

AEROPILLOW: TRAVEL NECK PILLOW

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INTRODUCTION

The main role of a pillow during sleep is to support the cervical spine in a neutral position. A neutral position of the spine prevents loss of cervical spine curvature and cervical waking symptoms by minimizing the end-range positioning of spinal segments (McDonnell 1946; Gordon et al. 2011). In addition, proper support can increase the contact area between the neck and the pillow so that the pressure exerted upon the muscles can be evenly distributed (Chen and Cai 2012). A previous study tested 6 different pillows and their effect on neck pain and quality of sleep. Fifty-five subjects tested all of the pillows in random order over the course of 3 weeks (3 consecutive nights per pillow). The authors concluded that pillows with firm support for cervical lordosis could be recommended for the management of neck pain and the improvement of sleep quality (Persson and Moritz 1998).

Moreover, Hannon (1999) showed that most people could not fall asleep when the neck was stiff and shoulder muscles were not relaxed. He reported 14 unique postures that can help relax the joints and loosen stiff muscles with proper support (Hannon 1999).

Another critical characteristic of a suitable pillow reduces the temperature of the head. A pillow that helps reduce core and head temperatures during night-time sleep is important for deep sleep (Liu et al. 2011). According to the study by Kawabata and Tokura (1996), the reason subjects using a pillow made of a material that helps the pillow surface stay cool could fall asleep more easily and sleep well is strongly related to lowered core and head temperatures and slowed heart rate. These results indicated that reduced core and head temperatures could induce deeper sleep (Kawabata and Tokura 1996).

Moreover, Okamoto-Mizuno et al. (2003) showed that a pillow design that helped reduce the

temperature of the head can reduce sweating and whole-body temperature, and indirectly improve sleep quality. Hating the stigma of sleeping in public, we've all been there. We've all needed to get a power nap in but are still in transit; so, we end up having an aching and tiring body that it was so impossible to be comfortable in that situation.

In the era of mask mandates and contagious airborne diseases, we did feel guilty and unsure about removing our facemasks. The harsh reality is that traveling is unforgiving to the body, whether you are trying to sleep or not. You can alleviate some of the pain with accessories like a neck pillow. You just have the right one for you. Special neck support pillows claiming to improve rest and reduce neck pain are currently being advertised around the world.

We define neck pillows as those that do more than simply support your neck while you sleep by maintaining the right alignment of the head, neck, and shoulders. One crucial element in obtaining long-term pain relief is having cervical pillows that are well-designed. Since there isn't a single pillow created for every unique case of neck pain, choosing pillows that suit your unique sleeping preferences is crucial in determining which pillow is best for you. Selecting a neck pain pillow that adapts to the sleeping positions that are most

comfortable for you is always simpler.

STATEMENT OF THE PROBLEM

1. What is the assessment level of the respondents, namely travelers, students, and professionals? In the following criteria:

1. Functionality
2. Efficiency
3. Usability
4. Aesthetics
5. Pricing

2. Is there any significant difference between the respondent's assessments?

OBJECTIVES OF THE STUDY

The general objective of this study is to promote the "AeroPillow" product to the market. Specifically, the objectives of the study are:

1. To evaluate and bring comfort, protection, and durability to enhance sleep quality.

2. To ease the daily struggle of travelers, students, commuters, and professionals who suffer from heat and uncomfortable journeys.

3. To produce a multi-functional purpose that's not only for comfort but also for the customer's health and safety.

Marketing Objectives

- To have a better understanding of what else has to be enhanced in our product with the help of customers.

- To increase positive product reviews.

- Focus more on the innovation and enhancement of the product in terms of style, comfort, health, and usefulness.

- Increase customer satisfaction through products; functionality, efficiency, usability, and aesthetics.

Marketing Strategy

Product:

- The AeroPillow is 100% made of memory foam, perfectly easing neck strain when you're moving about. The additional rechargeable fan, hoodie, and detachable mask keep you comfortable during long plane flights, car rides, train rides, or any other journeys that come your way.

- Quality - Use a high-quality product not only for its use as a product but also for its safety and is built of high-quality materials.

- Design - In terms of product design, our product design is more innovative in comparison to other products in terms of

product design, our product stands out from the competition.

- Packaging - We choose to create excellent packaging for our product to be easy to tuck away, and safe to keep, we use water repellent drawstring pouch.

Price:

For our price strategy, we use competitor-based pricing which means we compare our price with other similar businesses, and also we based on the high-quality materials that we used.

Place:

The place that we choose to start our business is in the middle of Quezon City. We chose Quezon City because it is close to our target market, which includes travelers, professionals, students, and commuters. Also, our AeroPillow is available for purchase online, which makes it easier for our customers.

Promotion:

As part of our marketing strategies, we rented billboards, transit ads, TV commercials, radio ads, magazine ads, and newspaper ads. This strategy is used to bring in more customers from a wider geographical area and ensure that our company is well-known. Additionally, social media is a part of our marketing strategy; this is one of the simplest ways to get in touch with our customers. We can successfully expand our business by utilizing

cutting-edge technology. One of the simplest methods to connect with customers is through social media sites like Facebook, gmail and other social media.

PRODUCT	DESCRIPTION	COST	TOTAL
AeroPillow Material	Memory foam pillow	1 piece of memory foam pillow cost Php 100	30 pieces of memory foam pillow would cost Php 3,000
	Water Repellant fabric	1 yard of fabric cost Php 50	15 yards of fabric would cost Php 750
	Invisible zipper	1 piece of Invisible zipper cost Php 20	30 pieces of Invisible zipper would cost Php 450
	Snap Button	1 pack (50 sets) of Snap Button cost Php 25	1 pack (100 pieces) of Snap Button would cost Php 25
	String		

	Velcro tape	1 piece of String costs Php 15	30 pieces of String would cost Php 450
	Rechargeable Fan	1 yard of velcro tape Cost Php 10	15 yards of velcro tape would cost Php 150
		1 piece of Rechargeable fan cost Php 325	15 pieces of Rechargeable fan would cost Php 9,750
Other expenses	Labor Tailoring	Php 300	Labor Tailoring (Minimum wage) Php 570
Total		Total of all expenses Php 845	Total of all expenses Php 15,145
Marketing Budget	Overall Advertisement		Php 1,966,300
Total Cost			Php 1,981,445
Expected Income	Product cost = Php 1,500	1,500 x 30 = 45,000 - 1,981,445=	Php 1,936,445

Table 1: Total Project Cost

Statistical Treatment of Data

Statistics is a type of analysis which involves using different types of statistical tools to analyze and understand the outcome of the data that is presented in a certain study. The researchers will choose the statistical tool below as it was seen fit to use.

Analysis of variance (ANOVA) is set of statistical models and

estimate processes for analyzing variations between means.

$$F = \frac{MST}{MSE}$$

where:

F = ANOVA coefficient

MST = Mean sum of squares due to treatment

MSE = Mean sum of squares due to error

Figures 1: The Formula of ANOVA

SUMMARY OF FINDINGS

INDICATORS	STUDENTS	COMMUTERS	TRAVELLERS	PROFESSIONALS	COMPOSITE MEAN		RANK
	WM	WM	WM	WM	WM	VI	
FUNCTIONALITY	4.4	4.18	3.89	2.97	3.86	SA	5
EFFICIENCY	4.38	4.24	4.83	3.64	4.27	HA	1
USABILITY	4.21	4.03	4.67	3.44	4.09	SA	3
AESTHETICS	4.3	4.22	4.5	3.92	4.24	HA	2
PRICING	4.14	3.95	4.14	3.8	4.01	SA	4
					4.09	SA	

Table 2: Overall Assessment of the Four Groups Respondents

Table shows the result of the over - all assessment of the four groups of respondents, namely: Students, Commuters, Travelers and Professionals. The over - all composite mean has a numerical value of 4.09 interpreted as "Slightly Acceptable ". Rank 1 is "EFFICIENCY "with a composite mean of 4.27 and interpreted as "HIGHLY ACCEPTABLE" Rank 5 is "FUNCTIONALITY" with a composite mean of 3.86 and interpreted as "SLIGHTLY ACCEPTABLE" Rank 2 is "AESTHETICS" with a composite mean of 4.24 and interpreted as "HIGHLY

ACCEPTABLE". Rank 3 is "USABILITY" with a composite mean of 4.09 and interpreted as "SLIGHTLY ACCEPTABLE" Rank 4 is "PRICING" with a composite mean of 3.01 and interpreted as "SLIGHTLY ACCEPTABLE".

The data shows that The AeroPillow in terms of its functionality, usability, aesthetics, efficiency, and price was evaluated as SLIGHTLY ACCEPTABLE product by the group of Students, Commuters, Travelers and Professionals.

Summary

1. What is the assessment level of the respondents, namely travelers, students, and professionals? In the following criteria:

1. Functionality

The assessment of functionality by the respondents, namely: Commuters, Professionals, Travellers, and Students, rated all of the indicators as "Slightly Acceptable," with an overall weighted mean value of 3.46, respectively. It is implied that the AeroPillow can be slightly acceptable in terms of functionality.

2. Efficiency

The assessment of efficiency by the respondents, namely: Commuters, Professionals, Travelers, and Students, rated all

of the indicators as "Highly Acceptable," with an overall weighted mean value of 4.27, respectively. As the assessment of the three groups of respondents the AeroPillow is highly acceptable in terms of efficiency.

3. Usability

The assessment of usability by the respondents, namely: Commuters, Professionals, Travelers, and Students, rated all of the indicators as "Slightly Acceptable," with an overall weighted mean value of 3.80, respectively. As the assessment of the three groups of respondents the AeroPillow is slightly acceptable in the usability aspect.

4. Aesthetics

The assessment of aesthetics by the respondents, namely: Commuters, Professionals, Travelers, and Students, rated all of the indicators as "Highly Acceptable," with an overall weighted mean value of 4.23, respectively. As the assessment of the three groups of respondents, the AeroPillow is slightly acceptable in the aesthetics aspect.

5. Pricing

The assessment of aesthetics by the respondents, namely: Commuters, Professionals, Travelers, and Students, rated all of the indicators as "Slightly Acceptable," with an overall

weighted mean value of 4.01, respectively. As the assessment of the three groups of respondents, the AeroPillow is slightly acceptable in price.

CONCLUSIONS

Based on the findings of the study, the following conclusions are drawn:

1. The researchers conclude that the AeroPillow have market potential. Also, the AeroPillow is different from the other, goods in terms of its design and functions.

2. The researchers conclude that the four groups of respondents in terms of its functionality, usability, aesthetics, efficiency, and price was slightly acceptable product by the group of students, commuters, travelers and professionals. In conclusion, the study aimed to address the issue of discomfort and lack of sleep quality experienced by various individuals during their daily journeys. The findings suggest that the development of a multi-functional product that provides comfort, protection, and durability can significantly improve sleep quality and enhance the overall travel experience. The study highlights the importance of considering the health and safety of customers in the design and production of such products. Overall, the study provides valuable insights into the

development of innovative solutions that can alleviate the daily struggles of travelers, students, commuters, and professionals.

RECOMMENDATIONS

Based on the findings and conclusion presented, the following recommendations are suggested:

1. The researchers recommend that research be conducted to create travel products that prioritize the safety and comfort of travelers.

2. The researchers recommend that the study should offer insights on product innovation to inspire students to generate their own ideas and emphasize the significance of research in product development.

3. The researchers recommend that the study should explore the use of technology to develop innovative products that can improve the overall travel experience.

4. The researchers recommend finding more affordable but still effective materials to make this product more affordable and environmentally friendly.

