



THE IMPORTANCE OF CONSUMER PERCEPTIONS IN SLEEPWEAR DESIGN

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ABSTRACT: Sleepwear is an important part of women's, men's and also children's wardrobes, which, in addition to other factors, affect the quality of sleep. Therefore, it is important to pay more attention to the designing and planning of sleepwear. To determine the state of wearing and purchasing sleepwear in Slovenia, we conducted a survey covering various aspects, including consumer perceptions and preferences regarding sleepwear textiles, details, colours and styles, purchasing behaviour and wearing of sleepwear. The results of the research will be helpful in planning and designing of sleepwear, as well in understanding Slovene consumers' perceptions of sleepwear.

Keywords: Consumer behaviour, clothing, sleepwear, purchasing, consumer, consumer perceptions.

ZNAČAJ PERCEPCIJA POTROŠAČA U DIZAJNU ODEĆE ZA SPAVANJE

APSTRAKT: Odeća za spavanje je važan deo ženske, muške, ali i dečije garderobe, koja pored drugih faktora utiče na kvalitet sna. Zbog toga je važno posvetiti više pažnje dizajniranju i planiranju odeće za spavanje. Da bismo utvrdili stanje nošenja i kupovine odeće za spavanje u Sloveniji, sproveli smo istraživanje koje pokriva različite aspekte, uključujući percepcije i preferencije potrošača u vezi sa tekstilom odeće za spavanje, detaljima, bojama i stilovima, ponašanjem pri kupovini i nošenjem odeće za spavanje. Rezultati istraživanja će biti od pomoći u planiranju i dizajniranju odeće za spavanje, kao i u razumevanju percepcije slovenačkih potrošača o odeći za spavanje.

Ključne reči: ponašanje potrošača, odeća, odeća za spavanje, kupovina, potrošači, percepcije potrošača.

1. INTRODUCTION

Depending on the conditions of wearing or the purpose, clothes can be classified into the following groups: everyday clothes, sports and leisure clothes, and special clothes that include work clothes and uniforms. Sleepwear is classified in the group of everyday clothing, which is divided into men's, women's and children's clothing [1].

Sleepwear in addition to other factors, affect the quality of sleep and contributes to a comfortable and pleasant rest. Therefore, when designing sleepwear, it is also important to research and understand consumer's perception and behaviour towards sleepwear. The paper summarizes the findings of a survey on wearing and purchasing sleepwear in Slovenia. The research was conducted in Slovenia in 2024 and covers various aspects, including consumer perceptions and preferences regarding sleepwear textiles, details, colours and styles, purchasing behaviour and wearing of sleepwear. The results of this study could be useful for fashion designers, brands and marketers etc. to understand Slovene consumers' perceptions of sleepwear, and will be helpful in planning and designing of sleepwear.

2. SLEEPWEAR AND TEXTILES

Sleepwear, also known as nightwear or sleep clothing (also nightclothes), refers to garments specifically designed to be worn while sleeping or relaxation at home. Common types of sleepwear include: pyjamas (pajamas), nightgowns (nighties), negligees, chemises, nightshirts (sleep shirts), sleep shorts, sleep pants, robes, peignoirs, adult onesies, babydolls, blanket sleepers. Other types of garments are commonly worn for sleeping, but not exclusively so, including gym shorts, t-shirts, tank tops, sweatpants, as well as underwear, and/or socks, with no outer garment. Also, sleeping without clothing is not uncommon [2, 3]. According to our previous survey made in Slovenia in year 2018 [4] and other surveys made in USA [5] and UK [6], the most popular sleepwear worn are pyjamas and nightgowns.

2.1. Sleepwear textiles

Sleepwear textiles are chosen for their comfort, breathability, durability, sensitivity, and ability to regulate body temperature during sleep. When selecting sleepwear, it is essential to consider also personal preferences, climate, and any specific needs such as allergies or skin sensitivities. Ultimately, the best sleepwear textile is one that ensures comfort and a restful night's sleep. Common textiles used in sleepwear include [7-10]:

- cotton: cotton is natural fibre and a popular choice for sleepwear due to its softness, breathability, durability and ability to absorb moisture, keeping the body cool and dry during sleep;
- flannel: flannel is a warm, soft fabric often made from cotton, wool, and synthetic fibres. Cotton flannel is commonly used in sleepwear for wearing during colder season, as it provides good insulation and comfort;
- silk: silk is a luxurious and lightweight fabric known for its softness, smooth surface and ability to regulate body temperature. Silk sleepwear is prized for its comfort and elegance, making it a popular choice for special occasions or those seeking a touch of luxury;

- satin: satin is a glossy fabric often made from silk, cotton, polyester, or a blend of synthetic fibres. It has a smooth and silky texture, offering a luxurious feel and a hint of sheen. Satin sleepwear is favoured for its softness and elegant appearance;
- modal: modal is a type of rayon produced from beech tree cellulose. It is eco-friendly and known for its softness, breathability, and moisture-wicking properties. Modal sleepwear is prized for its comfortable and lightweight feel;
- bamboo: bamboo fabric is derived from bamboo pulp and is valued for its softness, moisture-wicking properties, and eco-friendly nature. Bamboo sleepwear is breathable, hypoallergenic, and suitable for sensitive skin;
- other textiles also used in sleepwear: viscose, Tencel™ (lyocell), linen, wool, microfiber, polyester, rayon, fleece, terrycloth etc.

3. METHODOLOGY

A quantitative research study was carried out in order to explore consumers' wearing and purchasing sleepwear. The survey was published online using the 1ka program. All data presented are obtained by interviewing. The online survey was made in Slovenia and took place from 22 March 2024 to 23 May 2024. The questionnaire was sent by e-mail and shared via web page of Faculty of Design and social networks. A random sample was used in data collection. The total number of respondents who carried out a survey was 437. Of these, 298 respondents answered the question regarding gender and age, 4 % (11) were men and 95 % (283) were women, 4 respondents were unspecified regarding gender. The age of the respondents is presented in Table 1. The majority of the respondents 28% were up to 24 years of age, followed by the respondents aged between 35 and 44 (27%), between 45 and 54 (22%), and age 55 and more (13%), with the least number of respondents age between 25 and 34 (10%).

Table 1: Age of the Respondents

Age	Frequency	Percent
up to 24	82	28
25-34	29	10
35-44	80	27
45-54	67	22
55 and more	40	13

4. RESULTS AND DISCUSSION

As sleepwear and textiles for them can vary according to the seasons, firstly we wanted to know if respondents wore sleepwear during summer and winter time. Out of a total of 432 answers, 28 % of the respondents answered that they do not wear sleepwear in summer and 16 % of respondents do not wear sleepwear in winter, as presented in Figure 1a and 1b. For respondents who do not wear sleepwear, the survey ended with this question. Next, we were interested in whether they wear the same model of sleepwear in winter and summer time. Only 27 % of the respondents (91 from 342) answered that they wear the same model

of nightwear in summer and winter, which mostly consists of a T-shirt and pants, a two-piece pyjama, only underwear, oversized T-shirts etc.

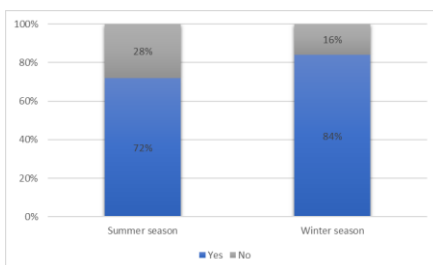


Figure 1: Do the respondents wear sleepwear while sleeping in summer and winter time?

Table 2: What kind of sleepwear do the respondents wear while sleeping?

Sleepwear	Frequency of answers	
	Summer season	Winter season
Two-piece pyjama set (a set of a shirt and pants)	127	220
Two-piece nightwear not in a set (consisting of a shirt and pants)	162	185
Nightgown (nightdress/nightshirt) with short sleeves	174	33
Nightgown (nightdress/nightshirt) with long sleeves	25	80
Short-sleeved T-shirts	243	85
Long-sleeved T-shirts	18	180
Sleeveless top	133	19
Shorts	201	34
Long pants/leggings	37	196
One-piece suit (adult onesie)	9	34
Negligee	81	16
Only underwear	127	17

In the following question, we were interested in what kind of sleepwear the respondents wear for sleep. Several answers were possible; thus, the frequency of answers is presented in Table 2. It was found that the majority of the respondents in winter time wear a two-piece pyjama set (a set of a shirt and pants), two-piece nightwear not in a set (consisting of a shirt and pants), long-sleeved T-shirt and long pants/legging. The least of them wear negligees, tank tops or just underwear in winter. In summer time the majority of the respondents wear short-sleeved T-shirts, shorts, nightgown (nightdress/nightshirt) with short sleeves, and two-piece nightwear not in a set. Negligees (a shorter female undergarment made of transparent materials and lace) are worn in summer by 81 and in winter by only 16 respondents. Only underwear without sleepwear is worn in summer by 127 respondents and in winter only by 17 respondents. We were also interested in whether the respondents liked the textile patterns and prints and inscriptions on the sleepwear. Several answers were possible; thus, the frequency of answers is presented in Table 3. The majority of the respondents like small prints (dots, hearts, teddy bears, etc.) and flower

prints/motifs from nature. 97 of respondents (out of 327) do not like patterns and prints. Some of them like stripes (68), various captions (e.g. Sweet Dreams), and captions/prints of cartoon series heroes/characters (52 of respondents). Checkered patterns are the least liked by the respondents.

Table 3: What prints, inscriptions, and patterns do respondents like on their sleepwear?

Prints, inscriptions, and patterns	Frequency of answers
Small prints (dots, hearts, teddy bears, etc.)	150
Flower prints/motifs from nature	103
Do not like patterns and prints	97
Various captions (e.g. Sweet Dreams)	72
Stripes	68
Captions/prints of cartoon series heroes/characters	52
Checkered patterns	34
Others (e.g. thematic prints of illustrations of animals or others motifs from nature, etc.)	22

Table 4: What kind of details do respondents like or bother them on sleepwear?

Details	Frequency of answers	
	They like them	Bother them
Do not like details / do not mind anything	222	100
Lace	73	26
Pockets	57	35
Trims (e.g. satin)	33	8
Strings and ribbons	33	66
Buttons	27	119
Bows	27	17
Embroidery	25	6
Flounces	18	35
Ruffles (frills)	21	43
Patches	8	53
Zippers	2	116

Table 4 presents results related to details that the respondents like on sleepwear or bother them on sleepwear while wearing it, such as buttons, lace, pockets, embroidery, flounces, ruffles (frills), zippers, and other. Several answers were possible; thus, the frequency of answers is presented. 68 % of the respondents (222 out of 328) do not like details nor the accessories that seem insignificant to them. 73 respondents like lace details, 57 like pockets, 33 like trims (e.g. satin), and 33 of them like strings and ribbons. It was found that only 2 respondents like zippers and 116 of respondents bothered them. The next question was about what currently bothers the respondents on their sleepwear. More answers were possible; thus, the frequency of answers is presented in Table 4. About 31 % of the respondents (100 out of 324) do not mind anything on their sleepwear, 119 of them are bothered by buttons, and 116 respondents are bothered by zippers. 66 respondents are

bothered by strings and ribbons, 53 are bothered by patches, and 50 respondents are bothered by elastic bands. When asked what colour of sleepwear the respondents mostly wear, several answers were possible; thus, the frequency of answers is presented in Figure 2. The most respondents wear blue sleepwear (173 out of 325), followed by grey (122), black (117), white (115) and beige (110) colours. The fewest respondents wear orange (13) and yellow sleepwear (21). 56 of respondents answered that they wear other colours, e.g. pastel, pink, olive, turquoise. In the following question, we were interested in what shades of colours the respondents like. Several answers were possible. 162 of respondents answered that they like light shades, 124 like pastel shades, 116 like dark shades, 86 of respondents like natural shades, and 60 like beige shades.

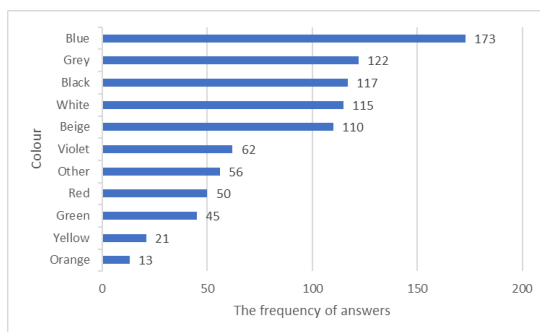


Figure 2: What colour of sleepwear do the respondents mostly wear?

When asked whether the material from which the sleepwear is made is important for respondents, 325 answered, 3 % (10) of which did not care about the material, 5 % do not know (15) and 92 % (300) of respondents answered that the material is important and has to be comfortable, natural, soft and pleasant to the touch, skin friendly, breathable, and flexible. In the following question we were interested in what material the sleepwear of the respondents is made of. As presented in Table 5, most sleepwear is made of cotton textiles, both for summer (265 of respondents) and winter (292) wear. In winter respondents often wear flannel (89) and terry cloth (79) sleepwear, but less often silk, satin, modal and lace nightwear. In summer, the respondents often wear silk (80), bamboo (64), transparent (59), lace (56), viscose (55) and satin (53) sleepwear, and less often flannel, terry cloth and modal nightwear. 75 of the respondents answered that they do not know sleepwear textiles made from modal fibres, 44 from bamboo, 30 from viscose, 24 satin, 31 terry cloth and 27 from flannel. When asked whether the respondents wear sleepwear made from organic and eco textiles, 315 respondents answered. 47 % (148) of the respondents wear sleepwear made from organic cotton, 15 % (46) wear sleepwear made from other eco materials (e.g. bamboo, lyocell), 31% did not know and 19 % of the respondents do not wear sleepwear from organic and eco materials. In the next question we were interested, if the respondents would like to have sleepwear made from organic and eco textiles. Who responded with doubt or negatively (157), 75 % (118 out of 157) of the respondents answered that they would like to have it, and 22 % of the respondents don't care about it.

Table 5: What material is the respondents' sleepwear made of?

Textiles used for sleepwear	Frequency of answers		
	Winter season	Summer season	Don't know
Cotton	292	265	8
Silk	17	80	18
Bamboo	34	64	44
Modal	19	18	75
Viscose	32	55	30
Satin	15	53	24
Terrycloth	79	1	31
Flannel	89	6	27
Lace	21	56	19
Transparent textiles	9	59	18
Others (wool, plush, hemp textiles)	4	3	10

When asked what is important to the respondents when wearing and buying nightwear, an assessment was conducted on a scale from 1 to 5, where 5 presents the most important value. It was found that comfort is the most important factor for the respondents when wearing (287 out of 313) and buying (251 out of 297) nightwear, followed by the material and quality, price, appearance/design, and colour, as presented in Figure 3a and b. It was also found that fashion trends are the least important to the respondents when wearing (56 % of the respondents) and buying (50 %) sleepwear. When asked whether the name of the brand was important to the respondents when buying sleepwear, 269 respondents answered, of which 93 % (250) did not care about the brand name. When asked how much the respondents spent on average for the purchase of their nightwear, 268 respondents answered. It was found that 28 % (76) of the respondents spend an average of up to € 20 for the purchase of nightwear, 47 % (127) of the respondents spend € 20-40 for the purchase of their nightwear, 14 % spend € 40-60 and 5 % spend € 60 and more for the purchase, as presented in Figure 4. 74 % (197) of the respondents (out of 267) when asked where they buy nightwear answered that in the store, 16 % (43) buy them online, 4 % (12) of them wear old T-shirts, leggings, promotional T-shirts or other pieces of clothing, and 3 % (9) of the respondents make their own sleepwear. It was also found that 83 % of the respondents (out of 197) buy sleepwear in Slovenia.

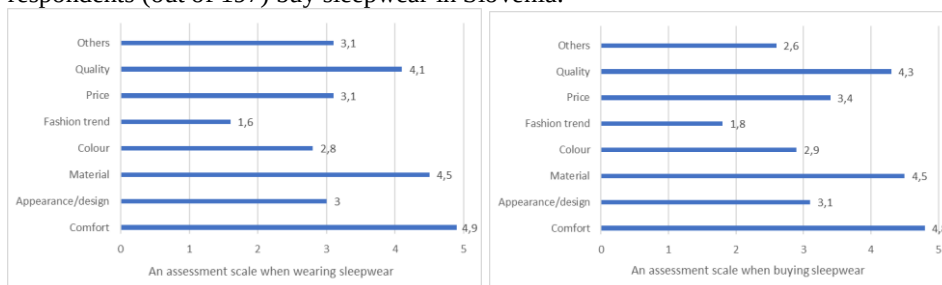


Figure 3: What is important to the respondents when wearing (a) and buying (b) sleepwear?

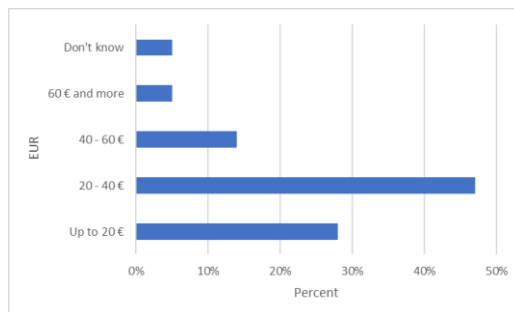


Figure 4: How much do the respondents spent on average for the purchase of sleepwear?

When asked how often the respondents buy sleepwear, 267 respondents answered. 30 % of the respondents buy sleepwear once a year, 10 % seasonally (summer, winter), 30 % of the respondents buy sleepwear once every 2 years, and 24 % buy them in period from 3 to 5 years and the rest (6 %) as the need occurs. When asked whether the respondent buys sleepwear as a gift, 302 respondents answered, of which 49 % answered that sometimes buy them for family members, friends, relatives, husband, wife, children, parents etc., 4 % often buy them, and 45 % of the respondents never buy sleepwear for a gift. 70 % of the respondents (out of 301) answered that they already received sleepwear as a gift. We were also interested in whether the respondents wear sleeping eye mask, socks, underwear, bathrobe and slippers before/while sleeping. Eye mask wear while sleeping only 3 % (9) and sometimes 9 % (28) of the respondents (out of 301). 28 % of the respondents (out of 302) wear socks while sleeping in the colder season, 4 % always wear them and 20 % of the respondents wear them occasionally. 48 % of the respondents wear underwear under their sleepwear in the summer, and 63 % of the respondents in the winter time. 12 % of the respondents wear only underwear in the summer. 9 % of the respondents (out of 292) wear a bathrobe before going to bed in summer and 17 % wear them only occasionally, while in winter season 22 % of the respondents wear a bathrobe and 23 % of them only occasionally. It was found that slippers wear at home 85 % of the respondents (out of 299) and 7 % wear them only occasionally. On the trip 74 % of the respondents wear slippers and 14 % only occasionally. The last question was whether the respondent would like to have an additional product that matches the style of the sleepwear, such as a bathrobe, slippers, socks, a textile storage bag, and an eye mask. Several answers were possible; thus, the frequency of answers is presented in Figure 5. 119 out of 296 respondents answered that they would like to have a bathrobe, 115 slippers, 88 socks, 32 a textile bag for storage, 25 an eye mask and 61 of the respondents answered that they would have nothing.

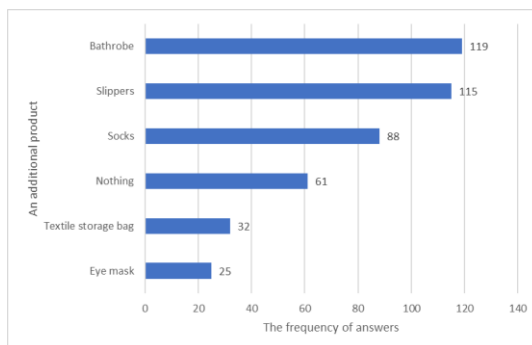


Figure 5: Whether the respondents would like to have an additional product that matches the style of the sleepwear?

5. CONCLUSION

The results of the study show that consumers wear sleepwear during sleep, both in summer and winter time, but not the same model of clothing. It was found that 27 % of the respondents wear the same model of nightwear in summer and winter, and that 28 % of the respondents do not wear sleepwear in summer and 16 % of them do not wear it in winter. It has been established that in winter consumers mostly wear two-piece sleepwear, such as pyjamas set (set of shirt and pants), or a combination of a long-sleeved T-shirt with long pants or leggings. In summer the majority of the respondents wear short-sleeved T-shirts, shorts, nightgown with short sleeves, and two-piece nightwear not in a set. It has also been established that the majority of the respondents like small prints e.g. dots, hearts, teddy bears, etc. and flower prints or motifs from nature. The results also show that about 30 % of respondents do not like patterns and prints at all and 68 % of the respondents do not like details nor the accessories that seem insignificant to them (e.g. buttons, pockets, flounces, ruffles, zippers etc.). About 31 % of the respondents do not mind anything on their sleepwear, while a few respondents do not mind buttons and zippers. Consumers wear blue sleepwear the most, followed by grey, black, white and beige sleepwear. 92 % of the respondents confirmed that the material of sleepwear is a very important factor and has to be comfortable, natural, soft and skin friendly, breathable, and flexible. Most sleepwear is made of cotton textiles, both for summer and winter wear. In winter, the respondents often wear flannel and terrycloth sleepwear, but less often silk, satin, modal and lace sleepwear. In summer, the respondents often wear silk, bamboo, transparent, lace, viscose and satin sleepwear, and less often flannel, terry cloth and modal nightwear. Several respondents answered that they do not know textiles made from modal fibres, bamboo, viscose, and satin. It was also found that 47 % of respondents wear sleepwear made from organic cotton, and 14 % wear sleepwear made from other eco materials (e.g. bamboo, lyocell). The most important factor for the respondents when wearing and buying nightwear is comfort. This is followed by the material and quality, price, appearance/design, colour and the latest fashion trends. The brand name of the sleepwear is important only to 7 % of the respondents. 74 % of the respondents buy nightwear in stores and 16 % buy them online.

This means that the percentage of online purchases of sleepwear increased compared to the previous survey from 2018, when only 3 % of respondents shopped online [4]. The rest wear old T-shirts, leggings, promotional T-shirts or other pieces of clothing, and 3 % of respondents make their own sleepwear. It was also found that 83 % of the respondents buy sleepwear in Slovenia, 30 % of the respondents buy sleepwear once a year, 10 % seasonally, 30 % of the respondents buy sleepwear once every 2 years, and 24 % buy them in period from 3 to 5 years. 49 % of the respondents answered that sometimes they buy nightwear for family members, friends, parents, relatives, etc. and 70 % of the respondents that they already received sleepwear as a gift. The results also show that some respondents would like to have a bathrobe, slippers, and socks that matches the style of the sleepwear. We can conclude that the findings of this study are useful for fashion designers, brands and marketers etc. to understand Slovene consumers' perceptions of sleepwear, and will be helpful in planning, designing and marketing of sleepwear.

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