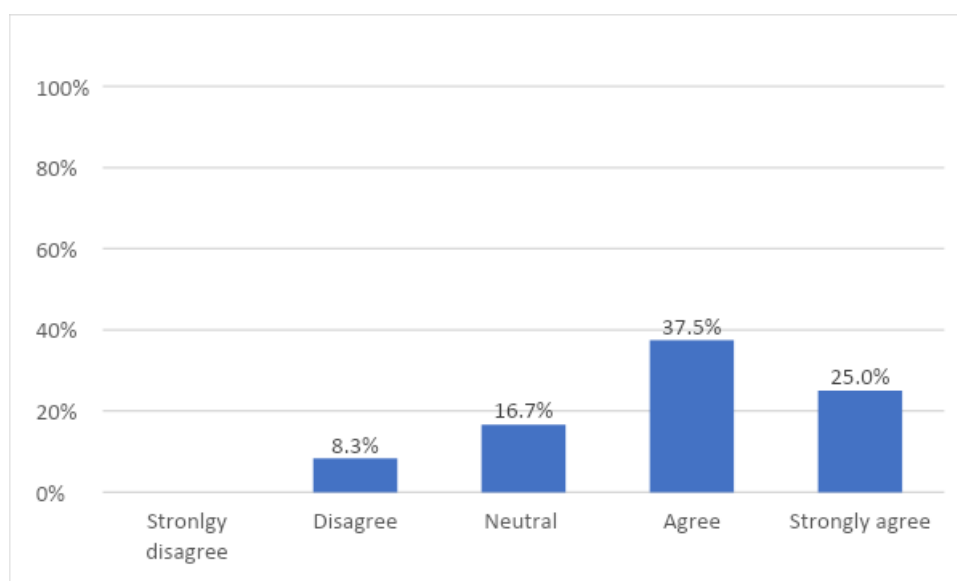
Graph 9: Awareness of the environmental impact of textile fibre production

As seen above in Graph 9, 66,7 % of the respondents are aware of the environmental impact generated by the textile fibre production, and only 12,5 % are not aware of it. 8,3 % are neutral.



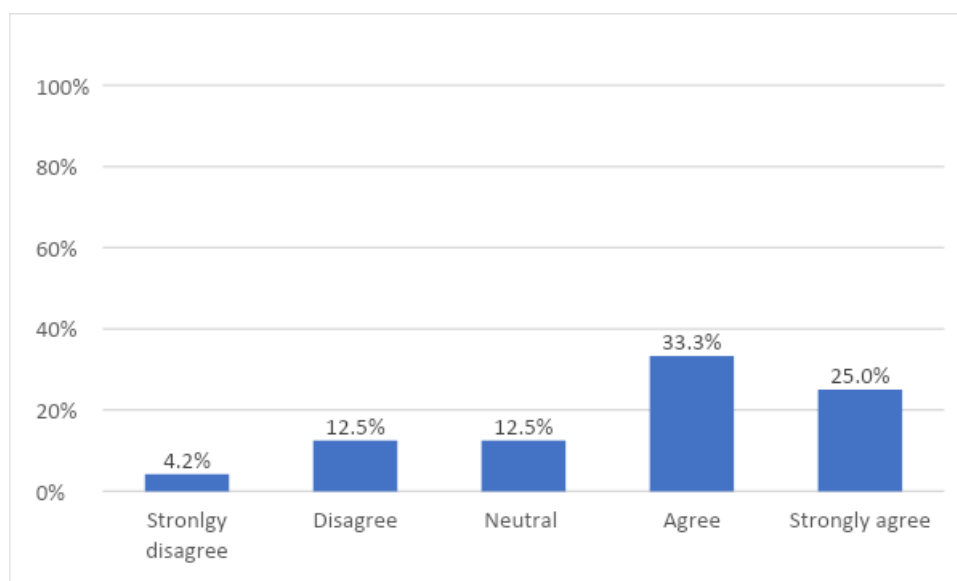
Graph 10: Awareness of microplastics fibres

From Graph 10 it could be perceived that respondents, 66,6 % of the respondents are aware that washing clothes made from artificial fibres releases hundreds of thousands microplastics fibres into the ocean and environment. Only 8,3 % disagree with that statement. 12,5 % are neutral.



Graph 11: Improving sustainable fashion behaviour

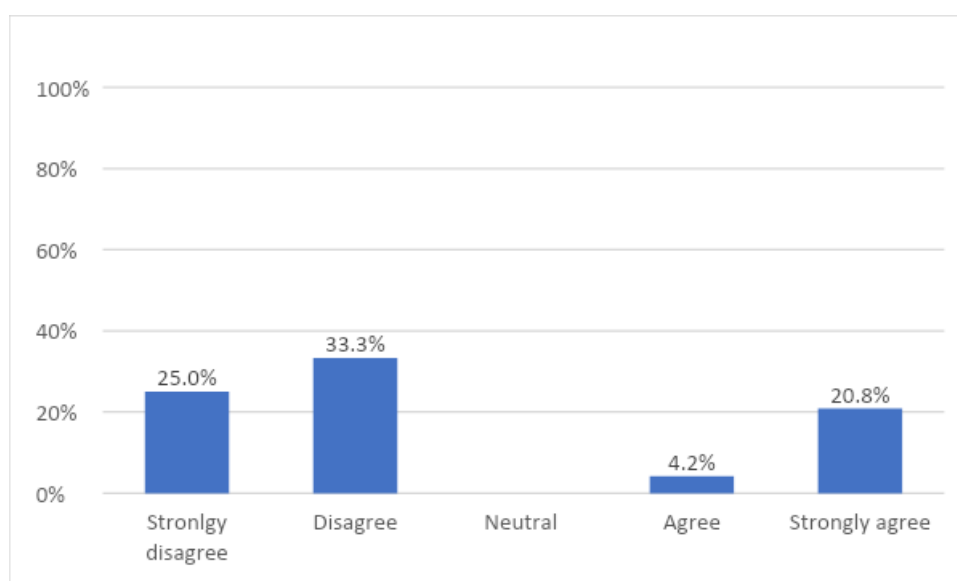
As seen above in Graph 11, 62,5 % of the respondents are aware of the areas in which they can improve their sustainable fashion behaviour. 16,7 % are neutral, and only 8,3 % disagree with the statement.



Graph 12: Learning more about raw materials

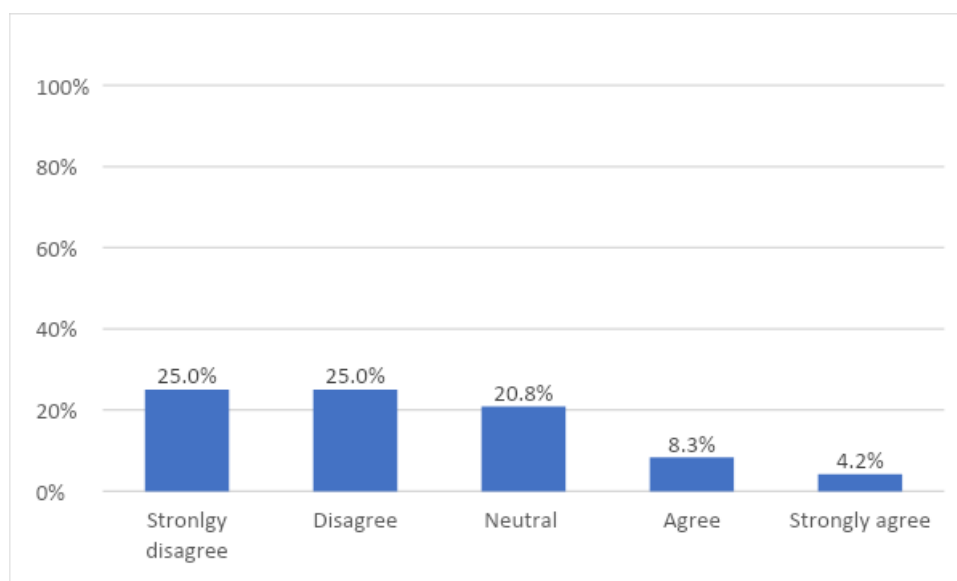
From Graph 12 it could be perceived that respondents, 58,3 % of the respondents are interested in learning more about raw materials. 16,7 % are not interested in learning anything new about raw materials. 12,5 % are neutral.

Topical questions – Sustainable fabrics



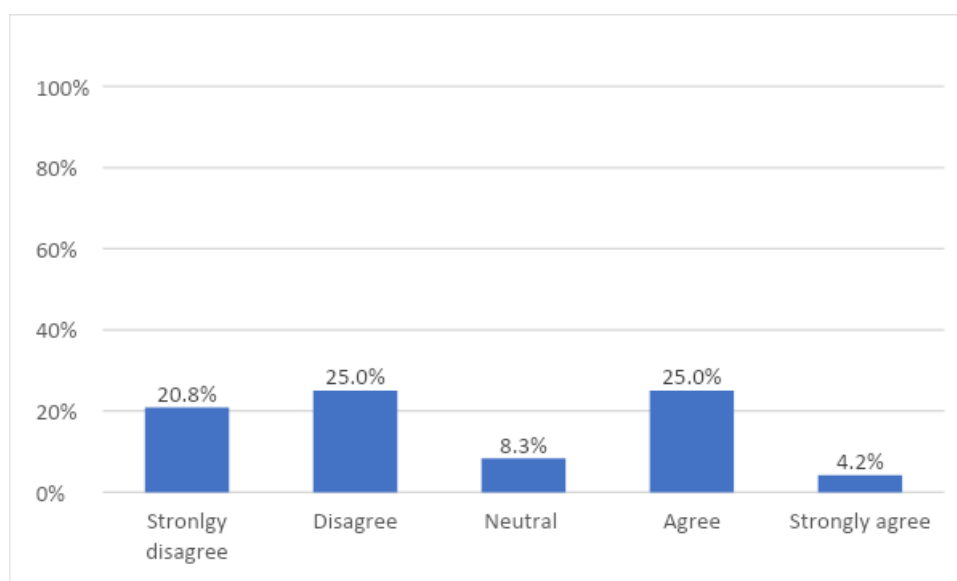
Graph 13: Innovative sustainable textile materials

As seen above in Graph 13, the majority of the respondents (58,3 %) is not familiar with at least 3 innovative sustainable textile materials. A quarter of the respondents (25 %) is familiar with such materials.



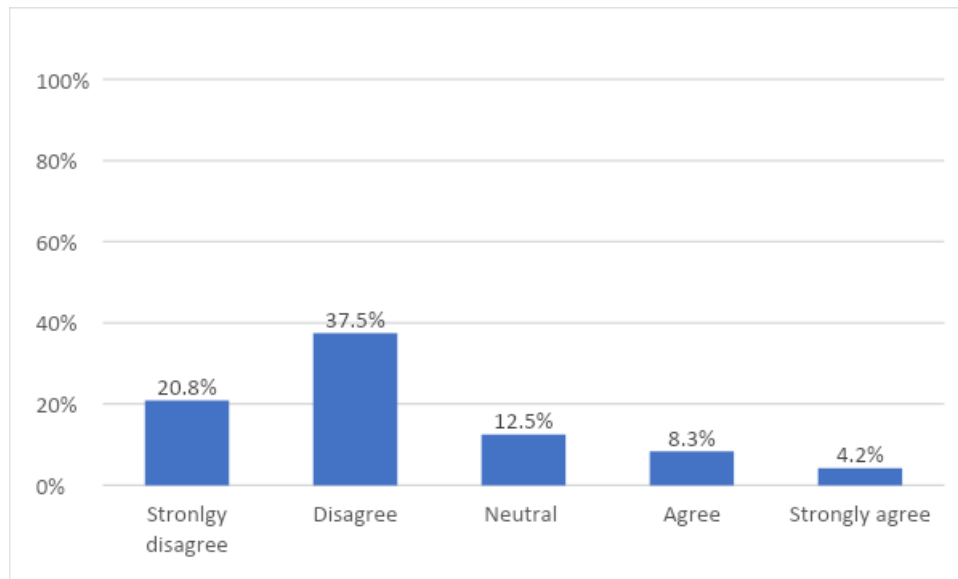
Graph 14: Eco-friendly fabrics production processes

From Graph 14 it could be perceived that respondents, half of the respondents (50 %) is not familiar with eco-friendly fabrics production processes. 20,8 % are neutral on this topic. Only 12,5 % of the respondents agree with this statement and are familiar with such processes.



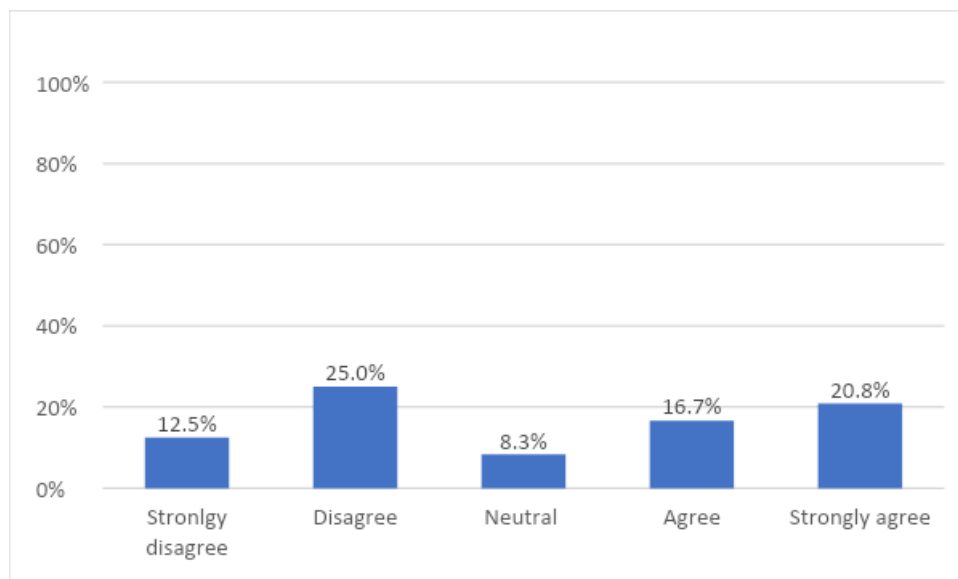
Graph 15: Knowledge about sustainable strategies in fabrics production

As seen above in Graph 15, 45,8 % of the respondents are not informed about sustainable strategies in fabrics production. 29,2 % are aware of such strategies. 8,3 % are neutral.



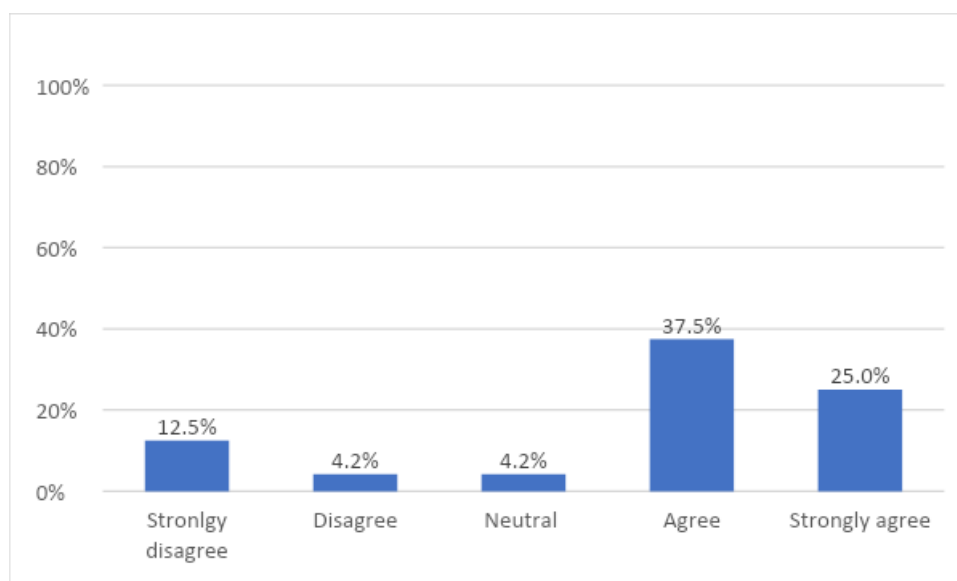
Graph 16: Circular design strategies in textile industry

As seen above in Graph 16, 58,3 % of the respondents are not familiar with at least 3 circular design strategies applied in textile industry. 12,5 % are neutral. Only 12,5 % are familiar with circular design strategies applied.



Graph 17: Design for longevity in textile

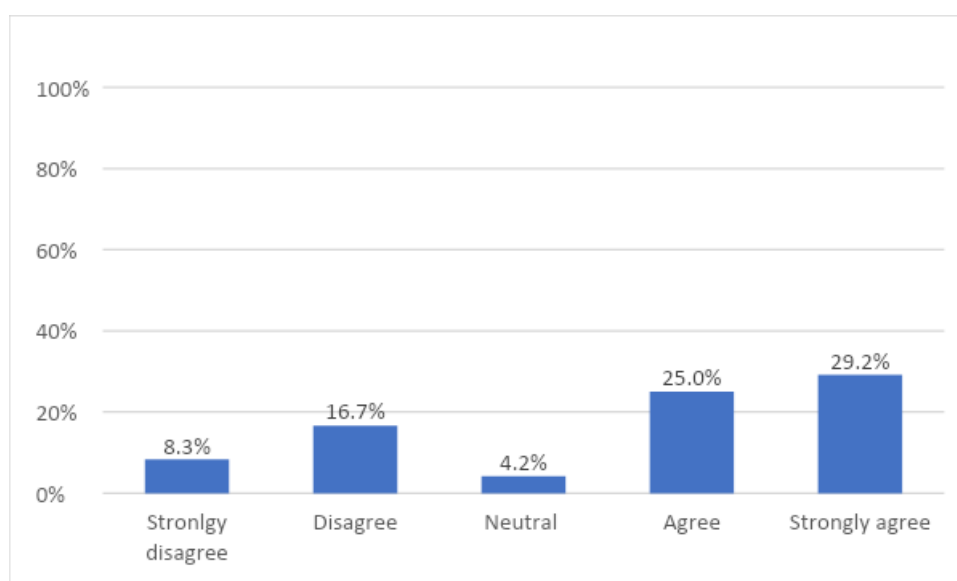
From Graph 17 it could be perceived that respondents, 37,5 % of the respondents know what a design for longevity in textile is and what are the main principles. 37,5 % of the respondents do not have that knowledge. 8,3 % are neutral.



Graph 18: Learning more about sustainable textile design

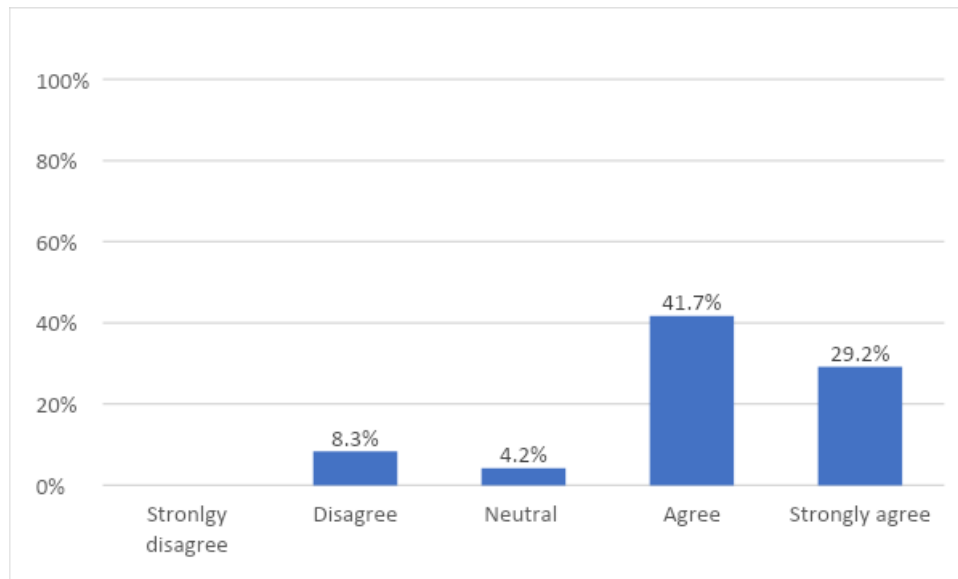
As seen above in Graph 18, 62,5 % of the respondents are interested in learning more about sustainable textile design. 16,7 % are not interested in sustainable textile design. 4,2 % are neutral.

Topical questions – Sustainable garment design



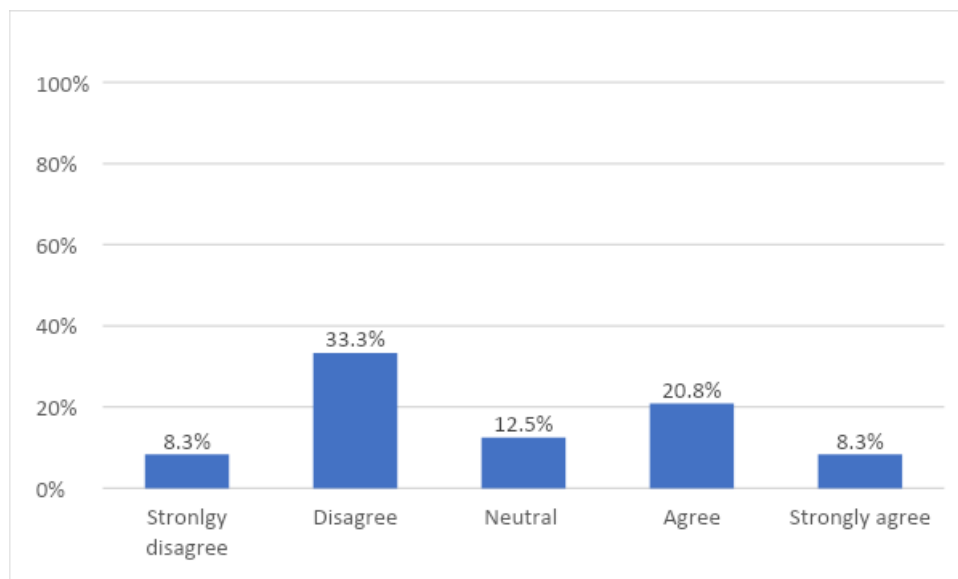
Graph 19: Slow fashion

As seen above in Graph 19, 54,2 % of the respondents know what slow fashion is. 25 % of the respondents do not know what slow fashion is. 4,2 % are neutral.



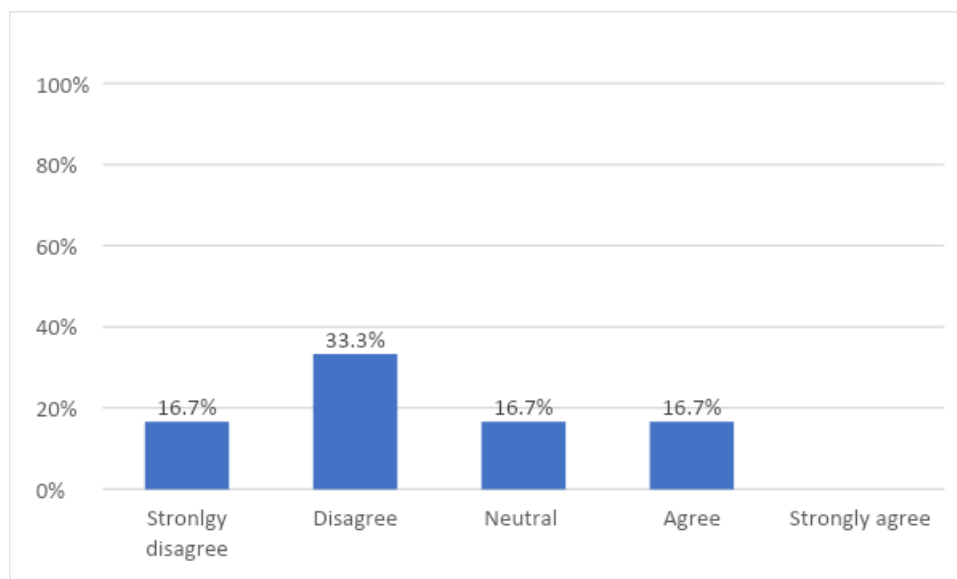
Graph 20: Awareness of the impact of clothing production

From Graph 20 it could be perceived that respondents, 70,9 % of the respondents are aware of the impact that clothing production has on the environment. Only 8,3 % are not aware of that impact and 4,2 % are neutral about the topic.



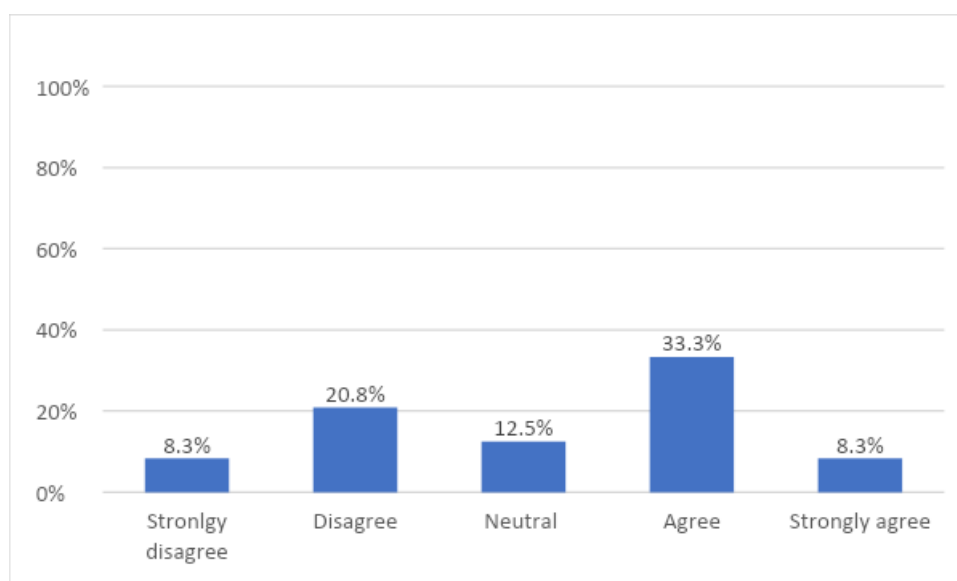
Graph 21: Circular design strategies regarding garment design

As seen above in Graph 21, 29,1 % of the respondents are familiar with at least 3 circular design strategies regarding garment design. 12,5 % are neutral on the topic. 41,6 % of the respondents do not know circular design strategies regarding garment design.



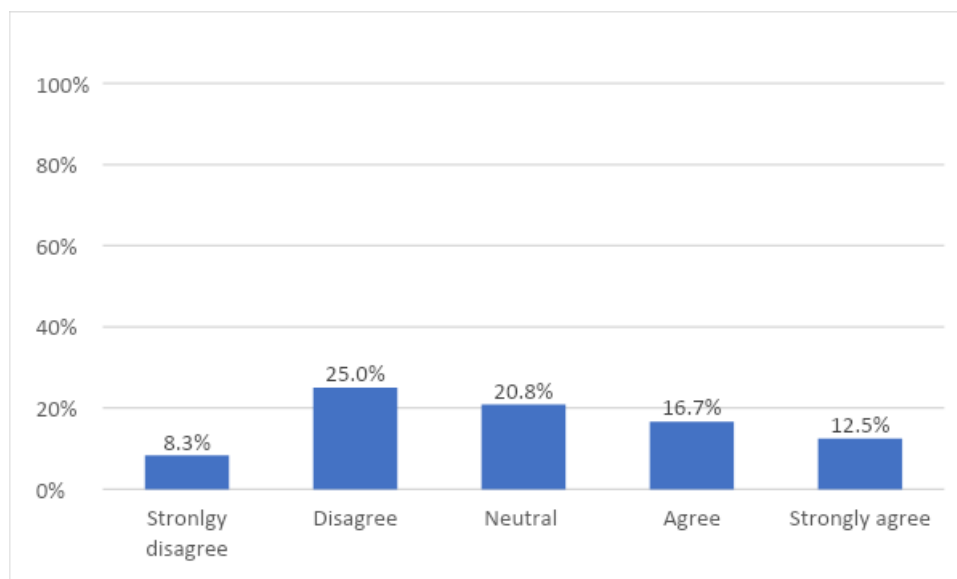
Graph 22: Digital innovations

From Graph 22 it could be perceived that respondents, only 16,7 % of the respondents agree with the statement that they are aware of digital innovations that can reduce the environmental impact at the design stage. 50 % of the respondents are not aware of such digital innovations. 16,7 % are neutral.



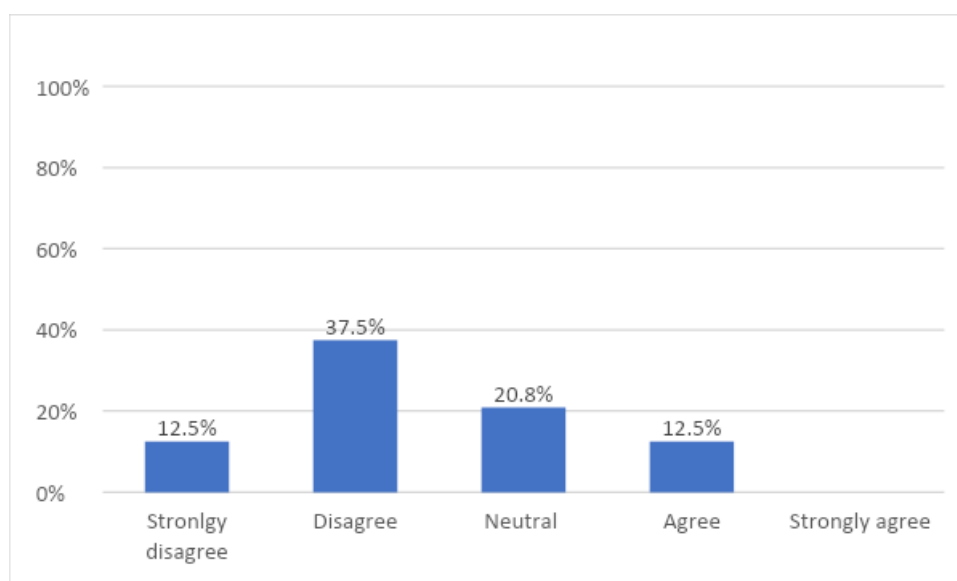
Graph 23: Design for longevity in garment design

As seen above in Graph 23, 41,6 % of the respondents know what design for longevity in garment design is and what are its main principles. 12,5 % are neutral and 29,1 % of the respondents do not have knowledge about design for longevity.



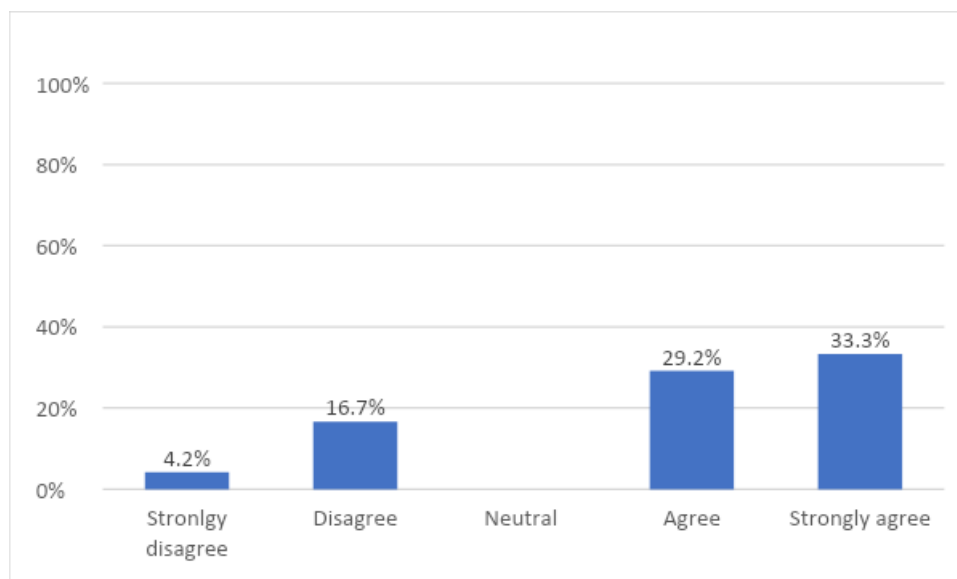
Graph 24: Impact of the design stage on production cycle

As seen above in Graph 24, 29,2 % of the respondents understand the impact that choices made at the design stage can have on the entire production cycle. 33,3 % of the respondents do not understand what impact those choices have on the production cycle. 20,8 % are neutral.



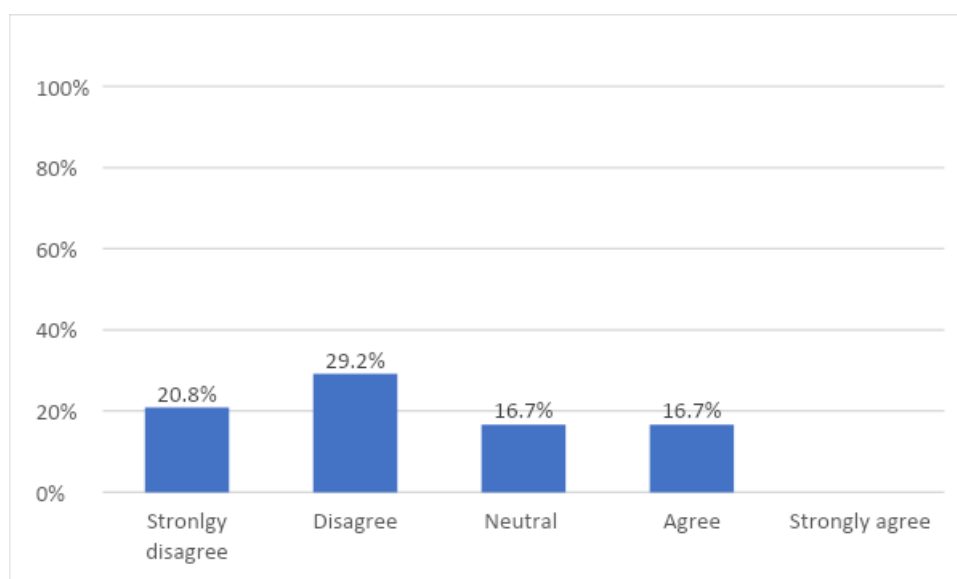
Graph 25: Awareness of optimisation of pre-consumer resources

From Graph 25 it could be perceived that respondents, only 12,5 % of the respondents are aware of the optimisation of pre-consumer resources through virtual collaborative design techniques. 20,8 % are neutral. 50 % of the respondents are not aware of the optimisation of pre-consumer resources through such techniques.



Graph 26: Learning about sustainable garment design

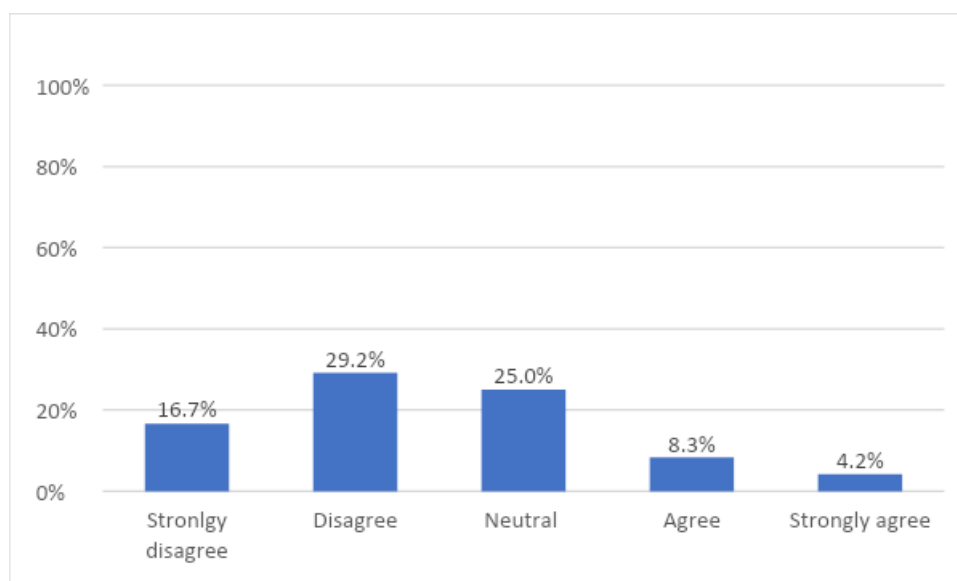
As seen above in Graph 26, 62,5 % of the respondents are interested in learning more about sustainable garment design. 20,9 % are not interested in learning more.



Graph 27: Tools for sustainable fashion design

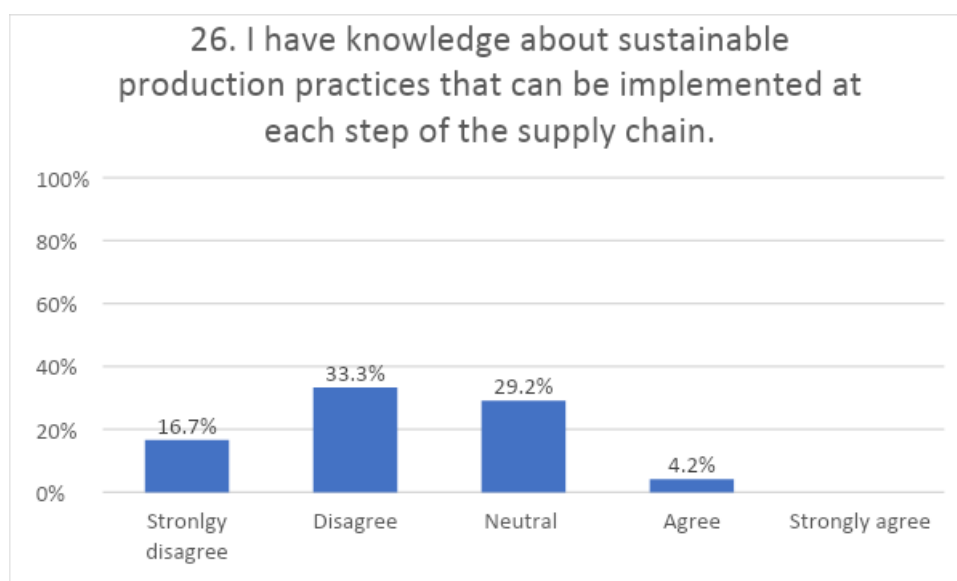
As seen above in Graph 27, 16,7 % of the respondents know tools for sustainable fashion design, and 50 % do not know such tools. 16,7 % are neutral.

Topical questions – Sustainable production practices



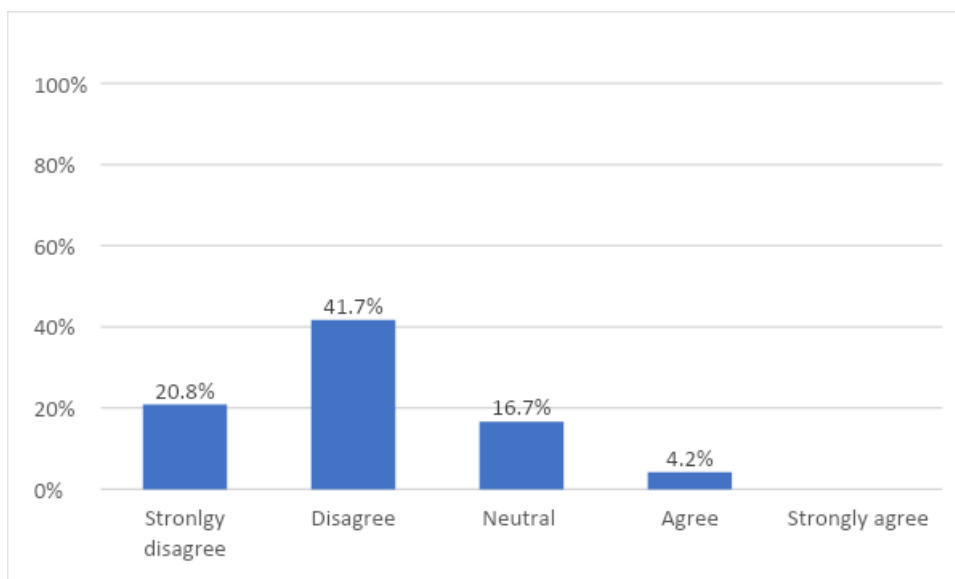
Graph 28: Knowledge of the steps within fashion supply chain

As seen above in Graph 28, 45,9 % of the respondents do not have knowledge of the steps within fashion supply chain. 25 % are neutral on this topic. Only 12,5 % of the respondents have knowledge of the steps within fashion supply chain.



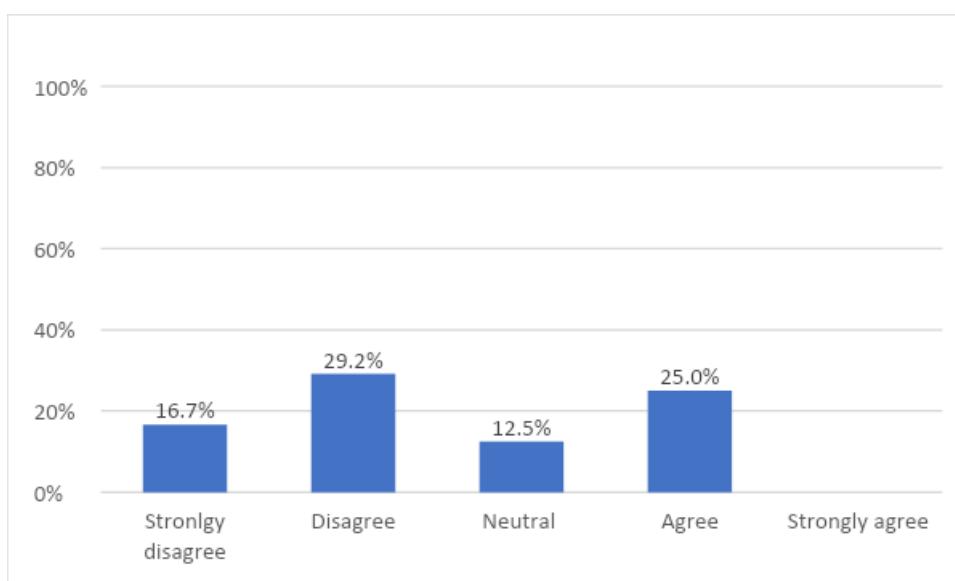
Graph 29: Knowledge about sustainable production practices in the supply chain

From Graph 29 it could be perceived that respondents, only 4,2 % of the respondents have knowledge about sustainable production practices that can be implemented at each step of the supply chain. 29,2 % are neutral on this topic. Half of the respondents (50 %) do not have any knowledge about sustainable production practices that can be implemented.



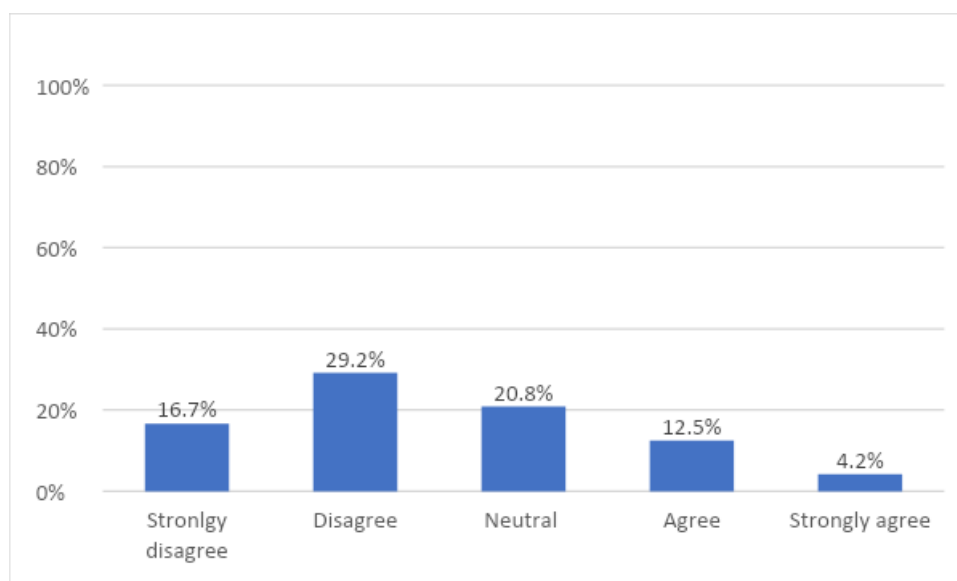
Graph 30: Knowledge about best available techniques in the textile industry

As seen above in Graph 30, only 4,2 % of the respondents have knowledge about the best available techniques in the textile industry. 16,7 % are neutral on this topic. 62,5 % of the respondents do not have knowledge about such techniques in the textile industry.



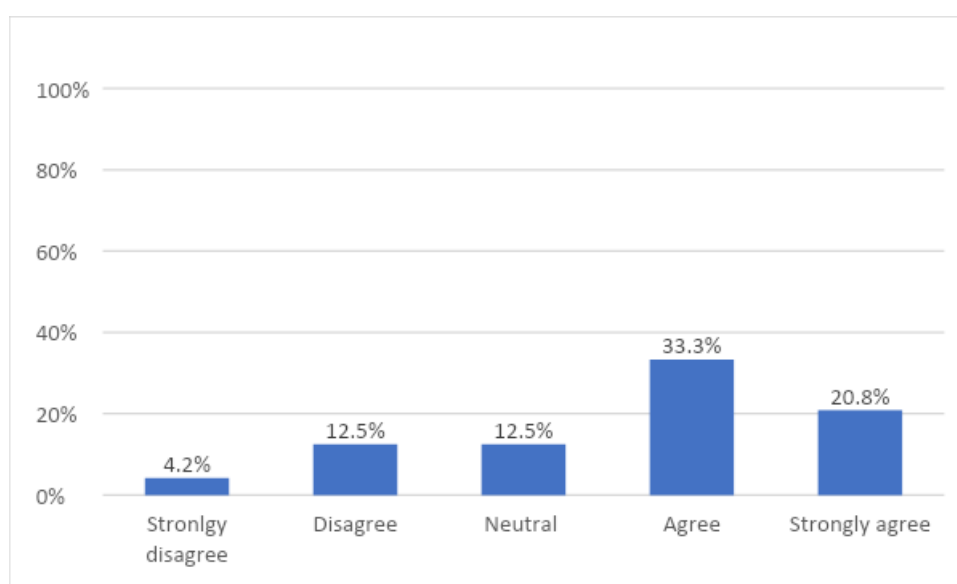
Graph 31: Resource efficiency and cleaner production assessment study

As seen above in Graph 31, 25 % of the respondents think they are able to carry out a resource efficiency and cleaner production assessment study. 12,5 % are neutral on this topic. 45,9 % disagree with the statement and think they would not be able to conduct an assessment study about resource efficiency and cleaner production.



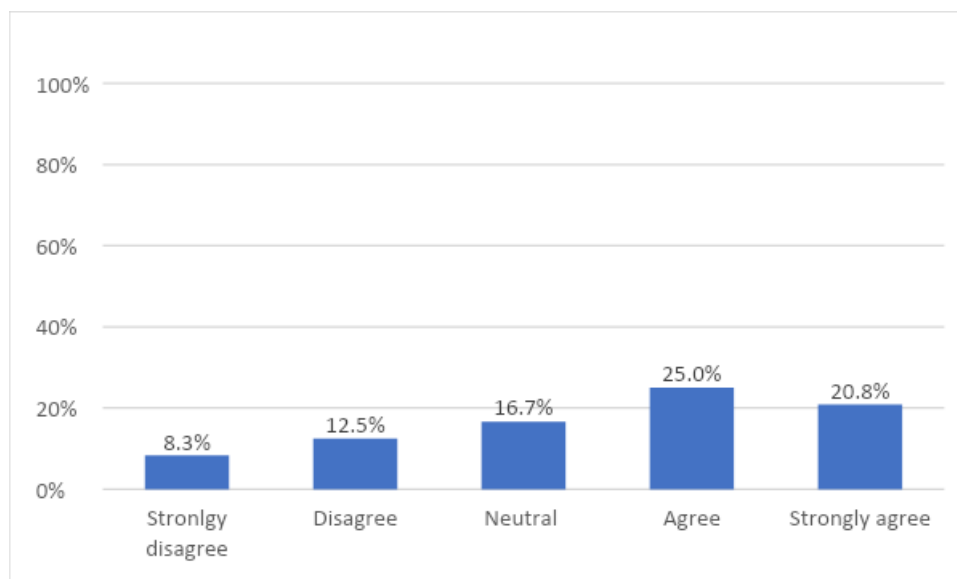
Graph 32: Management of waste streams

As seen above in Graph 32, 16,7 % of the respondents are able to identify and manage the waste streams associated with the fashion and textile production. 20,8 % are neutral. 45,9 % think they would not be able to identify and manage the waste streams associated with fashion and textile production.



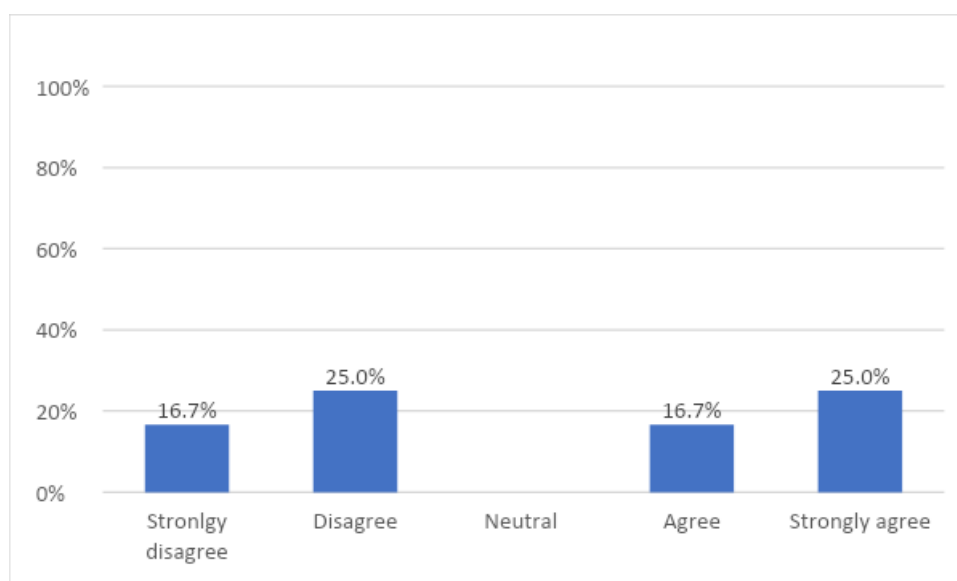
Graph 33: Learning more about sustainable fashion and textile production practices and pollution prevention approaches

From Graph 33 it could be perceived that respondents, 54,1 % of the respondents are interested in learning more about sustainable fashion and textile production practices. 12,5 % are neutral on this topic. 16,7 % of the respondents are not interested in learning more on this topic.



Graph 34: Knowledge about the violation of working rights and abuses

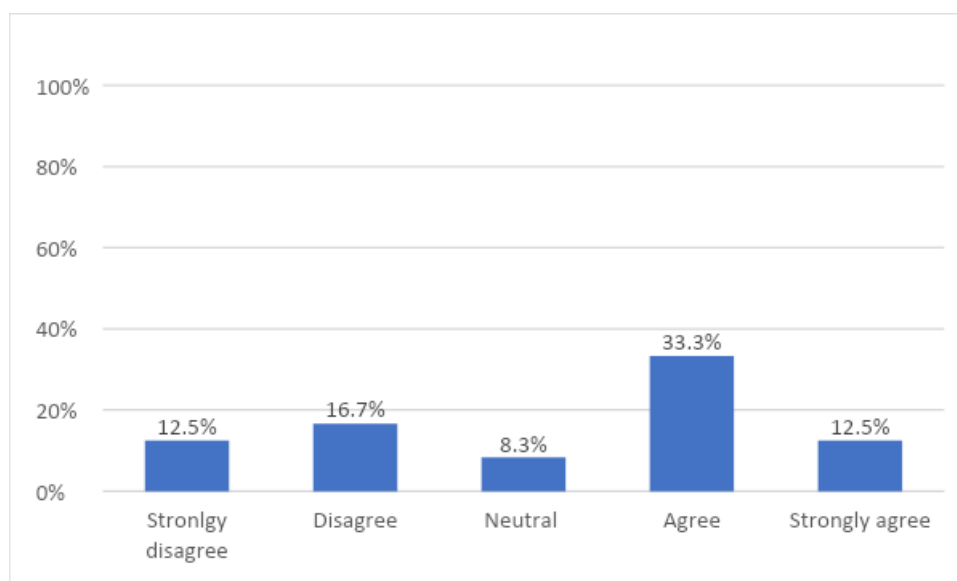
As seen above in Graph 34, 45, 8 % of the respondents have knowledge about the violation of working rights and abuses existing in fast fashion and textile sector. 16,7 % are neutral on this topic. 20,8 % do not have knowledge about such violations of working rights in the fashion and textile industry.



Graph 35: Sweat shop

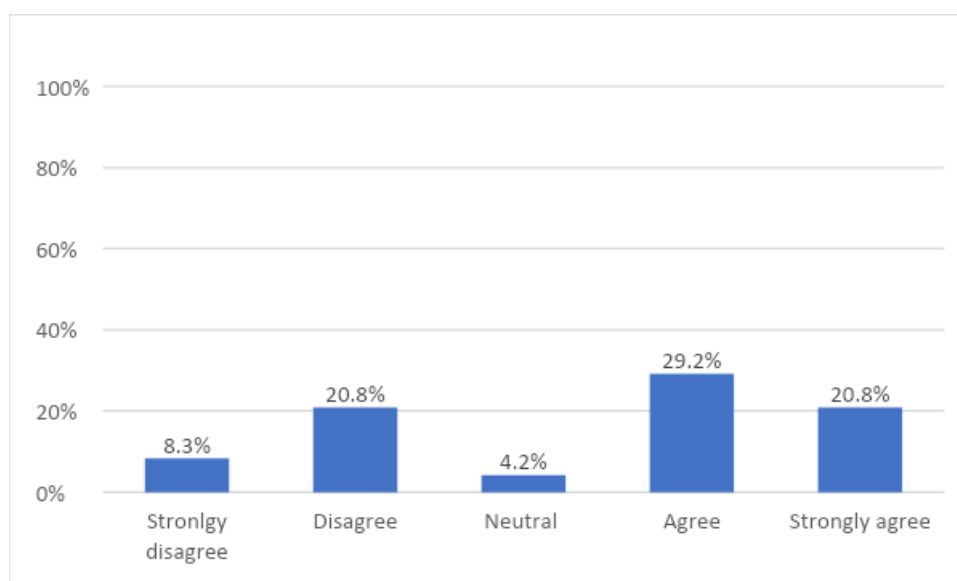
From Graph 35 it could be perceived that respondents, 41,7 % of the respondents have knowledge about the concept of a “sweat shop”. The same number of respondents (41,7 %) does not have knowledge about this concept.

Topical questions – Enhancing product durability and garment life cycle



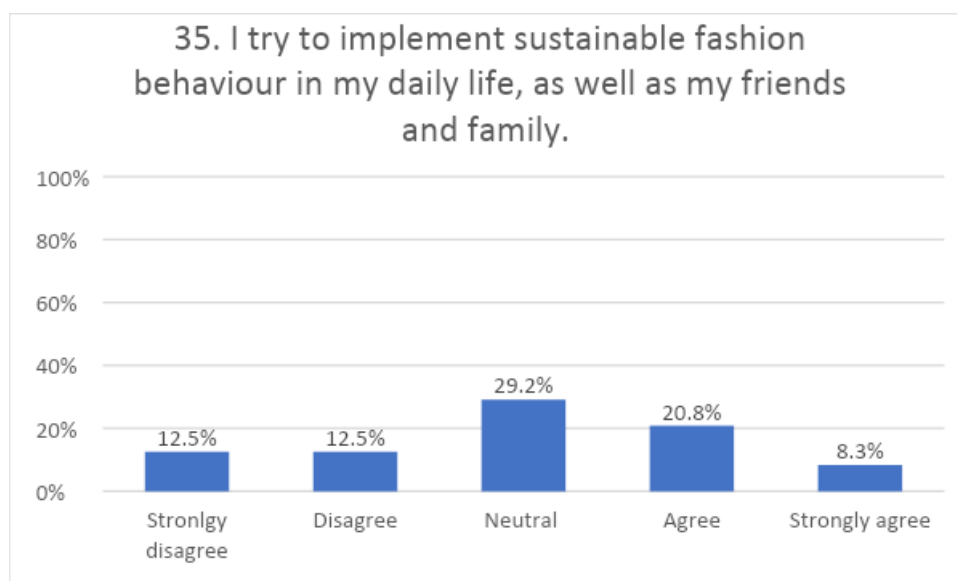
Graph 36: Clothing life cycle

As seen above in Graph 36, 45,8% of the respondents are familiar with the clothing life cycle. 8,3% are neutral. 29,2 % are not familiar with the clothing life cycle.



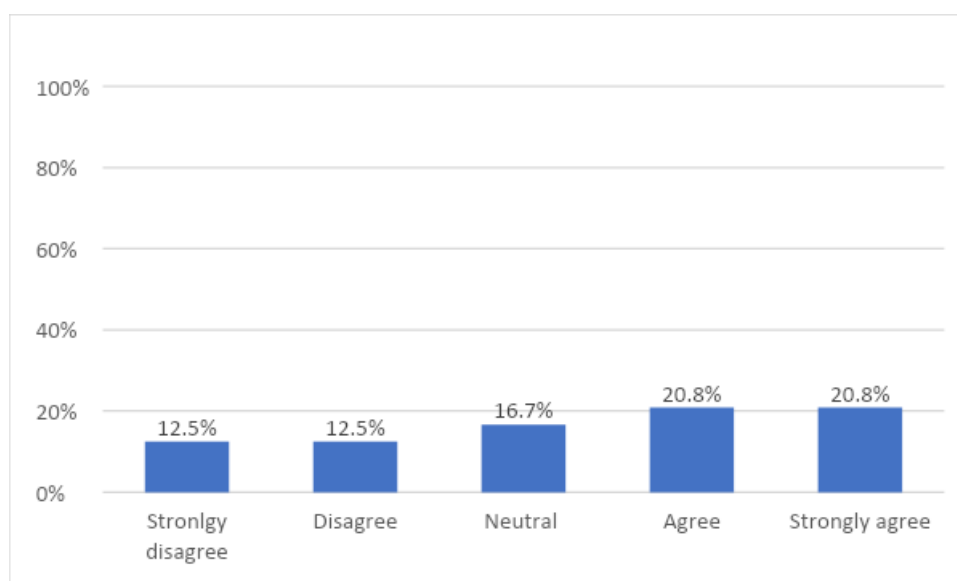
Graph 37: Clothing methods that extend garment's lifespan

As seen above in Graph 37, 50 % of the respondents are familiar with the clothing methods that extend my garment's lifespan. 4,2 % are neutral. 29,1 % of the respondents are not familiar with such methods.



Graph 38: Implementation of sustainable fashion behaviour in daily life

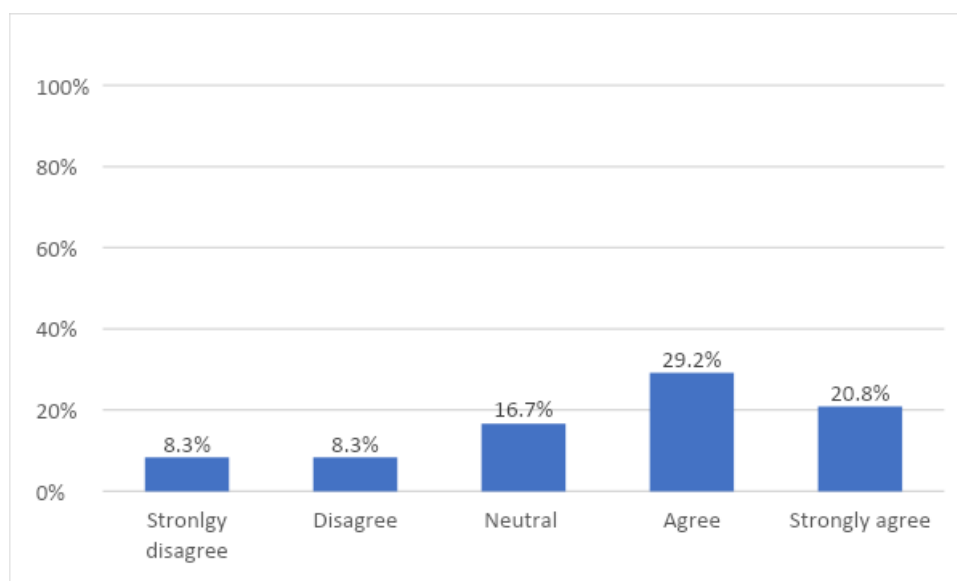
From Graph 38 it could be perceived that respondents 29,1 % of the respondents try to implement sustainable fashion behaviour in their daily life, as well as their friends and family. 29,2 % are neutral on this topic. 25 % of the respondents disagree with this statement.



Graph 39: Keeping up with trends regarding sustainable clothing/textiles

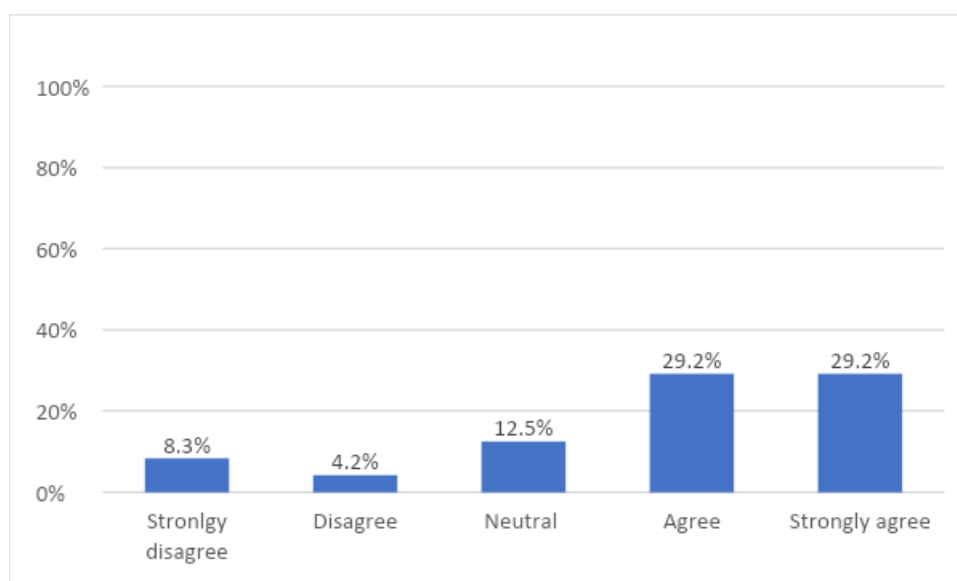
As seen above in Graph 39, 41,6 % of the respondents try to keep up with trends/innovations regarding sustainable clothing or textiles. 16,7 % are neutral. 25 % of the respondents do not try to keep up with these trends.

Topical questions – End-of-life management



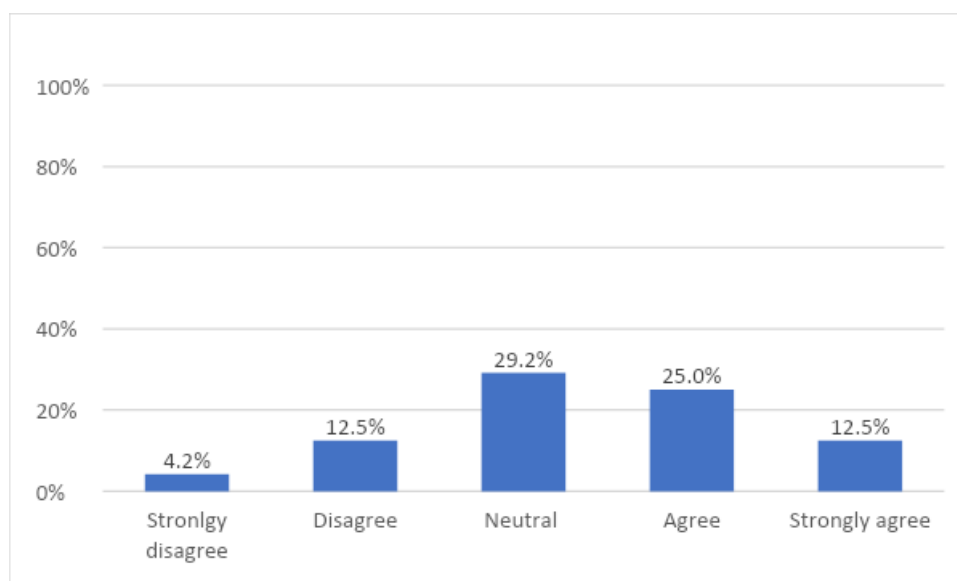
Graph 40: End-of-life possibilities for my clothing

From Graph 40 it could be perceived that respondents, 50 % of the respondents are aware of the end-of-life possibilities for their clothing. 16,7 % are neutral on this topic. 16,6 % of the respondents are not aware of such possibilities.



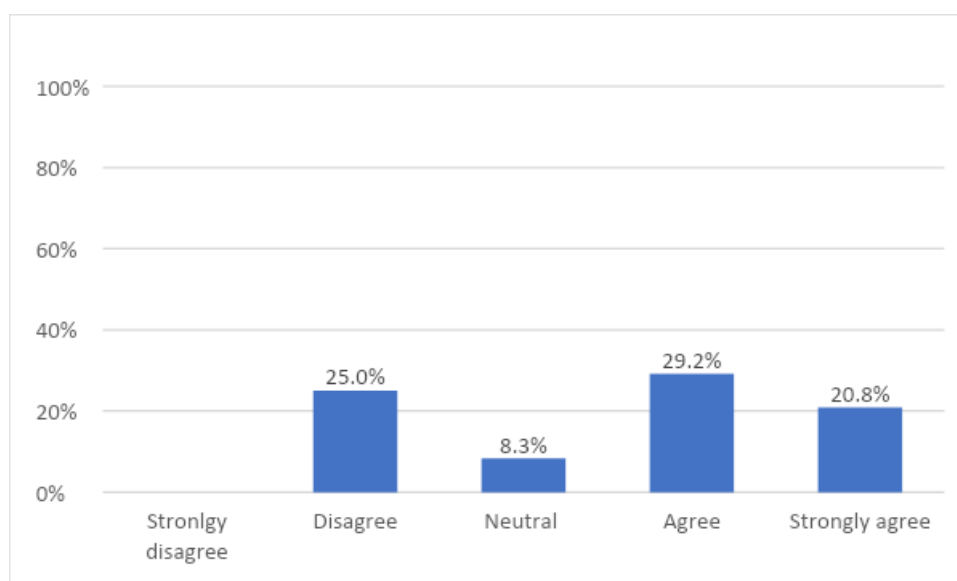
Graph 41: Second-hand clothes over new ones

As seen above in Graph 41, 58,4 % of the respondents do not mind purchasing second-hand clothes over new ones. 12,5 % are neutral. 12,5 % of the respondents are not comfortable with purchasing second-hand clothes over new ones.



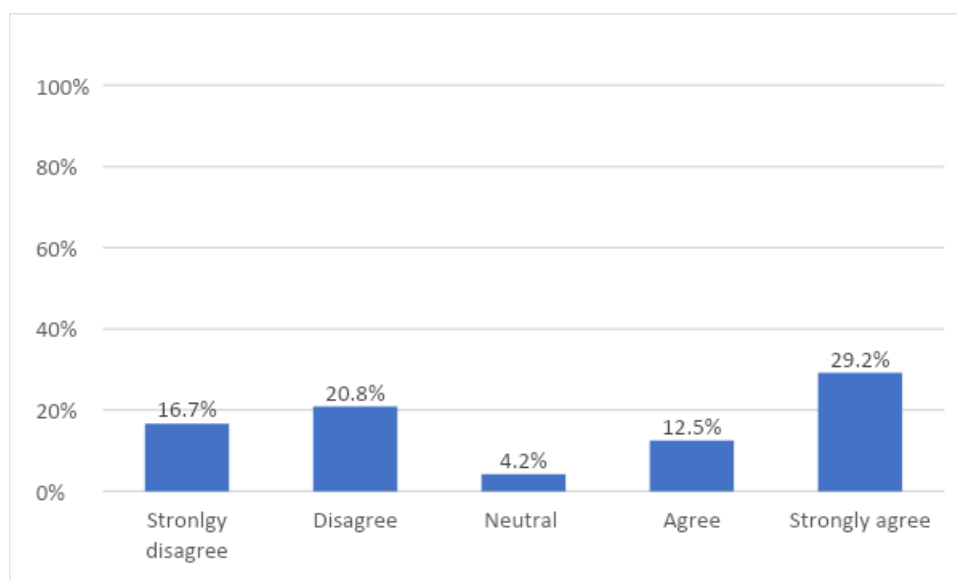
Graph 42: Sustainable/recycled materials over regular ones

From Graph 42 it could be perceived that respondents, 37,5 % of the respondents prefer purchasing clothes made from sustainable or recycled materials over regular ones. 29,2 % are neutral on this topic. 16,7 % of the respondent do not prefer purchasing sustainable materials over regular ones.



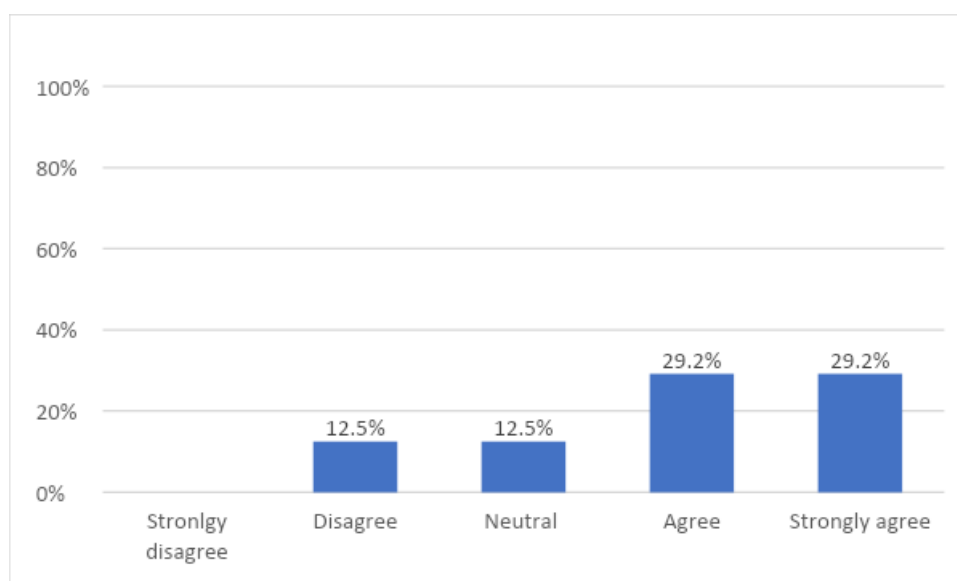
Graph 43: Awareness of sustainable clothing/textile end-of-life alternatives

From Graph 43 it could be perceived that respondents, 50 % of the respondents are aware of the sustainable clothing/textile end-of-life alternatives. 8,3 % are neutral on this topic. 25 % of the respondents are not aware of such alternatives.



Graph 44: Sustainable brands

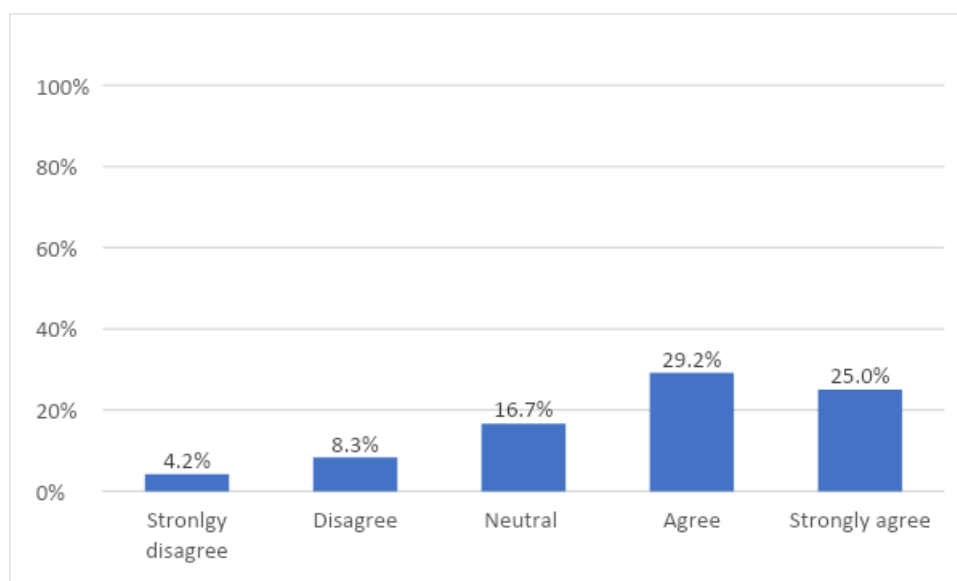
As seen above in Graph 44, 41,7 % of the respondents can name at least 3 sustainable brands. 37,5 % of the respondents are not able to do so. 4,2 % are neutral.



Graph 45: Learning more about sustainable clothing/textile end-of-life management

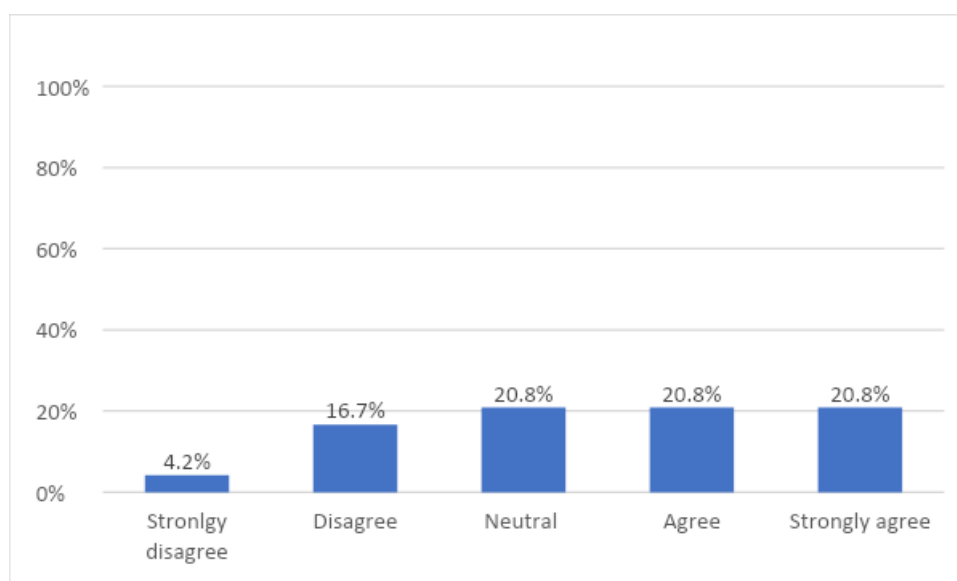
As seen above in Graph 45, 58,4 % of the respondents would like to learn more about sustainable clothing/textile end-of-life management. 12,5 % would not like to learn about such management. 12,5 % are neutral on this topic.

Topical questions – Implementation of circularity and sustainability practices in fashion and textile industry



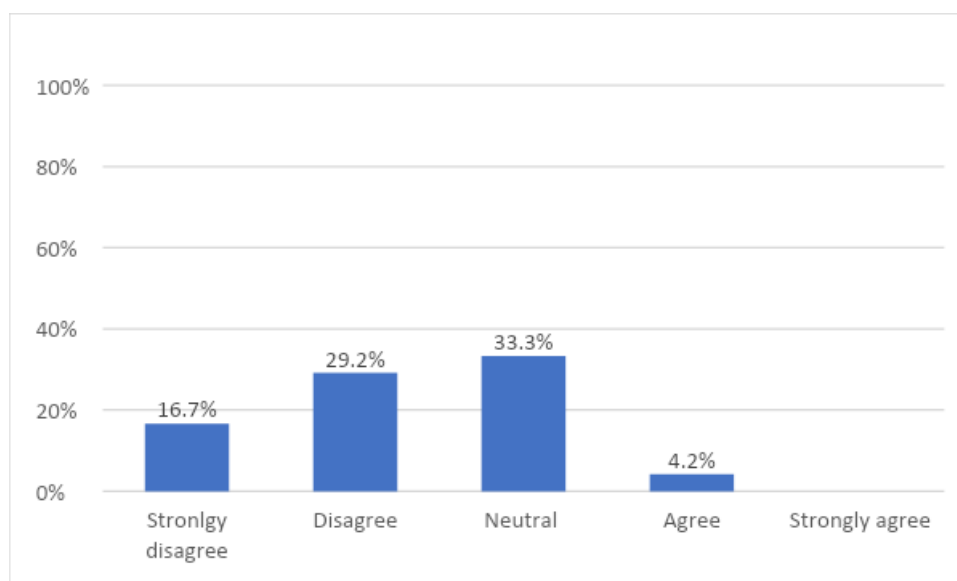
Graph 46: Circular economy

From Graph 46 it could be perceived that respondents, 54,2 % of the respondents know what the term “circular economy” means. 16,7 % are neutral on this topic. 12,5 % do not have knowledge about the term “circular economy”.



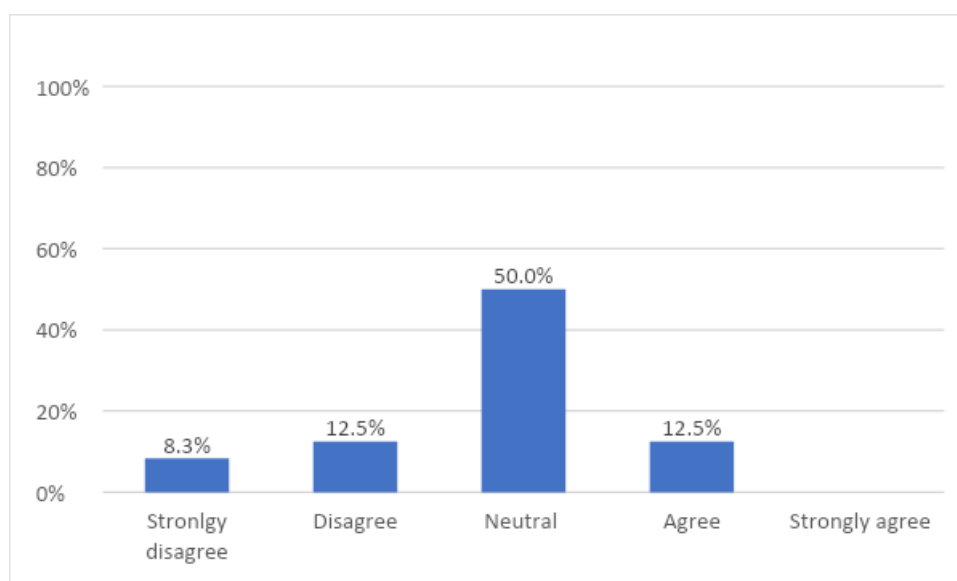
Graph 47: Awareness of importance of the circular economy in the fashion industry

From Graph 47 it could be perceived that respondents, 41,6 % of the respondents are aware of the importance of the circular economy in the fashion and textile industry. 20,8 % are neutral on this topic. 20,9 % are not aware of the importance of the circular economy in the fashion and textile industry.



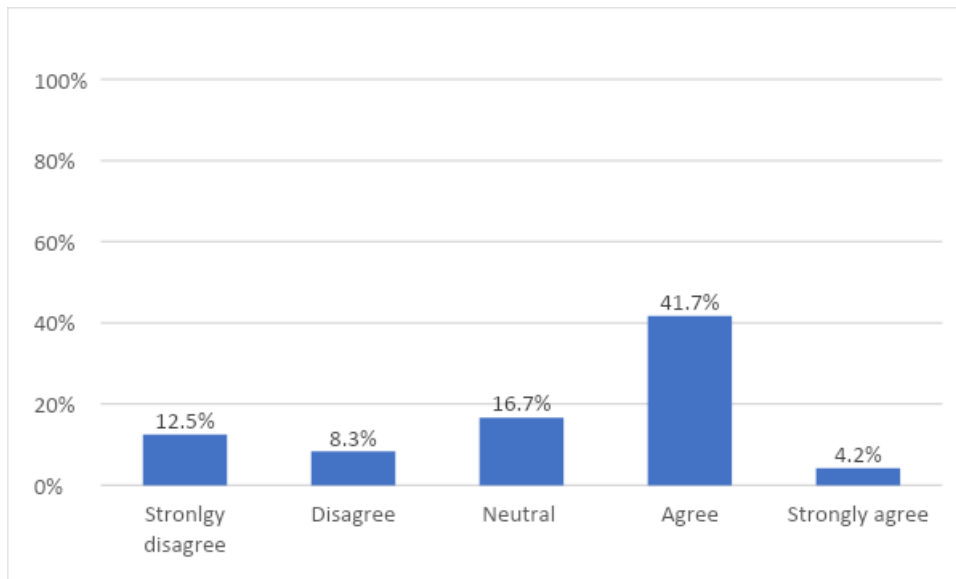
Graph 48: Awareness of digital systemic design methods

As seen above in Graph 48, Only 4,2 % of the respondents are aware of the digital systemic design method that are integrating end-of-life product assessments. 33,3 % are neutral on this topic. 45,9 % of the respondents are not aware of such methods.



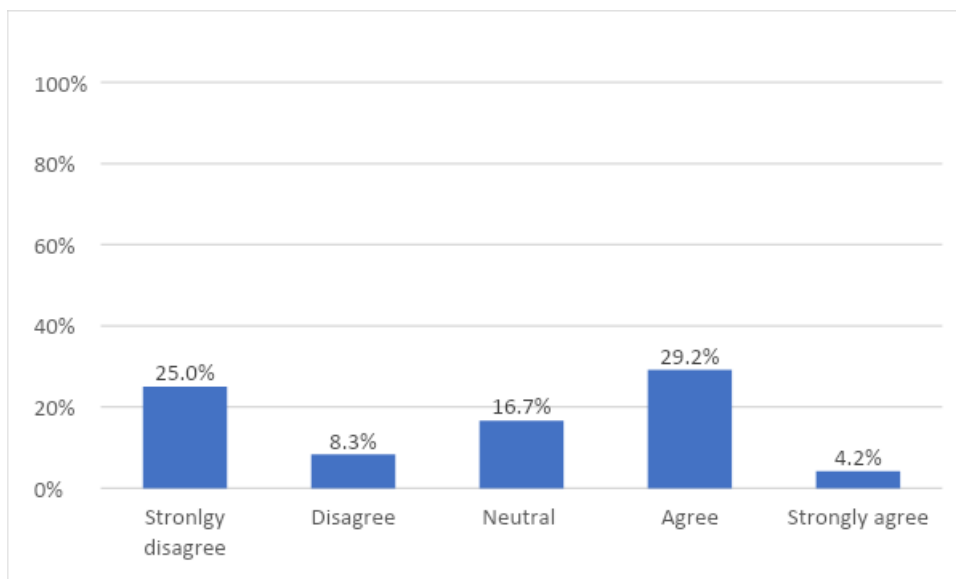
Graph 49: Practicing circular economy principles

From Graph 49 it could be perceived that respondents, 12,5 % of the respondents practice circular economy principles in fashion and textile industry. 50 % of the respondents are neutral on this topic. 20,8 % of the respondents do not practice circular economy principles in fashion and textile industry.



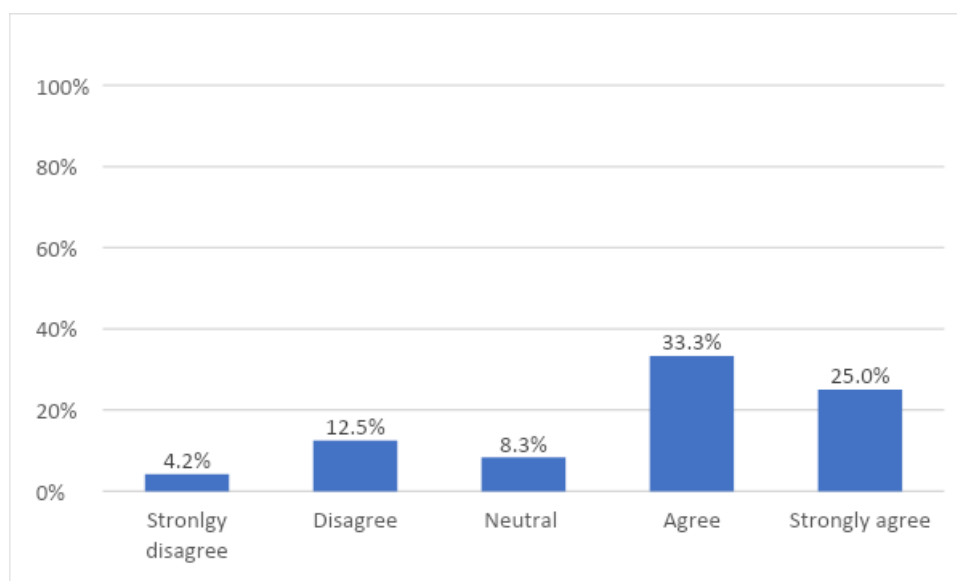
Graph 50: Awareness of the circular solution in the textile value chain

From Graph 50 it could be perceived that respondents, 45,9 % of the respondents are aware of the circular solution in textile value chain. 16,7 % are neutral on this matter. 20,8 % of the respondents are not aware of the circular solution in the textile value chain.



Graph 51: Awareness of digital tools that enable circular economy principles integration in clothing sector

As seen above in Graph 51, 33,3 % of the respondents are aware that digital tools enable circular economy principles integration in the textile and clothing sector, but 33,3% of the respondents are not aware of this fact. 16,7 % participants are neutral on this topic.



Graph 52: Learning more about implementation of circular economy practices

As seen above in Graph 52, 58,3 % of the respondents are interested in learning more about implementation of circular economy practices in the fashion industry. 16,7 % are not interested. 8,3 % are neutral on this topic.

Open question

There were almost no answers to the open question about any additional information regarding sustainable fashion and textile industry, except one. One of the respondents is interested in digital solutions for more sustainable fashion designing, procedures for acquiring eco-certificate (eko marjetica, GOTS) for small enterprises, and where to find eco-friendly dyes for textiles.

In conclusion, the results of our survey point to several gaps regarding the target group's competencies. Respondents are generally aware of the impact that the fashion and textile industry has on the environment. It is clear that clothes washing processes and fibre production impacts the purity of waters and environment in general. They also have some knowledge about possible alternatives or solutions. Some of those they have already been implementing themselves in their daily lives.

The respondents have relatively good knowledge of textile fibres of different kinds and a bit less knowledge about the actual production processes involving textile fibres. Regarding the end-of-life management, the respondents are familiar with the alternatives and methods on how to extend the life cycle of clothing and textile. Some are implementing these alternatives already. Respondents generally do not mind buying second-hand clothes; however, they prefer buying regular clothes to sustainable or recycled materials and textiles. This could be due to their higher price. Even though the

respondents do not prefer to buy sustainable clothes, they can in general name some sustainable clothing brands.

Respondents have good knowledge of terms such as “slow fashion” and “sweat shop”.

Respondents are aware of the issues regarding fashion and textile industry; however, they do not have the knowledge of specific solutions, such as digital innovations or sustainable production processes. These innovative solutions could be presented in the educational system. Digitalization should be shown as a way to implement more sustainable production practices.

Some examples of good practices in Slovenia would be the companies Lučka and I LOVE ZERO WASTE educational company. I LOVE ZERO WASTE was a concept developed by high school students from High School CIRIUS Kamnik, who decided to participate in international fair of educational companies. Their moto is “Be a hero, do a zero!”. They promote reducing the number of plastic packaging and substitute it with a sustainable package.

Lučka store is a second-hand store who offer opportunities to dress yourself fashionably and cheaply.

ReFashion could easily improve the situation and evolve the knowledge of many participants by creating educational materials and guides on how to implement certain procedures or methods into the fashion and textile industry.

4. Conclusion

Taking into consideration all the topics analysed within this survey, the level of understanding fashion and textile industry still needs improvement.

Respondents are familiar with basic and fundamental concepts and materials, yet they lack the understanding of *more complex and sophisticated processes or concepts* regarding fashion and textile industry. Knowledge of production processes is basic, but existing. Most respondents generally understand and have knowledge about different materials and types of fibres used for textile production and they understand their impact on the environment. The majority is familiar with concepts of “slow fashion” and “sweat shop”.

Generally, respondents are aware of the end-of-life management possibilities and alternatives for their textile products. Most do not mind purchasing clothes from a second-hand clothing store. The fact that some shop at second-hand stores shows that respondents have already implemented some sustainable fashion behaviours in their everyday life in some way. The majority is already fostering more sustainable and circular behaviours. Some are still unsure about how to *prolong the garment life cycle* and *how to improve their sustainable fashion behaviours* even further.

The main gaps that were identified in all countries were the knowledge about the *innovative sustainable textile materials* and *eco-friendly production processes and materials available*. There are also gaps regarding *circular fashion strategies*. A major gap was identified in the field of *innovative digital tools* that can be used to reduce the carbon footprint of the fashion and textile industry at every stage and what are the best *available techniques in the fashion industry*. There is a lack of awareness about *circular and sustainable fabrics production and design*. Respondents do not have the knowledge how to *optimize pre-consumer resources through virtual collaborative design techniques*. In some cases, there is *a lack of knowledge about fashion supply chains and stages of manufacturing*.

The gaps could be improved by offering additional information on the topic of innovative sustainable methods and techniques in the textile and fashion industry, either in the form of written material, workshops, or seminars. Workshops could be carried out by companies that have already implemented sustainable and eco-friendly materials or production processes.

Some countries have already found some good practices that could be further developed and spread. For example, Greece mentioned brands like KIMALE, Alchimia Vegan Shoes, MUSA, and the KNLs. These are all sustainable and ethical brands. Some examples of good practices in Slovenia would be

the companies Lučka and I LOVE ZERO educational company. Gaia Segattini and EcoGeco are the good practices mentioned by Italy.

Research shows, that respondents have a knowledge scarcity in more complex and current subjects, such as digital innovation, optimization of resources, tools for sustainable fashion design, etc. Knowledge about how to comply with European green priorities should be obtained. Majority of employees in fashion sector are still using traditional and outdated approaches to textile production and design, which will need to change eventually. The change in the textile sector is gradual, but sustainable practices are slowly becoming a phenomenon.

Based on all this information, the ReFashion project will proceed to the development of an innovative curriculum, covering all these aspects and thus leading to a better understanding of the sustainable textile and fashion industry. ReFashion could easily improve the situation and evolve the knowledge of many participants by creating educational materials and guides on how to implement certain procedures or methods into the fashion and textile industry.