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Impact of Knowledge Sharing on Vaccination in Rural Areas of South Punjab, Pakistan

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Abstract

This study investigates the impact of knowledge sharing on childhood vaccination in rural areas of South Punjab, Pakistan, focusing on mothers in District Layyah. The study population belonged to the southern part of Punjab, Pakistan. A questionnaire was developed after carefully considering the literature on childhood vaccination adoption approach objectively examines variables such as risk perception, systematic processing, information seeking, vaccine knowledge, and vaccine inadequacy. This study is helpful to design effective strategies to fill communication gaps and highlights the importance of a public awareness campaign to ensure vaccination acceptance.

Keywords Knowledge Sharing, Vaccine, Childhood Vaccination, Rural Areas

Background of the Study

Childhood vaccinations began when Edward Jenner invented the smallpox vaccination in the late 1700s. The field of vaccination has advanced tremendously since this ground-breaking discovery. Important turning points include the global vaccination campaigns that eradicated smallpox in the 20th century and the continuous progress being made in the development of vaccines. Due to these advancements, a variety of vaccines, such as subunit vaccines, recombinant DNA techniques, and inactivated and attenuated viruses, have become safer and more effective. Governments and international organizations have implemented immunization programs to guarantee that children receive the correct vaccines at the right age by adhering to recommended immunization plans. The development of the hepatitis B vaccine opens the door to avoiding a dangerous liver infection (Nuwarda, 2022). With the introduction of combination vaccines, the number of injections required is decreased by enabling the administration of multiple vaccines in a single shot. Early in the twenty-first century, the human papillomavirus (HPV) vaccine was developed to prevent some of the cancers that the HPV virus can cause. The historical progression of childhood vaccination exemplifies a significant paradigm shift in the field of public health. The initial development of a vaccine for smallpox has evolved into a diverse collection of vaccines that effectively safeguard children against a multitude of diseases. With the continuous progress of research and technology, the future of childhood vaccination exhibits the potential for the development of safer and more efficacious vaccines, thereby contributing to a further reduction in the global prevalence of preventable diseases (Hilleman, 2000).

Literature Review

Knowledge is a grasp of a subject both theoretically and practically. Additionally, it refers to a familiarity, awareness, perception, discovery, learning, or understanding of someone or something such as details, facts, or abilities that is gained via education or experience. It's an intangible, cognitive product, a quality that one must possess and uphold to benefit oneself.

Sharing knowledge is the process of easily imparting information to others for the benefit of an organization or giving and conveying one's intellectual capital to others, always involving them in sharing their own. This idea is used in organizations, institutions, and even families to prevent

knowledge loss caused by things like worker turnover, retirement, resignations, deaths, and unwillingness to share information, as well as everyday workloads and firm restructuring (Knight, 2018).

According to Kwayu et al., (2021) the creation, distribution, and sharing of information are all made possible by digital technology, such as social networking sites and digital platforms. As a result, businesses are using a wider range of digital technologies more holistically to improve knowledge exchange and facilitate efficient decision-making.

Ahmed et al., (2019) explained that technologies such as social media (Facebook, LinkedIn, Instagram, etc.) and digital platforms (weblogs, Zoom, Microsoft Teams, Skype, big data, and online resources) are altering how information is produced, shared, and dispersed in various contexts.

Kim (2020) made another noteworthy contribution by concentrating on how social settings influence individualism and collectivism attitudes, especially when it comes to information sharing among Korean workers. According to the study, people's intentions to share information were favorably impacted by perceived relationship tension and colleague support. These social circumstances have a major impact on knowledge-sharing behaviors in businesses by promoting the development of both individualistic and collectivistic mindsets. This highlights how crucial it is to cultivate positive interpersonal ties in the workplace to promote cooperative information exchange.

Bhatti et al. (2020) looked at how organizational social capital (OSC) affected employee creativity, specifically how knowledge sharing acted as a mediator and how job meaningfulness was moderated. Through knowledge-sharing practices, their research showed that organizational social capital might have a major impact on creative behaviors. Additionally, the study emphasized the crucial role that work meaningfulness plays in moderating this link, indicating that employees are more inclined to share information and promote an innovative corporate culture when they find their job meaningful.

Prevention of disease is always better than cure. A substance that stimulates the body to create antibodies is called a vaccination. A vaccine is a compound that is ingested into the body to treat or prevent disease caused by a specific pathogen, such as a virus, bacteria, or parasite. By triggering an immune reaction, the vaccine "teaches" the body how to defend itself against the disease. Vaccines are an essential component of the global health system, as demonstrated by the numerous nations where they have been successful in containing diseases with the help of vaccination Immunization is the procedure of using a vaccine to make a person resistant to infectious diseases. Immunization is one of the most crucial steps in protecting children from preventable, fatal infections (World Health Organization: WHO, 2019).

For caregivers of persons with Alzheimer's disease and similar dementias, in particular, Ruggiano et al. (2019) stress the need for efficient coordination and communication within networks of health and support services. Their study reveals a wide range of communication issues that caregivers encounter, including unclear information and a lack of assistance from medical professionals. The authors contend that improving the caring experience and, eventually, patient outcomes depend on removing these obstacles through better communication techniques. According to their findings, focused interventions may improve communication between medical staff and caretakers, creating a more encouraging atmosphere for everyone.

Song et al. (2020) stress the significance of data sharing for open science while preserving privacy and security in the field of medical data anonymization. They contend that medical practice, particularly vaccination techniques, might undergo a revolution with the integration of artificial intelligence and big data analysis. Researchers may create more precise prediction models for vaccination distribution and uptake by exchanging anonymized medical data, which will ultimately result in more effective public health responses. This study demonstrates how information exchange combined with cutting-edge technology may improve immunization programs' effectiveness.

One of the greatest advantages a nation can give its citizens is protection against diseases. It is undeniable that vaccinations are a crucial component of a health system, an efficient tool for managing diseases in many nations, and the most economical method of preventing morbidity and death that enables individuals to better protect themselves from specific bacteria and viruses. Children should obtain all of their recommended immunizations at the prescribed ages in order to have the best protection against diseases. Children’s growth will be better and improved if they are given the right immunizations, which would also greatly lower the costs of disease treatment and disease rates.

Parents' attitudes and degree of vaccination knowledge may have an impact on how they choose to vaccinate their children. Lack of knowledge or information about vaccinations, low levels of awareness or unfavorable attitudes about vaccinations, and fake beliefs or rumors about the dangers linked to vaccinations are major barriers to achieving high vaccination rates among children. Age, occupation, education level, and family type of the mother were common variables linked to increase knowledge and attitude. (Almutairi et al. 2021)

Statement of the Problem

The present study is being conducted to know the impact of knowledge sharing that why mothers hesitate to vaccinate their child. The research study emphasis to assess the vaccine knowledge, to know the information insufficiency, to determine the risk perception, to evaluate the systematic processing, to examine the information seeking and to identify the acceptance of vaccination among mothers in these areas. The purpose of this study is to explore the knowledge sharing about vaccination and current status of vaccination in rural areas of the District Layyah, South Punjab. The population is selected from rural areas of district Layyah to know the awareness and knowledge of vaccination amongst mothers.

Objectives of the study

The present study is being conducted to assess the childhood vaccine knowledge, knowledge insufficiency about childhood vaccination, knowledge for risk perception about childhood vaccine,

Knowledge seeking behavior about childhood vaccine, systemic knowledge processing about childhood vaccine in mothers and to evaluate the childhood vaccine acceptance among the mothers of rural areas in district Layyah.

Methodology

This study used a close-ended questionnaire to collect quantitative data from participants. After a comprehensive review of relevant research, a questionnaire draft was prepared. The present study consists of mothers from rural areas of District Layyah Punjab, Pakistan who have up to 5 years of age child/children. The population of the study belonged to the southern part of the province the present study is conducted in district Layyah. This district has three tehsils, namely tehsil Layyah, tehsil Karor Lal Eason and tehsil Chobara. Data were collected from the rural areas of these three tehsils namely Chak 170 tda, Chak 171 tda, Phar Pur Samandary, Dhori ada, Bkhri Ahmad khan, Ghaoon wala aara and Peer Juggy.

Data Analysis

Table 1

Demographic Data of the Respondents

Gender	**Frequency**	**Percentage**
Female	502	100%
Age of the respondents		
18-25	35	7.0%
26-30	80	15.9%
31-35	132	26.3%
41-45	133	26.5%
46 or above	122	24.3%
Occupation		
Farming	150	29.9%
Shop Keeping	154	30.7%
Bus driver	116	23.1%
Lands labor	65	12.9%
Carpenter	17	3.4%
Education		
illiterate and non-formal education	239	47.6%
Vocational school	153	30.5%
Elementary or junior high school	95	18.9%
Graduate school	15	3.0%

Family Income		
25000	161	32.1%
30000	50	10.0%
40000	125	24.9%
50000	166	33.1%
Total	502	100%

Family Information of the Respondents

The vast majority of those surveyed, 156 (31.1%) have four kids. Over 28% have five or more children, 105 (20.9%) have three, 91 (18.1%) have two, and only 08 (1.6%) have one. Most of the respondents have one girl among children 174 (34.7%), around 33% have 2 girls, 83 (16.5%) have three girls, 46 (9.2%) have four, 18 (3.6%) have five, and only 3(0.6%) of the respondents have six daughters. While 8 (1.6%) respondents have no girl. In the case of the total girls and boys, most of the respondents 177 (35.3%) have two boys, 174 (35.5) have one boy, 119 (23.7%) have three boys, 29 (5.8%) have four boys, 1 (0.1%) have five boys. In contrast, 2 (0.4%) of the respondents did not have any boys. Respondents asked about the age of their youngest child. Majority 262 (52.2%) reported that the age of their youngest child is between one and two years. About 32% of respondents reported age as around three to four years, and 52 (10.4%) reported as less than a year.

Table 2: Family Information of the respondents

Number of Children	**Frequency**	**Percentage**
1	8	1.6
2	91	18.1
3	105	20.9
4	156	31.1
5 or above	142	28.3
Number of Girls		
0	11	2.2
1	174	34.7
2	167	33.3
3	83	16.5
4	46	9.2
5	18	3.6
6	3	.6
Number of Boys		
0	2	.4
1	174	34.7
2	177	35.3
3	119	23.7
4	29	5.8
5	1	.2
Age of the youngest child		
Age group		
less than one year	52	10.4
between 1 and two years	262	52.2
between 3 and 4 years	160	31.9

Knowledge Insufficiency

The level of knowledge insufficiency were measure using a set of six statements reported in table below. Two of the statements received a mean score around 4 indicating that respondents were agree that they need information on childhood vaccination (M= 3.57, SD= .778) and they spend more time to get knowledge about childhood vaccination than others around them (M= 3.79, SD= .676). Rest of the statements received a mean score around 3 indicating that respondents were slightly agree that they require correct and exact information to judge the risks when children receive vaccination (M=

3.47, SD= .796) and need more information provided through multiple channels (for example hospital and government circulars) (M= 3.48, SD= .796). Respondents also mentioned that they need more information provided through social media (M= 3.44, SD= .768) and need more information provided by the hospital and government circular (M= 3.45, SD= .756).

Table 3

Knowledge Insufficiency

Statements	*Mean*	*Std. Deviation*
I need more information about childhood vaccine.	***3.57***	***.778***
I require correct and exact information to judge the risks when my children receive vaccinations.	***3.47***	***.796***
I need more information provided through multiple channels (for example hospital and government circulars).	***3.48***	***.796***
I need more information provided through social media.	***3.44***	***.768***
I need more information provided by the hospital and government circular.	***3.45***	***.756***
I spend more time to get knowledge about childhood vaccination than others around me.	***3.79***	***.676***

Risk Perception

Respondents were ask about their perceived level of risk perception about vaccination acceptance. Results of all six statement indicated that respondents were slightly agree on "I think my child should develop immunity by getting sick rather than getting a shot" (M= 3.16, SD= .758), I have delayed having my child vaccinated for reasons other than illness or allergy (M= 3.14, SD= .727), and "I do not think vaccines are needed since the diseases are rare" (M= 3.25, SD= .702). Furthermore, they were slightly agree "If I vaccinate my child, he may suffer from fever, typhoid etc" (M= 3.22, SD= .711), "If I vaccinate my child, he/she may have serious side effects" (M= 3.25, SD= .700), and "children receive too many vaccines" (M= 3.32, SD= .700).

Table 4

Risk Perception

Statements	*Mean*	*Std. Deviation*
I think my child should develop immunity by getting sick rather than getting a shot.	***3.16***	***.758***
I have delayed having my child vaccinated for reasons other than illness or allergy	***3.14***	***.727***
I do not think vaccines are needed since the diseases are rare.	***3.25***	***.702***
If I vaccinate my child, he may suffer from fever, typhoid etc.	***3.22***	***.711***
If I vaccinate my child, he/she may have serious side effects.	***3.25***	***.700***
Children receive too many vaccines.	***3.32***	***.700***

Systematic Processing

The systematic processing of vaccination acceptance measured using a set of six statements. About three statements respondents were agree that they try to make the connection between the information and children's safety (M= 3.50, SD= .691), "they spend more time getting knowledge than others around them (M= 3.53, SD= .722), and "they pay attention to the latest news of the vaccine crisis every day" (M= 3.80, SD= .661).

Table 5

Systematic Processing

Statements	*Mean*	*Std. Deviation*
I connect information to other information I have read or heard.	***3.49***	***.739***
I compare information to others.	***3.47***	***.716***
I consider the significance of the information.	***3.44***	***.691***
I try to make the connection between the information and children's safety.	***3.50***	***.691***
I spend more time getting knowledge than others around me.	***3.53***	***.722***
I pay attention to the latest news of the vaccine crisis every day.	***3.80***	***.661***

Knowledge Seeking

Respondents' practice of sharing vaccine knowledge was assessed using a set of six statements. Respondents were found to agree, "they search and share vaccine cost" (M= 3.65, SD= 1.135), they search and share vaccine content, (M= 3.71, SD= 1.157), they search and share for vaccine frequency (M= 3.50, SD= 1.163), and they search and share information from more available places (M= 3.56, SD= 1.110). However, respondents agreed slightly on "I search and share for vaccine injections" (M=

3.44, SD= 1.168) and "I want to search for and share much more information about the vaccine crisis" (M= 3.48, SD= 1.144).

Table 6

Knowledge Sharing

Statements	*Mean*	*Std. Deviation*
I search and share vaccine cost.	***3.65***	***1.135***
I search and share for vaccine content.	***3.71***	***1.157***
I search and share for vaccine frequency.	***3.50***	***1.163***
I search and share for vaccine injections.	***3.44***	***1.168***
I want to search for and share much more information about the vaccine crisis.	***3.48***	***1.144***
I search and share information from more available places.	***3.56***	***1.110***

Vaccination Knowledge

Respondents' level of knowledge sharing indicated that they agreed that "they try to find vaccine knowledge from relatives, friends, and neighbours" (M=3.47, SD=1.037) and "they try to find vaccine knowledge from television programs", (M= 3.57, SD= 1.012), and "seek vaccine knowledge from newspapers and magazines", (M= 3.67, SD= .958). Moreover, "seek vaccine knowledge from a radio program", (M= 3.64, SD= .904), "ask for vaccine knowledge from healthcare providers", (M= 3.69, SD= .881), and "read vaccine-related websites" (M= 3.74, SD= .862).

Table 7

Vaccination Knowledge

Statements	*Mean*	*Std. Deviation*
I try to find vaccine knowledge from relatives, friends, and neighbours.	***3.47***	***1.037***
I try to find vaccine knowledge from Television programs.	***3.57***	***1.012***
I seek vaccine knowledge from newspapers, Magazines,	***3.67***	***.958***
I seek vaccine knowledge from radio Programs.	***3.64***	***.904***
I ask for vaccine knowledge from healthcare providers.	***3.69***	***.881***
I read vaccine-related websites.	***3.74***	***.862***

Vaccine Acceptance

Lastly, the acceptance of vaccines among mothers in rural areas was measured using a set of six statements. All six statements received a mean score of around 4 demonstrating that respondents agreed on "they will say positive things about vaccination" (M= 2.55, SD= 1.153), "will continue to have my children vaccinated" (M= 3.68, SD= 1.267), "will encourage other parents to vaccinate their children" (M= 3.63, SD= 1.174), "believe vaccines are safe for my children" (M= 3.71, SD= 1.171). Furthermore "trust that vaccinations help increase my child's immune system" (M= 3.71, SD= 1.133), and "don't think a past event would stop me from getting a child vaccinated" (M= 3.68, SD= 1.267).

Table 8

Vaccine Acceptance

Statements	*Mean*	*Std. Deviation*
I'll say positive things about vaccination	***2.55***	***1.153***
I'll continue to have my children vaccinated	***2.68***	***1.267***
I'll encourage other parents to vaccinate their children	***2.63***	***1.174***
I believe vaccines are safe for my children	***2.71***	***1.171***
I trust that vaccinations help increase my child's immune system	***2.71***	***1.133***
I don't think a past event would stop me from getting a child vaccinated.	***2.68***	***1.267***

Problems relating to Knowledge sharing on Vaccination

A set of 13 statements were asked to the respondents about the challenges and issues faced during the knowledge-sharing process. All of the statements received a mean score ranging from 3.47 to 3.97 indicating that barriers exist. Problems identified were related to "**lack of attempts to improve the efficacy of vaccination" (M=3.97, SD=0.770), "economic problems" (M=3.96, SD=0.772), "fear of adverse events" (M=3.86, SD=0.803), "missed opportunities" (M=3.85, SD=0.801), "**logistic problems to reach clinics" **(M=3.85, SD=0.775),** "difficult vaccine storage and poor quality of management system" **(M=3.75, SD=0.809). Furthermore, "**lack of a system to collect and consolidate vaccination status of single individuals" **(M=3.74, SD=0.862), "**poor access to children's immunization records" **(M=3.69, SD=0.881),** "cost and lack of fair reimbursement (**M=3.69, SD=0.815),** "poor communications with parents and adolescents" (**M=3.67, SD=0.958), "**poor knowledge of immunization indications and contraindications" (**M=3.64, SD=0.904). Likewise,**

"problems in understanding the complex vaccination schedule" (**M=3.57, SD=1.012) and "**poor understanding of the real value of vaccines" (**M=3.47, SD=1.037).**

Problems **Table 9**	**Mean**	**Std. Deviation**
Lack of attempts to improve the efficacy of vaccination.	3.97	.770
Economic problems.	3.96	.772
Fear of adverse events.	3.86	.803
Missed opportunities.	3.85	.801
Logistic problems to reach clinics.	3.85	.775
Difficult vaccine storage and poor quality of management system.	3.75	.809
Lack of a system to collect and consolidate vaccination status of single individuals.	3.74	.862
Poor access to children's immunization records.	3.69	.881
Cost and lack of fair reimbursement.	3.69	.815
Poor communication with parents and adolescents.	3.67	.958
Poor knowledge of immunization indications and contraindications.	3.64	.904
Problems in understanding the complex vaccination schedule.	3.57	1.012
Poor understanding of the real value of vaccines.	3.47	1.037

Suggestion regarding vaccine acceptance

A set of 06 statements were asked to the respondents about the suggestions. All of the statements received a mean score ranging from 3.84 to 4.13 indicating that respondents were found agree that "To mitigate the issue, an effective and efficient vaccine infrastructure is essential**" (M=4.13, SD=0.686). Similarly "**The engagement of religious leaders, teachers, and influential community members is necessary to spread awareness and address misinformation about vaccination**" (M=4.03, SD=0.772), "**Healthcare centers should manage educational programs to guide parents on childhood vaccination.**" (M=3.97, SD=0.800). Furthermore, "**The government should play its role in raising awareness among parents in rural areas about child vaccination.**" (M=3.90, SD=0.803), and** "Setting up mobile vaccination units can provide information and easy access to vaccines" **(M=3.90, SD=.809), and "**Mass media should deliver a carefully crafted message to enhance public awareness of the benefits of childhood vaccination" (**M=3.84, SD=0.769).**

Suggestion regarding vaccine acceptance

Table 10

Suggestions	**Mean**	**Std. Deviation**
To mitigate the issue, an effective and efficient vaccine infrastructure is essential.	4.13	.686
The engagement of religious leaders, teachers, and influential community members is necessary to spread awareness and address misinformation about vaccination.	4.03	.772
Healthcare centers should manage educational programs to guide parents on childhood vaccination.	3.97	.800
The government should play its role in raising awareness among parents in rural areas about child vaccination.	3.90	.803
Setting up mobile vaccination units can provide information and easy access to vaccines.	3.90	.809
Mass media should deliver a carefully crafted message to enhance public awareness of the benefits of childhood vaccination.	3.84	.769

Discussion

This study is helpful for healthcare service providers to design effective strategies to fill communication gaps. . Community health workers and social gossip influence their opinions, which affects the general acceptance and uptake of vaccines (Dhaliwal et al., 2021).

Policymakers can design specific vaccine policies for rural areas. The study highlights the importance of a public awareness campaign to ensure vaccination acceptance and presents the opportunity for collaboration among local community welfare centers and religious leaders to eradicate vaccine hesitation in rural areas. The study addresses the need for effectively managing myths and fears relating to vaccination an also guides policymakers to utilize social media channels to broadcast messages of vaccination acceptance to the broader audience. The government and healthcare service provide need to strengthen the health infrastructure in rural areas. Public libraries in

rural areas need to play their part in eradicating misinformation about vaccine-relating knowledge among mothers. Public libraries can host community engagement programs for rural mothers and involve them in discussion sessions on vaccine acceptance.

Implementing structured communication methods allows doctors to interact with hesitant patients by directly addressing their worries and misconceptions (Adedokun & Idowu-Collins, 2024). Healthcare practitioners are considered as reliable sources of information, which is critical for overcoming parental vaccination reluctance (Lermytte et al., 2024).

Conclusion

The study highlights the influencing factors of vaccine acceptance among rural mothers in Punjab's District Layyah to accept vaccinations. It emphasizes how vaccine reluctance greatly influenced by knowledge gaps and risk perception, whereas acceptance is increased by knowledge exchange, methodical processing, and vaccination expertise. To overcome vaccination hesitancy in rural locations, the results highlight the critical need for community-driven educational programs, efficient risk communication, and enhanced healthcare accessibility. Policymakers and public health officials can increase vaccination rates and improve the health of children in underprivileged communities by putting in place focused awareness campaigns and encouraging confidence in medical professionals. To create more thorough immunization plans, future studies should examine more socioeconomic and policy-related aspects.

References

Adedokun, T. A., & Idowu-Collins, P. (2024). Communication strategies for healthcare providers to enhance vaccine discussions with vaccine-hesitant patients. *Interdisciplinary Journal of Sociality Studies*, *4*, 1-16.

Ahmed, Y. A., Ahmad, M. N., Ahmad, N., & Zakaria, N. H. (2019). Social Media for knowledge-sharing: A systematic literature review. *Telematics and Informatics*, *37*, 72–112. https://doi.org/10.1016/j.tele.2018.01.015

Almutairi, W. M., Alsharif, F., Khamis, F., Sallam, L. A., Sharif, L., Alsufyani, A., ... & Alqasimi, R. (2021). Assessment of mothers' knowledge, attitudes, and practices regarding childhood vaccination during the first five years of life in Saudi Arabia. *Nursing Reports*, *11*(3), 506-516.

Bhatti, S. H., Vorobyev, D., Zakariya, R., & Christofi, M. (2020). Social capital, knowledge sharing, work meaningfulness and creativity: evidence from the Pakistani pharmaceutical industry. *Journal of Intellectual Capital*, *22*(2), 243–259. https://doi.org/10.1108/jic-02-2020-0065

Hilleman, M. R. (2000). Vaccines in historic evolution and perspective: a narrative of vaccine discoveries. *Vaccine*, *18*(15), 1436-1447.

Kim, S. S. (2019). The effect of social contexts and formation of individualism–collectivism orientation on knowledge sharing intention: the case of workers in Korea. *Journal of Knowledge Management*, *24*(2), 196–215. https://doi.org/10.1108/jkm-06-2019-0284

Knight, H. (2018, December 21). *How different types of knowledge impact the growth of new firms*. Phys.org. https://phys.org/news/2

Kwayu, S., Abubakre, M., & Lal, B. (2021a). The influence of informal social media practices on knowledge sharing and work processes within organizations. *International Journal of Information Management*, *58*, 102280. https://doi.org/10.1016/j.ijinfomgt.2020.102280

Lermytte, E., Bracke, P., & Ceuterick, M. (2024). Healthcare Professionals' Discursive Constructions of Parental Vaccine Hesitancy: A Tale of Multiple Moralities. *Qualitative Health Research*, 10497323241245646.

Nuwarda, R. F., Ramzan, I., Weekes, L., & Kayser, V. (2022). Vaccine hesitancy: contemporary issues and historical background. *Vaccines*, *10*(10), 1595.

Ruggiano, N., Bangerter, L. R., Gruber, M., Luetke-Stahlman, H., Malley, K. a. O., & Wolff, J. L. (2019). STRENGTHENING DEMENTIA CAREGIVING NETWORKS WITH TECHNOLOGIES: INTERSECTIONS OF POLICY, RESEARCH, AND PRACTICE. *Innovation in Aging*, *3*(Supplement_1), S451–S452. https://doi.org/10.1093/geroni/igz038.1692

Song, C., Wang, Y., Li, W., Hu, B., Chen, G., Xia, P., ... & Liu, Y. (2020). Absence of 2019 novel coronavirus in semen and testes of COVID-19 patients. *Biology of reproduction*, *103*(1), 4-6.