

CHAPTER III

DESIGN METODOLOGY

3.1 Subject of the Design

The data used in this design includes primary and secondary data. Primary data is gained from questionnaires distributed to the target audience as well as interviews, both from experts and the subject matter. Secondary data is sourced from existing reference studies.

This research will contain limitations so that the research does not deviate from the topic that has been set, such as the media that will be designed for the target demographic. The limitations of the problem in this study are as follows:

1. Website: The accessibility of information has significantly improved with the rise of online platforms. Nowadays, people primarily access health information, including content related to allergies, through the internet. However, many existing online resources are often too specialized and technical, making them hard to understand for the average reader, or is too overly simplistic, glossing over important details and failing to offer in-depth explanations of allergy-related topics. There is a need for more balanced, informative, and accessible content that bridges this gap, providing users with a better understanding of allergies in a digestible manner.
2. Segmentation: The target audience will consist of individuals aged between 21 and 35 years old, minimally high school graduates, SES A and B. Geographically, the target audience would ideally live in Jabodetabek, as it is more likely for people in those areas to have access to medical healthcare and internet. This makes it easier for them to engage with online content on health-related issues, including allergies.
3. Contents: The contents of the project will primarily focus on the following:
 - b. Early Onset Allergies: What early onset allergies are, how they manifest in children, and how parents can identify the symptoms

early. It will also provide a basic overview of how allergies develop and the immune system's role in allergic reactions.

- c. Side Effects of Allergies on Health: This section will explore the physical and emotional toll that allergies can take on an individual's health. It will highlight both the immediate symptoms and the long-term effects of living with chronic allergies.
- d. Anaphylactic Shock: This section will explain what anaphylactic shock is, how it occurs, and why it can be life-threatening. It will also outline the signs of anaphylaxis and stress the importance of seeking immediate medical attention.
- e. First Aid for Allergic Reactions: Here, parents will learn what to do if their child has an allergic reaction. Step-by-step guidance on how to manage allergic reactions will be provided.

This is due to the fact that although the main topic of the design that are being focused are children's allergies, the actual reader should be the parents who control the environment as well as nutrition of said children.

1. Demographic

- a. Gender: N/A
- b. Age: 21 – 35 years old
- c. Education: High School Graduate
- d. Occupation: Stay-at-Home Parent
- e. SES: A – B
- f. Language: Indonesian

2. Geography: Jabodetabek

3. Psychography: Young parents or expecting parents who are in need of information for their young children.

The author determined the primary target audience to be new parents between the ages of 21 and 35, within the socio-economic status (SES) groups A and B. This demographic is more likely to have consistent access to healthcare services, such as clinics and pediatric care, and tends to prioritize infant health and nutrition. In contrast, those within from SES group C are often more focused on meeting basic survival needs, which may limit their capacity to engage with information related to food choices and allergy prevention. This does not mean that the design is limited towards only SES A-B, however, it is just that the content would be more tailored to an audience with both the resources and motivation to actively seek out and apply the knowledge concerning early childhood allergies.

3.2 Design Methods and Procedures

The author has chosen to use the theory of Design Thinking, which as outlined by Meinel & Leifer (2021) and by the Interaction Design Foundation – IxDF (2016) as being a non-linear process used by designers to understand users, challenge assumptions, and redefine problems in an effort to identify alternative strategies and solutions that may not be immediately apparent. At the same time, Design Thinking provides a solution-based approach to solving problems. This will give the author the flexibility needed to go back and redefine problems without being constricted in one phase as new information pops up, refining the design as necessary.

3.2.1 Empathize

The empathize phase focuses on understanding the target audience's experiences, needs, and perspectives. This is critical in creating effective solutions and addressing the actual problem at hand, as in this phase, the designers are encouraged to set aside their own assumptions and put themselves in the shoes of the target audience to gain insight into users and their needs. This phase is done through insight research, gaining data through interviews with experts and the target audience, observation studies, and literature reviews. The data will then be analyzed to obtain information about the depth

of the knowledge of the topic at hand, to what content should be added for the media, to what media the author should make.

3.2.2 Define

The Define phase involves analyzing the information gathered during the empathy phase to define the problem clearly and precisely. The main goal is to create a problem statement that reflects the true needs of the target audience and the gaps that exist in knowledge or awareness. By defining the problem, this stage may help the author brainstorm ideas for features, functions, and other elements that will allow them to solve the problem or help the users to solve the problem on their own with minimal difficulty.

3.2.3 Ideate

This phase is about brainstorming, developing, and refining ideas to address the identified problem. With a strong background from the research in the previous two stages, the designer starts to identify new solutions and explore alternative ways to look at the problem. This may involve gathering existing references, media, or approaches that could serve as inspiration for the solution. Later on, the designer will start to narrow down and finalize the best ideas for implementation in the next phase.

3.2.4 Prototype

In this phase, the solutions developed during the ideation phase will be turned into tangible prototypes. All of the previous steps are taken into consideration when creating the prototype, experimenting with the product to help identify the best solutions to each of the problems identified during the first three stages. The prototypes are to be shared and tested with either anyone within the team, or with a small group of people outside the design team, with the aim of gaining feedback. Each solution implemented will be investigated, refined, re-examined, and rejected based on said user feedback.

3.2.5 Testing

In this phase, the prototype is sent to the testing phase. The author will then gather and analyze the feedback given, and improve the prototype according to the feedback and criticism from the users. Although this is the final stage of design thinking, this phase is often a repetitive cycle of gaining user feedback from the testing, and then using that feedback to improve the media, similarly to the prototype phase. The results generated during this phase are often used to redefine one or more problems and inform understanding of how the users behave and think while using the product.

3.3 Design Techniques and Procedures

The author uses a mixed method which is a combination of quantitative and qualitative methods carried out in the study. According to (Sugiyono, 2016), mixed method refers to the combination of quantitative and qualitative methods in research, using qualitative methods in the first stage then continued with quantitative methods. In the qualitative method, the author will conduct interviews with experts and target audience, and in the quantitative method, the author will distribute questionnaires to the public.

3.3.1 Interview

Qualitative data is taken through interviews with experts and the target audience, ultimately aiming to obtain information about the depth of the knowledge of the topic at hand, to what content should be added for the media, to what media the author should make.

A. UI/UX Expert Interview

The author interviewed an expert in UI and UX design to give insight on the topic of informative media, specifically on website design. The interview was designed to get ideas, brainstorming, as well as criticism of idea to build off a more solid understanding.

The questions asked are as the following:

1. When designing a website, what do you take into account the most?
2. What are the essential elements of a visually appealing website?
3. How do you decide on color schemes, typography, and layout?
4. What are the key principles of a good user experience in website design?
5. What do millennials like in terms of aesthetics? How do you appeal to them? Current UI design trends?
6. How do you ensure consistency in design across different pages of a website?
7. How do you ensure a website is accessible and inclusive for all users?
8. How do you handle UX challenges when designing for different user demographics?
9. For this kind of project, what do you think is the best way to approach the problem?
10. What are the main differences you noticed when you designed a mobile website vs a desktop website?
11. Illustration vs Photography; How do you decide which to use?
12. What methods do you use for user research and gathering feedback?
13. Any advice for the project the author is making?

B. Target Audience

The author had decided to interview one of the target audience to get more information about the experiences of these parents and their own personal opinions about the topic at hand. This is due to the fact that questionnaires, although informative in quantitative data, is not able to focus in the deeper understanding of the target audience's point of view (Sugiyono, 2016).

These are the list of questions planned by the author for the interview, written in Indonesian for the ease of the interviewee:

1. *Bisa ceritakan sedikit tentang anak Anda dan jenis alergi yang mereka miliki?*
2. *Kapan pertama kali Anda mengetahui bahwa anak Anda memiliki alergi, dan bagaimana reaksinya saat itu?*
3. *Seperti apa reaksi alergi yang biasanya dialami anak Anda?*
4. *Apakah anak Anda pernah mengalami reaksi yang parah atau anafilaksis? Bisa ceritakan pengalaman tersebut?*
5. *Seberapa cepat gejala muncul setelah anak Anda terpapar alergen?*
6. *Ke mana Anda pertama kali mencari informasi setelah anak Anda didiagnosis alergi makanan?*
7. *Apa sumber informasi terkait alergi yang paling terpercaya? (misalnya, dokter, situs web, buku, kelompok pendukung)*
8. *Apakah Anda menemukan situs web, buku, atau organisasi yang sangat membantu untuk penanganan alergi makanan?*
9. *Bagaimana Anda menentukan apakah sumber daring dapat diandalkan dan akurat secara medis?*
10. *Apakah Anda pernah menerima saran yang saling bertentangan tentang alergi makanan? Bagaimana Anda memutuskan apa yang harus diikuti?*
11. *Seberapa sering Anda mencari informasi terkini tentang alergi makanan?*
12. *Apakah Anda mengikuti spesialis alergi, kelompok advokasi, atau profesional medis di media sosial?*

13. *Apakah Anda lebih mengandalkan profesional perawatan kesehatan atau pengalaman pribadi dari orang tua lain saat membuat keputusan tentang penanganan alergi?*
14. *Apakah Anda merasa ada cukup kesadaran dan edukasi publik tentang alergi anak?*
15. *Bagaimana informasi yang Anda kumpulkan membantu Anda mengelola alergi makanan anak Anda? Apakah Anda telah mengubah kebiasaan memasak atau berbelanja bahan makanan berdasarkan informasi yang Anda temukan?*
16. *Bagaimana Anda memastikan makanan anak Anda aman, terutama saat makan di luar atau bepergian?*
17. *Apakah Anda telah menggunakan panduan atau saran medis untuk membuat rencana darurat untuk reaksi alergi?*
18. *Bagaimana Anda mendidik anggota keluarga, pengasuh bayi, dan guru tentang alergi anak Anda?*
19. *Apakah Anda harus mengadvokasi kebutuhan anak Anda di sekolah atau tempat penitipan anak menggunakan informasi yang telah Anda pelajari?*
20. *Tantangan apa yang Anda hadapi saat mencoba menerapkan saran medis dalam situasi kehidupan nyata?*
21. *Apakah Anda merasa penyedia layanan kesehatan memberi Anda cukup panduan praktis tentang cara mengelola alergi di rumah?*
22. *Apakah Anda pernah merasa kewalahan dengan terlalu banyak informasi? Jika demikian, bagaimana Anda menyaring informasi yang bermanfaat?*
23. *Bagaimana cara Anda mengelola alergi anak di rumah?*
24. *Bagaimana Anda memastikan anak Anda mendapatkan makanan yang aman, baik di rumah maupun saat makan di luar?*

25. *Apakah Anda sering memasak sendiri makanan khusus, atau ada produk tertentu yang sering Anda beli?*
26. *Apakah Anda pernah mengalami kesulitan saat makan di restoran atau bepergian dengan anak Anda? Bagaimana cara Anda mengatasinya?*
27. *Apakah ada tantangan khusus dalam memastikan makanan atau lingkungan anak tetap aman?*
28. *Bagaimana Anda mengajarkan anak Anda untuk mengenali dan menghindari alergen mereka sendiri?*
29. *Apakah Anda stok obat di rumah? Jika iya, medikasi apa yang Anda stok dan pakai untuk Anak anda?*
30. *Apa tantangan terbesar dalam mengasuh anak dengan alergi, menurut Anda?*
31. *Apa pesan atau saran yang ingin Anda sampaikan kepada orang tua lain yang baru mengetahui bahwa anak mereka memiliki alergi?*
32. *Apakah ada hal yang Anda harap bisa diperbaiki dalam lingkungan sosial atau sistem kesehatan terkait alergi anak-anak?*

3.3.2 Questionnaire

The author uses the questionnaire technique of random sampling type of respondents distributed to the target demographic, namely parents who live in the Jabodetabek area. This questionnaire was conducted with the aim of finding out how much do the target demographic knows about allergies in children.

In addition, the distributed questionnaire can also provide information about the target media behavior of the design so that the information-seeking habits of respondents can be understood. The information and data obtained from this questionnaire are used as a basis for design to be more effective and can overcome problems seen from the perspective of the

design target. The contents of the questionnaire distributed to the target are as follows:

Table 3.1 Questionnaire Questions

Question	Model	Answers
Section 1 : Profile of the Respondents	Goal : Know the profile of the respondent so it is in accordance with the target demographic.	
<i>Kelamin sesuai KTP</i>	Multiple Choice (Single Answer)	- <i>Laki-laki</i> - <i>Perempuan</i>
<i>Usia</i>	Multiple Choice (Single Answer)	- <i>21-23</i> - <i>24-26</i> - <i>27-30</i> - <i>>30</i>
<i>Domisili</i>	Multiple Choice (Single Answer)	- <i>DKI Jakarta</i> - <i>Tangerang</i>
<i>Status Perkawinan</i>	Multiple Choice (Single Answer)	- <i>Single</i> - <i>Married</i> - <i>Divorced</i> - <i>Kohabitasi</i>
<i>Pekerjaan</i>	Multiple Choice (Single Answer)	- <i>Karyawan</i> - <i>Wiraswasta</i> - <i>Ibu Rumah Tangga</i> - <i>Other</i>
<i>Penghasilan</i>	Multiple Choice (Single Answer)	- <i>Dibawah 5.3 Juta</i> - <i>5.3 Juta – 10 Juta</i> - <i>Diatas 10 Juta</i>
<i>Tingkat Pendidikan Terakhir</i>	Multiple Choice (Single Answer)	- <i>SD</i> - <i>SMP</i> - <i>SMA-SMK</i> - <i>D3</i> - <i>S1</i>

Question	Model	Answers
		-S2 dan ke-atas
<i>Umur Anak (Jika Ada)</i>	Checkboxes	-Bayi (0 – 12 bulan) - Balita (1 tahun - 3 tahun) - Anak TK (3 tahun - 5 tahun) - Anak SD (5 tahun - 12 tahun) - Teenager (12+) - Tidak Ada
Section 2 : Pre-Test about Allergies	Goal : Gauge the extent of the knowledge of the respondents about the topic at hand.	
Question	Model	Answers
<i>Apakah Anda tahu tentang alergi?</i>	Multiple Choice (Single Answer)	- Iya - Tidak
<i>Seberapa banyak yang kamu ketahui tentang alergi?</i>	Linear Scale (1 to 6)	-1 (Hanya pernah dengar sekali) -6 (Sudah konsultasi dengan dokter)

Question	Model	Answers
<i>Apa itu alergi?</i>	Multiple Choice (Single Answer)	<i>-Ketika tubuh bereaksi negatif terhadap semua produk makanan.</i> <i>-Ketika tubuh merasa sakit setelah mengonsumsi suatu produk makanan.</i> <i>-Ketika tubuh salah mengidentifikasi sesuatu zat sebagai ancaman yang menyebabkan reaksi alergi.</i> <i>-Saya tidak tahu.</i>
<i>Apa saja gejala umum alergi makanan? (Tolong pilih 2.)</i>	Checkboxes	<i>-Pembengkakan atau gatal pada wajah, bibir, dan lidah</i> <i>-Hives/Urtikaria (Kulit mulai bentol-bentolan dan bewarna merah)</i> <i>-Wheezing/Mengi</i> <i>-Suara serak</i> <i>-Pilek</i> <i>-Saya tidak tahu</i>
<i>Di dalam satu keluarga, kedua orang tua mempunyai alergi.</i>	Multiple Choice (Single Answer)	<i>- Iya</i> <i>- Tidak</i>

Question	Model	Answers
<i>Apakah anak mereka dijamin mempunyai alergi yang sama?</i>		
<i>Apa itu anafilaksis?</i>	Multiple Choice (Single Answer)	- Reaksi alergi serius yang mengancam jiwa. - Ketika tubuh muntah setelah makan. - Ketika kulit bengak setelah bersentuhan dengan alergen. - Saya tidak tahu.
Section 3 : Personal Experiences	Goal : Find out the personal experiences of the respondents with the topic	
Question	Model	Answers
<i>Apakah anak Anda memiliki alergi?</i>	Multiple Choice (Single Answer)	-Iya -Tidak -Mungkin
<i>Apa keluarga Anda ada riwayat alergi?</i>	Multiple Choice (Single Answer)	-Ya -Tidak -Mungkin
<i>Jika ada, alergi tipe apa?</i>	Multiple Choice (Single Answer)	-Makanan -Kulit -Rhinitis / Pilek -Debu -Obat -Peliharaan -Tidak Ada Alergi

Question	Model	Answers
		-Other
<i>Obat apa saja yang kamu simpan dan pakai untuk anak Anda?</i>	Checkboxes	-Cetirizine (Zyrtec) -Loratadine (Claritin) -Fexofenadine (Allegra) -Xyzal (Levocetirizine) -Saya tidak stok obat -Other
<i>Bagaimana Anda tahu kapan anak Anda mengalami reaksi alergi?</i>	Checkboxes	-Adanya bengkak atau gatal -Anak mulai pilek-pilek atau batuk-batuk -Suara serak -Kulit mulai bentol-bentolan -Other
<i>Step-step apa yang Anda lakukan saat anak Anda mengalami reaksi alergi?</i>	Open Answer	
Section 4 : Media Usage	Goal : Find out the media and channel preferences of the respondents.	
<i>Media apa yang Anda paling sering digunakan?</i>	Multiple Choice (Single Answer)	-Social Media -Search Engine Mobile -Search Engine Desktop -Aplikasi

Question	Model	Answers
		<i>-Video Edukasi</i> <i>-Buku</i> <i>-Other</i>
<i>Apakah estimasi screen time Anda dalam sehari? (Seberapa lama main HP/Laptop)</i>	Linear Scale (1 to 6)	-1 (1 jam) -6 (12 jam dan lebih)
<i>Apakah media yang Anda paling sering temui yang berbicara tentang alergi?</i>	Multiple Choice (Single Answer)	<i>-Buku</i> -Website (Desktop) -Website (Mobile) <i>-Aplikasi</i> -Social Media <i>-Kampanye</i> <i>-Video Edukasi</i> -Other
Question	Model	Answers
<i>Media apa yang Anda gunakan untuk mencari informasi terkait alergi?</i>	Multiple Choice (Single Answer)	-Social Media -Search Engine Mobile -Search Engine Desktop <i>-Aplikasi</i> <i>-Video Edukasi</i>

Question	Model	Answers
		-Buku -Other
<i>Seberapa lama Anda telah menggunakan media ini?</i>	Linear Scale (1 to 6)	-1 (Seminggu -6 (Setahun dan atas)
<i>Faktor apa yang menjadi pertimbangan saat mencari media terkait Alergi? (Tolong pilih 3 yang paling penting untuk Anda.)</i>	Checkboxes	-Aksesibilitas / Accessibility -Kepercayaan / Credibility -Pemahaman -Pengetahuan yang Diberikan -Detail -Other
Section 5 : Availability	Goal : To know if the respondents are willing to be interviewed.	
Question	Model	Answers
<i>Apakah anda bersedia dikontak untuk FGD/ wawancara? Jika ya, tolong tulis detail kontaknya di sini! (WA, Email, etc)</i>	Open Answer	