Reasons for non-mask wearing during Covid-19 among non-mask wearers in Ireland

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Abstract

Despite the proven effectiveness of the health protective measure of wearing face masks during Covid-19, a minority of individuals within Ireland still refuse to do. This study answers the call for further research and understanding of the reasons and beliefs these individuals have about mask wearing, in order to better promote mask wearing in the future. A series of semi-structured interviews among 3 male and 2 female participants who refused to wear masks was conducted to discover and further explore the reasons that led to non-mask wearing. A thematic analysis of participants interviews generated four main themes: (i) Personal choice & perceived risk, (ii) Distrust & skepticism, (iii) A long road behind and ahead, (iv) The meaning of masks. Results of the study showed that belief in Covid-19 misinformation had the greatest effect on the choice to not wear a mask. The implications of belief in Covid-19 misinformation on mask wearing and potential action required to reduce spread of misinformation are discussed. Pandemic Fatigue as reason for those who had previously worn masks and not those who had never worn masks was discovered and further discussed.

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Introduction

"Masks are an effective tool in combatting the spread of Covid 19, but some people still resist wearing them" (Haischer et al., 2020). SARS-Cov-2 as of 17/11/2021 has resulted in over 255 million cases and 5 million deaths worldwide, with over 500,000 of these cases and over 5000 deaths in Ireland (worldometers.info).Thus far there are a proven methods for reducing and potentially halting the transmission of SARS CoV 2, excluding that of pharmaceutical methods such as vaccination of the populace, according to the World Health Organization's meta-analysis and systematic review of 172 studies on Covid 19 transmission. These included maintaining a physical of a minimum one meter from others, the usage of eye

protection, and critically the wearing of an N 95, surgical or 12–16-layer cotton mask, the wearing of which could result in a large reduction in risk of infection (Chu et al., 2020). Despite this evidence towards the usage of face masks by the public being greatly beneficial and their usage being encouraged by bodies such as the World Health Organisation (World Health Organisation[WHO], 2020), the European Centre for Disease Prevention and Control (European Centre for Disease Prevention and Control[EDCD], 2020) and the majority of countries encouraging or mandating their use(masks4all.com), there is still a subset of people who refuse to wear them (Haischer et al., 2020). The following literature review will discuss the current literature for non-mask usage by choice during covid 19, the social meanings and symbolism of masks during covid 19, the differences between eastern and western citizen's attitudes in regard to mask usage, and the current study's aims and rationale.

East and West Differences

In contrast to the West, some East Asian countries including Taiwan, Japan, China, and South Korea have seen near universal adoption and use of face masks and have consequently had better results in the management of Covid 19, with greater reductions in both case numbers, fatalities, and transmission rates (Prather et al., 2020). When compared to Western samples, Chinese samples exhibit significantly higher frequency of facemask wearing, stronger pro masking tendency and a more positive attitude towards face mask wearing (Zhao & Knobel, 2021). There are a number of reasons behind the widespread use and acceptance of mask wearing and the lack of refusal in these countries. Past experiences with respiratory pandemics and wearing masks (Bavel et al., 2020) such as the SARS outbreak in East Asia in 2002-2003(Wong, 2020) led to wider usage and acceptance of masks. In comparison in the West's most recent experience with respiratory pandemics and widespread mask wearing was the Spanish Flu in 1918 (Scerri and Grech, 2020). The rapid industrialisation of Eastern countries after World War Two caused lasting air pollution and

smog, negatively effecting respiratory health also made the population experienced with regular mask wearing prior to the SARS CoV 2 outbreak, which may have significantly contributed towards mask wearing (Yang, 2014). Influence from Taoism and its religious beliefs towards noxious wind or bad air intake into the body being the cause of many external diseases and illnesses is a centuries old belief, and is embedded deeply into these cultures (Flaskerund, 2020) and further contributes towards mask wearing.

A previous custom of mask wearing exists in East Asia, especially in Japan, from before the start of Covid (Yamagata, Teraguchi & Miura, 2020), resulting in mask wearing as a social norm, as a "collective courtesy to others" (Burgess & Horii, 2012), and as protecting others in an act of solidarity (Wong, 2020). However, such a custom and social norm for mask wearing does not exist in the western world outside of healthcare (Choi & Lee, 2021). Conformity to this social norm is a driving factor for the wearing of masks (Nakayachi, Ozaki, Shibata & Yokoi, 2020). Eastern countries having a "tight" culture, where social norms, such as mask wearing, are strict, with punishment for non-conformity to these norms (Bavel et al., 2020). This is supported by how Chinese citizens feel more perceived social pressure to wear masks in public (Zhao & Knobel, 2021) than citizens from the USA, a loose culture where social norms are weaker, and deviance is more permitted (Zhao & Knobel, 2021). The obligation towards others as part of a collectivist society may encourage Asian citizens to follow social norms over their own desires (Kitayama et al., 2018). Overall, Collectivism does predict mask wearing over Individualism (Lu, Jin & English, 2021).

Social Meaning and symbolism of Masks

Mask wearing has had symbolic importance throughout history back from Ancient Greek theatre to Ancient Roman funeral rites, to the plague doctors ubiquitous with the Black Death during medieval Europe, the advent of germ theory and scientific advancement, up to

the modern day Covid 19 pandemic (Ike, Bayerle, Logan & Parker, 2021). Historically and in the modern day, outside of pandemics, masks have been associated with dangerous social behaviour and criminal conduct to the extent of being illegalized as unlawful behaviour (BBC News China, 2019), Livni, 2020, Hackey, 2009). The Burka in Islam has led to face coverings being viewed as symbolic of Islamic influence and a method of self-identification, but in the predominantly Christian west led to face coverings being viewed as oppressive, anti-feminist, anti-equality and showing a lack of liberalisation and advancement(Ahmed, 2011, Choi & Lee, 2021).

In Covid 19 pandemic masks gained new meanings and symbolism to individuals. To many, wearing a mask became a symbol of one's commitment and personal responsibility towards protecting others around them, and doing their share in ending the pandemic (Timpka & Nyce, 2021, Betsch et al., 2020, Ike et al., 2021). Wearing a mask became a social contract, where wearing a mask was the morally correct behaviour to protect others (Korn, Böhm, Meier & Betsch, 2020)**.** Wearing a mask was symbolic of entering and following this social contract and also enabled easy self-identification (Kaplan, Vaccaro, Henning & Christov-Moore, 2021) Those who entered the contract were socially rewarded, and those who refused to wear a mask and join were treated with less warmth and generosity regardless of ingroup or outgroups status, effectively being punished (Korn et al., 2020). Mask wearers perceive other mask wearers as being more prosocial, and perceive greater warmth towards other frequent mask wearers, lending further credence to a social contract existing (Betsch et al., 2020).

To those who choose not to wear masks however, masks have a different meaning and symbolism. Some men view wearing masks as a sign of weakness or shame (Capraro & Barcelo, 2020), or as unmasculine (Palmer & Peterson, 2020). In the US the mask can be a symbol of perceived government overreach into an individual's life (Ike et al., 2020, Vuolo,

Kelly & Roscigno, 2020). Furthermore, in the USA where issues between mask wearing and not has become increasingly politicised between Democrats and Republicans, wearing, or not wearing a mask can often represent one's political affiliation and beliefs, and be used as a means of self-identification (Ike et al., 2020).

Non--mask usage

In terms of demographics, a quantitative cross sectional of explicit attitude measures for face mask wearing resulted in two demographics predicting opposition to face mask wearing: political conservatism and young age, and potentially to a lesser extent gender, specifically being male (Mallinas, Maner & Plant, 2021). However, Galasso et al (2020), rather than a potential difference, found an actual large gender difference, with males being less likely to comply with measures such as mask wearing, due to decreased perception of covid as a risk.

Psychological factors for choosing not to wear a mask are more numerous than demographic ones and can "differentially predict anti- and pro-mask attitudes over and above demographic factors" (Mallinas et al., 2021). As noted previously, risk perception is a factor in driving mask wearing, with lower perception resulting in lower mask wearing behaviour (Huynh, 2020). The symbolic meaning of masks covered previously, as a signs of shame and weakness, lacking masculinity, being a government overreach and as a political sign can also be reasons as for why an individual may eschew wearing a mask. A literature review of mask wearing and stigma during covid 19 concluded that anticipated stigma if an individual wore a mask and perceived stigma while wearing a mask can lead to not wearing masks (Calvo, 2021). Distrust of medical science and the science community as a whole is associated with and predicts anti-mask beliefs (Kaplan et al., 2021, Mahalik, Bianca & Harris, 2021) A longitudinal and cross-sectional quantitative study showed misinformation about Covid 19,

which included misinformation about the necessity of masks, is negatively associated with mask wearing behaviours, albeit to a lesser extent than beliefs about the consequences of mask wearing (Hornik et al., 2021). A qualitative thematic analysis of tweets in the USA identified main concerns for choosing to wear a mask as the physical discomfort of wearing masks, the belief that masks were ineffective in halting transmission, belief that masks were only useful for the already infected, political beliefs about mask wearing and finally that covid was not a serious threat (He et al., 2021).

High Psychological Reactance is associated with and predicts non mask wearing and anti-mask attitudes (Taylor & Asmundson, 2021, Calvo, 2021, Mallinas et al., 2021). Psychological Reactance Theory suggests that when an individual perceives their freedom of behaviour or control is under threat from rules, regulations or persuasion, they have a psychological reactance, a motivation to assert their freedom and reject the perceived threat (Rosenburg & Siegel, 2018, Rains, 2012). In practice this results in an intensification or "doubling down" in the original behaviour of not wearing a mask, and can result in denying the need for mask wearing as a necessity.

A study of 29 PhD students and PhD graduates by Martinelli et al. (2020) included a thematic analysis of the participants decision to wear, or not to wear masks. From their data the authors identified four themes behind this decision. These themes were (1) An individual's personal perception of risk of getting infected, or of infecting others (2) individuals' unique interpretation of responsibility to society and solidarity with others, (3) "cultural traditions and religious imprinting" and (4) "the need of expressing self-identity" including both political and personal expression. However, there was a key issue with this study. From among the 29 participants only one had made the decision to not wear a mask, and the nature of the written interview did not allow for further probing or questioning of the participant's reasoning for this decision. The results also show a lack of generalizability, even

for qualitative research, due to the target sample being comprised of only highly educated individuals. While the study adequately explains reasons for wearing a mask during covid, it fails to explain or investigate any further reasons why individuals do not wear masks.

As the evidence so far has shown, there is a vital need for universal mask usage to halt or slow Covid 19, but a minority who refuse to take this protective measure for little known and little researched reasons. However, the differences between Eastern and Western cultures, experiences and attitudes with mask wearing are starkly different as evidenced in this literature review, and thus different measures to promote mask wearing will be required between eastern and western countries (Zhao & Knobel, 2021). Thus, the current study will seek to understand and investigate the reasons why this minority in Ireland choose not to wear masks, answering Martinelli's (2020) call to improve and better the understanding of citizens behaviours and attitudes around mask wearing for more effective health communication

The study will build upon Martinelli et al.'s study (2020) with several differences. This study will instead utilise a sample of only those who have chosen to not wear masks in order to investigate this phenomenon to its fullest extent, given the previous research focused mostly upon the reasons of those who do wear masks. In order to gain a more detailed narrative for the study and more themes and reasonings, instead of written interviews live semi structured interviews will be conducted, with a new interview schedule with further questions focused solely on the experience of not wearing a mask. This study will provide clarity as to the reasons why this subset of people chooses not to use this easy preventative measure, and the experiences that contributed to this decision. This in turn will better enable policy makers and health officials to better communicate and convey the benefits of mask usage among this population, by appealing directly to their reasons and knowing them. This

vital endeavour will help reduce the transmission of covid 19 among this group and healthy individuals they encounter, bringing this deadly pandemic to a swifter conclusion.

Methods

Participants/Sampling

Participants were recruited online via purposive and snowball sampling. Purposive sampling was utilised due to its ability to identify and select the most information rich participants who will contribute the most towards data saturation (Etikan, Musa & Alkassim, 2016). Snowball sampling supplemented purposive sampling due to its ability to recruit hard-to-reach populations who may have stigmatised views (Parker, Scott & Geddes, 2019), in this instance views related to mask wearing. Advertisement posters (Appendix A) were posted on the researcher's personal social media accounts on both Facebook and Instagram due to ease of access to individuals and the prevalence of Covid-19 misinformation spread on social media (Cinelli et al., 2020). Potential Participants were provided an information sheet, basic demographic questionnaire and an informed consent form via a link available in the advertisement post. Once all forms were completed, participants were provided with the interview schedule, a contact number and email for the researcher, and a proposed time for an online interview. The exclusion criteria for involvement in the study were individuals with a medical exemption from mask wearing, under the age of 18, over the age of 85, or belonging to a vulnerable group as outlined in the NCI Human Participation Ethics. Inclusion criteria for the study included self-reporting or self-identifying as an individual who chooses not to wear a mask during Covid-19, currently lives in Ireland, and has a device capable of internet interviewing over Zoom.

7 individuals expressed interest in participating in the study and met the inclusion criteria. The final sample consisted of 5 participants, due to individuals expressing concerns over the potential leaking of identifiable data from interviews, and distrust of how the study would display results. 4 participants were recruited from the advertisement post, and one participant on recommendation from another participant. The final sample consisted of 3 women and 2 men. Participant's age ranged from 23 to 57 (M = 34.2, SD = 13.18), with 4 participants identifying as Irish and one as Chinese. The highest level of education for participants was a bachelor's degree (n = 1) and Leaving Cert Certificate or equivalent (n = 4). It is important to note that one participants interview took place in person rather than over zoom.

Study Design

This study's research design and methodology was of a qualitative nature. The reasons for choosing to not wear a mask during Covid-19 is an area that requires more research (Martinelli et al., 2020) and has no research on reasons specific to those living in Ireland. Qualitative methods and designs excel in initial or exploratory research in understudied areas (Sofaer, 1999) and thus is ideal for this study. Semi-structured interviews will be used to enable flexibility in participants answers and to open the possibilities for potentially relevant data that a structured interview may otherwise not have discovered.

Materials/Apparatus

Zoom Meetings software was used to both host and create audio recordings for 4 of the participants interviews. The fifth participant's interview took place in-person, and an audio recording app on the researchers Samsung Galaxy 8 phone was used to audio record this interview. Transcriptions of the audio recordings were made using Otter.ai (https://otter.ai/), an online transcription service. The Social media websites Facebook and

Instagram were used to display adverts for the study (Appendix A). Google forms hosted the study's Information Sheet (Appendix B), Demographics questionnaire (Appendix E) and Informed Consent Form (Appendix C). A Debriefing Sheet for participants was included (Appendix D). An interview schedule consisting of 12 questions about participants thoughts and experiences in relation to mask wearing was designed by the researcher in accordance with Agee's (2009) process for developing qualitative questions. The full interview schedule is in the Appendix (see Appendix F).

Ethical Consideration

This study was ethically approved by the National College of Ireland's Psychology Ethics Review Committee and adhered to the NCI Ethical Guidelines for Research with Human Participants and the PSI Ethical Guidelines for Research in Psychology.

Informed consent was created with all potential participants in the study to ensure participants understood what involvement would mean for them, and to prevent coercion into the study. Participants were informed of all potentially stressful questions prior to the interview via email and were provided a number of helplines in case of distress, were offered a 10-minute break or complete stop to the interview after questions and were reminded of their ability to withdraw from the study at any time as stated in their informed consent. This was reiterated verbally the day of the interview. Post interview, participants received a verbal debriefing and a debriefing sheet from the researcher.

In accordance with the PSI Ethical Guidelines for Research in Psychology, a pilot study was conducted due to the interview schedule being untested. No distress was caused to the pilot study participant, so the study continued.

To ensure the confidentiality and anonymity of participants, transcripts had all potentially identifiable information changed or transformed. Once transcriptions were completed, the original audio recordings were destroyed. Each fully anonymized transcript was assigned a unique number ID, encrypted and then password protected. These transcripts were kept in a PC in a locked room, to which only the researcher had access. Copies of their informed consent forms were offered to each participant, while the original was encrypted, password protected and stored on the researchers PC. Informed Consent Forms and Transcripts are to be destroyed after a 5-year period in accordance with the NCI Data Retention Policy.

Data Collection

Data collection took place over a two-month period, December 2021 to January 2022. A single pilot study interview was conducted in line with ethical guidelines, with satisfactory validity and no participant distress. Pilot study results were not included in the study. Data collection consisted of 5 semi structured interviews between the participant and the researcher, and a short demographic questionnaire prior to the interviews (see Appendix E). Demographic data collected included Nationality, age, gender, and highest level of education. 4 interviews took place online on Zoom and 1 interview in person at the participants behest. The interview schedule can be viewed in the Appendices (see Appendix F). Interviews lasted approximately 20-60 minutes and were transcribed verbatim.

Data Analysis

The data in this study was analysed using Braun and Clarke's (2006) Thematic Analysis. An inductive approach was taken for this thematic analysis in order to generate the most amount of data relevant to the research aim as possible. The epistemological approach for the data analysis and coding in this study was essentialist/realist. This essentialist

approach lent towards the data being primarily identified on the semantic level (Braun & Clarke, 2006). Thematic Analysis occurs in six phases. First, the researcher familiarised themselves with the collected data via verbatim transcription and repeated reading of transcripts. Codes were generated by analysing and extracting data relevant to the research question from the created transcripts. These codes were then grouped into themes and sub-themes that were relevant to answering the research aim. Themes and sub-themes were further analysed and refined until each theme was both distinct from other themes and representative of its codes. This process continued until data saturation was achieved, meaning no more distinct themes could be created, and all unique codes had been extracted from the data (Saunders et al., 2018).

Study Procedure

Potential participants upon seeing the online advertising posts (See Appendix A) would follow a link embedded in the advertisement to a form containing the study's information sheet (See Appendix B), informed consent form (See Appendix C) and demographic questionnaire (See Appendix E). Upon signing the informed consent form and completing the demographic questionnaire, participants were emailed the interview schedule and the time and invitation key for their online Zoom interview.

Prior to the interview beginning, participants in the zoom call were reminded of their right to withdraw and/or to take a break during the interview and were given the opportunity to ask any further questions. Participants were reminded that audio from the interview would be recorded, reiterated their consent, and then the interviews began using the interview schedule (see Appendix F). These interviews lasted approximately 20-60 minutes.

Participants were emailed a debriefing sheet (See Appendix D) and were provided a full verbal debriefing. This included their right to withdraw until the anonymization of data, a

number of mental health helplines in case of distress as a result of the interview, reminders of how their data would be handled, reminders on who to contact should they wish to withdraw or had further questions, a recap on the aims and goals of the study, and a word of thanks for their participation in the study. One interview took place in-person within the participants home, all factors remained consistent with online interviews with the exception of a physical debriefing sheet being provided rather than digital, and audio being recorded using Samsung Voice Recorder app rather than Zoom.

Results

Conducting a thematic analysis (Braun & Clarke, 2006) of the interview transcripts resulted in the creation of four salient themes, each illustrating potential reasons for non-mask wearing in Ireland. These themes are: (i) Personal choice and perceived risk, (ii) Distrust and scepticism, (iii) A long road behind and ahead, (iv) The meaning of masks. Themes possesses further subthemes, which will be discussed in the context of each overarching theme.

Personal Choice and Perceived Risk

A common thread interwoven throughout all participants was a low perception of Covid-19 as a risk. Participants consistently understated potential adverse health effects and outcomes of contracting Covid-19, and often held the belief that they themselves would never contract a serious case of Covid-19. This was best indicated by one participant,

> At this point [Covid-19] may as well just be like a flue…it's like I get it and then what? Oh no I get paid to take a couple days off work to sit and relax and maybe feel a little sick during it? It's not exactly the end of the world like it got made out to be. (Participant 2)

Justifications for Covid-19 being a low risk, and thus making health measures unnecessary were willingly volunteered by participants throughout interviews. These were often delivered in the form of anecdotes, stories, and personal experiences of friends, family members or themselves previously contracting Covid-19 and then experiencing little to no adverse effects. A participant recalled,

> I know [Covid-19] isn't that serious…I've had it myself and know others who got it too and we're all fine… yeah there might be some people who need to wear [face masks], cancer patients and the like, but the rest of us don't need [face masks] (Participant 3)

Personal choice was a strong factor that emerged as a reason for choosing not to wear a mask. Participant's perception of choosing to wear a mask or not was that it would only affect themselves and thus mask wearing ought to be a "personal choice… something I should decide". A participant spoke further how such a choice would only affect the person choosing,

> If I did wear a mask one day what would actually change? Let me tell you, nothing. It'd still all be the exact same except I'd have that shit on my face… do you see what I mean here? Exact same thing. (Participant 1)

There was a feeling of frustration and to a lesser extent anger at mask wearing mandates among the participants. Mask mandates were perceived as an attempt to take away the participants personal choice, which often drove them to choose the opposite of what had been forced upon them in a display of psychological reactance. As evidenced by Participant 5,

> They can go ahead and try to make us [wear a face mask] but it won't work… it never has, and it never will… its my body and my choice, and I won't let them force anything on to me or on to my family without our say-so. (Participant 5)

Distrust and Scepticism

This theme captures how participants placed their trust in the pandemic and who and what information they chose to believe. Participants maintained a strong distrust of healthcare practitioners, healthcare, and pharmaceutical companies, and in particular figures of authority in the Irish government, with this suspicion being a reason for noncompliance with mask wearing.

Inherently intertwined throughout all other overarching themes that is especially relevant to this theme is belief in covid misinformation. Nearly all participants believed in misinformation about Covid-19 and mask wearing to some degree. Among participants beliefs differed "It's no worse than a flu", another participant stated "[face masks] trap all the diseases inside them…its not healthy", with the most common belief being that face masks were ineffective at reducing or preventing transmission of Covid-19. For one participant their beliefs strayed from beyond incorrect or non-factual information about Covid-19 and the role of masks, and closer to conspiracy, with this participant suggesting,

> [face masks] don't actually protect you or help you or anything… they're a tool to control you, they're meant to make everyone feel all happy and safe so the government can do whatever they want, and none of you are going to stop them except us. (Participant 5)

The majority of participants spoke negatively of modern healthcare practices and of healthcare practitioners, highlighted in the distrust, suspicion, and disbelief they had for modern medicine and its facilities. Participants maintained a preference and much greater level of trust for what they perceived as natural medicine over modern pharmaceutical drugs "…we try our best to only use natural…you don't know what's in other stuff, it could be literally anything for all we know…we're not going to take that chance". This distrust of modern medicine over natural remedies further extended towards public health measures, which also included mask wearing.

> Like we have immune systems for a reason, humans have survived for thousands of years without needing anything else…things like the black plague all these other diseases, but for some reason its this one that we suddenly have to destroy our way of life and do all this extra stuff for? I call bullshit on that (Participant 1).

One participant described their negative previous experiences with Irish healthcare and modern medicine when her daughter was diagnosed with cancer, an experience which led to her greatly distrusting medical practices and medical advice,

> If I had listened to what the doctors were saying to do back then, [daughter's name] would have lost her arm. Can you even imagine being 12 and that happening to you? Your arm just gone, and your dreams with it… now the same people want us to go and get the jab, wear a mask, do all this stuff *disbelieving laughter*… the doctors don't always know best (Participant 4).

The data illustrated a similar level of scepticism and distrust in participants towards governmental figures of authority and those associated with them, especially the Chief

Medical Officer of Ireland Tony Holohan and the National Public Health Emergency Team for Covid-19. Participants spoke of their unwillingness to comply with or to trust the advice of these government figures "if Tony Holohan said tomorrow, it was safe, that's when I'd worry". Participant's distrust was further indicated in the concern that these figures and organisations had an ulterior motive for creating a mask mandate,

> There has to be another reason for all this. The masks don't do anything but they're still trying to make everyone wear them, so what we need to do is find out why that is. I've heard some reasons already, and if they're true its gonna be an uproar when everyone finds out (Participant 1).

A Long Road Behind and Ahead

Covid-19 in Ireland has been ongoing for 2 years, and mask wearing mandates have been in place in for just under 16 months. This theme deals primarily with Participant 2 and 3 who wore face masks for at least one month at the beginning of mask mandates. For these two participants, Covid-19 has been a long grinding process with no foreseeable end in sight, a situation which slowly eroded their willingness to wear face masks away.

Participant 2 described how their long experiences with Covid-19 and subsequent lockdowns had affected them. They had developed a sense of apathy and numbness about Covid-19, feeling unable to adapt to the radical lifestyle restrictions and could no longer care enough about the situation to take any preventative action. They described how they felt about the situation,

> It got to a point where I just can't find it in me to care enough about it anymore… its been so long trapped inside, barely allowed to see my friends or go out for a proper

> night on the town or anything… I feel kind of numb at this point, if I get Covid I get Covid (Participant 2)

Hopelessness was a key factor in the two participants decision to stop wearing masks partway through the mandate. Neither participant could see an end to the Covid-19 pandemic nor its restrictions, and repeated extensions of deadline restrictions took their toll until little to no hope of restrictions being lifted and life returning to normal was left. A feeling of futility set in as they came to a realisation that restrictions may never end. The participant disclosed how choosing to no longer wear a mask or follow restrictions let them see the "light at the end of the tunnel", counteracting their sense of futility and giving them a semblance of the return to normalcy they wished for,

> "if this is how its going to be with covid, where you cant have a life or do anything because of the restrictions, to me that's not really having a life at all. I may as well be dead already…I'm not going to live my life in fear of covid anymore than I have to (Participant 3).

The Meaning of Masks

The fourth final theme created from the analysis of the data is that of the meaning of masks. This theme encompasses the various negative connotations and qualities the participants had associated with face masks and with individuals who wear face masks that hindered or prevented the participants willingness to wear face masks themselves

While all of the participants involved in the study spoke of their unwillingness to wear a mask during Covid-19 at the time of the interview, not all participants had worn a face mask before. Three participants who had worn a mask before spoke about fears of physical discomfort while wearing a face mask as potential impediments to mask compliance,

> It was so hot and sweaty underneath it I felt like I could barely catch a breath through the fabric. It was tight and restrictive to the level of being claustrophobic…it fogged up my glasses so I couldn't see anymore, and when I took it off it had left a red mark around my face…I didn't wear it again (Participant 4).

Another participant spoke to how the physical discomfort of mask wearing at their job had become untenable to them "Working in the restaurant the heat becomes unbearable, and a mask would make that worse".

Participants also spoke of their perception of masks when they were being worn by other individuals, highlighting a potential fear of being viewed similarly if they were to wear a mask in public. Four participants felt there was a significant difference between themselves and those who did wear masks. These participants main perceived differences were that those who did wear masks did not "think for themselves" as they did and were more inclined to "follow orders and do what they were told", both of which were perceived as negative traits. As one participant succinctly put,

> There's a difference…like between the two of us you know which one is just going to do whatever the government tells them to do no questions asked, they're not going to stop and question it or do their own research to find out, they'll just follow along like sheep" (Participant 5)

A gender specific difference in mask wearing perceptions also existed among the participants. Specific to the male participants, individuals wearing masks were perceived as either unmasculine, weak or effeminate. While specific to the male participants, not all male participants held this view. One who did subscribe to this viewpoint stated that,

Its not something an actual man would do…who'd be able to look at themselves with that on and still have any dignity…guys are meant to laugh at that kind of shit, that's just what guys do, but now you get all these types who go around wearing that pussy shit (Participant 1).

Reassurance and reinforcement of their beliefs from others who shared similar beliefs about masks was important to the participants. Throughout their interviews, participants mentioned groups of other likeminded individuals they came into contact with as a result of their beliefs about mask wearing. The actions and opinions of other non-mask wearers effected the participants confidence and willingness to forgo wearing masks "if everyone else around me doesn't wear a mask, why should I?" Online groups have a similar effect,

> Yeah for a little bit at the start… having others to talk to who understand everything I'm going through and are in the same boat as me really helps… a lot of people won't listen and talk about it or don't know the truth, so having others out there who do understand is a huge comfort (Participant 5).

Discussion

This qualitative study was conducted with the aim to discover the reasons that individuals had for choosing to not wear facemasks during the Covid-19 pandemic in Ireland. A thematic analysis of participants semi-structured interview transcripts was conducted, and four key themes were created: (i) Personal choice and perceived risk, (ii) Distrust and scepticism, (iii) A long road behind and ahead, (iv) Perception of masks and who wears them.

In the theme of Personal choice and perceived risk, the participants perception of Covid-19 as a potential health risk differed from that of leading health authorities in Ireland.

The participants perceived Covid-19 as of little to no relative risk towards themselves or towards society as a whole, and consequently they doubted the necessity of aversely affecting their lives by following public health measures including mask wearing. A decreased risk perception resulting in decreased mask wearing during Covid-19 is consistent with previous literature (Macintyre et al., 2021, Schneider et al., 2021). Participants low risk perception may partly arise from how significant of an effect Covid-19 has had on the lives of their close friends and family members. This was revealed by participants consistently referring to friends and family members contracting Covid-19 with little or no adverse health effects as evidence when claiming Covid-19 was of little danger or risk, over any other factors or individuals. A second possible explanation is risk compensation (Luckman et al., 2021), that participants perceive not wearing a mask as low risk, due to engaging in another risk reducing activity in socially distancing, and thus do not engage in mask wearing. A strong belief in personal choice and psychological reactance to mask mandates as obstacles to mask wearing has been replicated previously (Taylor & Asmundson, 2021). Further research is required to determine if the high vaccination rates among the general populace in Ireland have effected individuals risk compensation and resulted in reduced mask wearing.

Distrust and scepticism were a significant theme in the course of the study. Of significant interest is participants belief in Covid-19 misinformation. Participants believed in, promoted, and received misinformation in relation to both Covid-19 and public health measures among likeminded peers on social media. The main finding of this theme was that misinformation about the role and the lack of effectiveness of mask wearing was rife among those who choose not to wear a mask, resulting in the participants refusing to wear equipment they believed to be ineffectual or harmful. Similar findings of Covid-19 misinformation negatively affecting individuals mask wearing behaviours has been mirrored in other studies (Barua, Barua, Aktar, Kabir & Li, 2020). Belief in Covid-19 misinformation often polarises

individuals, reinforcing their beliefs and leading to conspiracy (Smith, Blastland & Munafo, 2020), which was corroborated by participants describing conspiracies related to masks, such as masks being "tools of control" and paranoia of governmental and healthcare authorities. Each participant possessed multiple incorrect beliefs surrounding mask wearing and Covid-19, a finding that was replicated by Wang et al's (2021) discovery that increased false beliefs about mask wearing has a negative effect on mask wearing behaviour. Future research is required to ascertain whether certain covid misinformation beliefs have a greater negative effect on mask wearing than other beliefs. Targeting and re-educating these beliefs may lead to a reduction in non-mask wearing, making knowledge about which belief has the greatest impact important.

A long road behind and ahead was a theme that exclusively addressed participants who had worn masks at the beginning of mask mandates and made the decision to not wear masks thereafter. The main findings for this theme are how apathy, fatigue and futility effects mask wearing behaviour, regardless of initial mask wearing intention. For the participants, their experience of Covid-19 had been a long and fatiguing journey, whittling away at their motivation and determination until their predominant feelings were of fatigue and apathy for the situation they were, and futility and hopelessness for a return to normal in their future. The participants were self-aware of how this fatigue had affected them, but nonetheless felt powerless to resist its effects, even harbouring regret over their own perceived weakness for said powerlessness. No longer able to care about potential consequences, the participants reverted the behaviour change of mask wearing back to their previous behaviour. The feelings described by the participants and their consequent effects may be attributable to the concept of Pandemic Fatigue, a phenomenon wherein adherence to, and motivation for recommended health-protective measures decrease due to distress and exhaustion caused as a result of Covid-19 (World Health Organisation, Regional office for Europe, 2020). The

existence of Pandemic fatigue and of its effects is a disputed topic (Lilleholt, Zettler, Betsch & Böhm, 2020, Michie, West & Harvey, 2020, Reicher & Drury, 2021, Petherick et al., 2021), to which this study contributes further evidence to Pandemic Fatigue's existence. Future research to confirm or deny the existence of Pandemic Fatigue is required, due to the potential public health risks if this phenomenon is reducing adherence to health-protective measures.

Finally, the theme The meaning of masks, is the most diverse theme to have been created in the course of this study. This theme explored the opinions, associations, and beliefs the participants held about both masks, and about the people who wore them. To the participants, masks were perceived as being symbolic with a number of negative meanings, contributing towards their hesitancy to wear them. Masks were perceived as a physical manifestation of what individuals believed, a symbol of governmental oppression and control, and an indicator of those that were with them in their in-group, and those who were against them as an outgroup. These findings overlap with previous research into the meaning of face masks and their symbolic value among those who choose not to wear masks (Martin & Vanderslott, 2021, Powdthavee, Riyanto, Wong, Yeo & Chan, 2021). Similarly, fears and experiences of facemasks being uncomfortable as mentioned by participants have been documented as a preventative factor for mask wearing (Esmaeilzadeh, 2022). In regards to perception of individuals who wear masks, the finding of a male specific perception of mask wearing individuals being weak or unmasculine matches previous research (Padun, Belova & Nestik, 2021, Capraro & Barcelo, 2020). We hypothesise the actions and opinions of other non-mask wearers the participants were in contact with and often looked to for understanding, are reinforcing the participants choice to not wear masks via conformity. Conformity has been hypothesised to affect the choice to not wear masks previously

(Woodcock & Schultz, 2021), but further research would be required to confirm this hypothesis.

Strengths and Limitations

The major limitation of this study was its relatively small sample size. Studies show that data saturation in thematic analysis generally occurs within 8 (Eynon et al., 2016) or 12 interviews (Guest et al., 2006), however the study's sample size was 5. The target samples overall distrust of science and healthcare made recruitment a challenging prospect, with potential participants citing distrust over whether results of the study would be portrayed fairly and accurately and fears of being doxed by the researcher, i.e., having their details deliberately leaked online by the researcher as reasons for choosing not to take part in the study. Subsequently this led to a self-selection bias, where those most distrustful of science refused to take part in the study. However, this had a surprising benefit: the participants who did take part in the study were of an excellent quality, willing to freely volunteer relevant information, possessing strong opinions on related topics and being favourable to prompts, providing the study with singularly rich data despite the limited sample size. Thus, despite the difficulty in recruitment and sampling, the study retained its original target population and vision, lending significant strength to the study.

The final limitation to the study was an announcement to the end of mask wearing in Ireland outside of medical settings on 28/02/2022. As the study is cross sectional in nature, and the announcement occurred after collection and analysis of data, the study's results are unaffected. This announcement may affect the current relevancy of the implications arising

from this study. However, as new Covid-19 mutations continue to sweep Europe and Ireland, the reintroduction of mask wearing, and other health protective measures is a distinct possibility. In this scenario, the results and implications from this study will once again become relevant in combatting the decision to not wear a mask to protect others.

Clinical Implications and Future Direction

The current findings emphasise that there is no singular reason in what causes an individual to choose to ignore public health measures and mandates and choose not to wear a mask. However, belief in Covid-19 misinformation is a fundamental factor in the decision to not wear a mask and is elemental to two of the four major themes noted by this study, showing its importance in making this decision. The finding of the study suggests that in order to prevent individuals refusing to wear masks, prioritising the prevention, and spreading of Covid-19 misinformation is key. The participants received and spread the majority of their Covid-19 misinformation on social media. A number of methods for reducing the spread of Covid-19 misinformation on social media exist, including penalising automated dissemination software (Ayers et al., 2021), health literacy, machine learning (Naeem & Boulos, 2021) and journalistic factchecks (Kreps & Kriner, 2022). Implementation of some of these methods would both reduce Covid-19 misinformation online and reduce growth in those who choose not to wear masks.

The results of the study also imply that in the decision to not wear a mask the majority of reasonings remain consistent across different Western countries, such as lowered risk perception and believing in Covid-19 misinformation. Some reasonings appear to be exclusive to, or exert a much greater influence in the US, specifically the politicisation of mask wearing (Kahane, 2021), however politicisation had no effect in Ireland, the

geographically closest European country to the US. This would imply that in countries high in politicisation, politicisation may exert greater influence on the choice to not wear masks than the reasons found by this study, and thus any intervention that would be applicable to Ireland would not apply. Therefore, any intervention for reducing non mask wearing should focus on mutually reasons such as risk perception in order to have a more universal outreach.

Further studies based on this research have a number of directions to choose from. One such direction would be separating individuals who had previously worn masks before choosing not and exploring the effects of Pandemic Fatigue in a longitudinal study. Another direction would be to examine the effects of being vaccinated on mask wearing through the lens of risk compensation. In developing the current study further, increasing the sample size, introducing quantitative methods and gathering more detailed demographic information would allow for a more robust analysis of a greater amount of data, which would be of great benefit in discovering further themes.

In conclusion, the current study fulfils Martinelli et al's (2020) call for further research into the attitudes around mask wearing in order to better health advice, contributing to the more limited qualitative literature for reasons to not wear masks during Covid-19, among a unique Irish sample. Four themes were created from the data: (i) Personal choice and perceived risk, (ii) Distrust and scepticism, (iii) A long road behind and ahead, (iv) The meaning of masks. Findings from the study showed how the decision to not wear a mask during Covid-19 had no singular reason, but how belief in Covid-19 misinformation was the most influential factor in this decision. Combatting Covid-19 misinformation should be considered key when attempting to promote mask wearing behaviours in Ireland.

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Appendices

Appendix A – Advertisement Poster

Appendix B – Information Sheet

Reasons for non-mask wearing during Covid-19 among non-mask wearers in ireland

This document is an invitation to take part in a student research study. To see what the study is about, and to decide if you would like to participate, please read this document in its entirety. Once read, if you have any further questions about the study or information provided, or you would like to participate in the study, please don't hesitate to contact me, the student researcher, using the details at the bottom of the document.

The Study

I am a final year student in BA Psychology at the National College of Ireland. As part of my undergraduate degree, I have to conduct an independent research project. My project will consist of a short interview with people who identify as choosing not wearing masks during COVID-19, with the interview seeking to understand the reasons behind the decision to not wear a mask and to explore your experiences of not wearing one.

What will taking part involve for me?

If you choose to take part, you will be required to complete an informed consent form online as well as complete a 1 to 1 interview over Zoom Meetings/Microsoft Teams with the student researcher, lasting approximately 30-60 minutes. The audio from this interview will be recorded. A ten-minute break during the interview will be available, if required. A time and date for this interview will be created at your convenience. The interview content will cover your experiences with not wearing masks, and your reasons behind choosing not to. You will be provided a copy of the interview schedule in advance, to avoid any surprise questions.

Can I Take Part?

Anyone currently living in Ireland above the age of 18 and below 80 who identifies as not wearing a mask during COVID-19 may take part in this study. However, we kindly ask those with a medical exemption to mask wearing to not apply to take part in this study. Medical proof of exemption will NOT be required or asked for. Either Zoom Meetings or Microsoft Teams will be used for the interview, so a device with an internet connection and an email account will be required.

Do I have to take part?

Participation in this study is completely voluntary, meaning you do not have to take part and there will be no consequence for not taking part. You may withdraw from this interview and the study at any time prior to the de-identification of your data, with no penalty. To do so, contact the student researcher or their supervisor.

Risks and Benefits

There are no direct benefits for participants in taking part in this study. However, you will be giving the student researcher the opportunity to both complete their undergraduate degree, further their education, and further the field of psychology. Additionally, this is your chance to have your voice and opinion be heard and understood by the wider scientific community on this issue.

Minor distress from questions asked during the interview is a small possibility for participants. If this does occur, you will be provided several helplines, as well as be able to take a 10-minute break during the interview. You will also be able to end the interview at any time.

Confidentiality and Data

An audio recording of the Zoom Interview/Microsoft Teams interview will be created by the student researcher and be only accessible by them. Audio recordings will be transcribed by the student researcher and the original audio recordings destroyed. Transcriptions will be kept confidential and be stored electronically, encrypted with password protection, and assigned a unique ID. Personally identifying data will be removed or transformed to protect your confidentiality and de-identify your transcript. You will be emailed a copy of your transcript to ensure your satisfaction and give you a chance to change

it within a one-week deadline. Once this one-week deadline is over, you will be unable to withdraw from the study, as your data will now be de-identified and anonymous. Electronic files of Transcripts and Informed Consent Forms will be stored and protected for 5 years before being destroyed in March 2027, as required by the National College of Ireland data retention policy.

What will happen to the study results?

The final study results will be submitted to the National College of Ireland in my final dissertation. If the study is published or presented, it may include transcription quotes from your interview, however these will be anonymous. You may withdraw your data from the study at any time prior to the de-identification of your data without any penalty. To do so please contact the student researcher or their academic supervisor.

Contact details for questions and further information

Student Researcher Email Contact: rory.sheridan12525@gmail.com

Student Researcher Phone Contact: 087 600 2051

Supervisor Contact Email: Amanda.Kracen@ncirl.ie

Appendix C – Informed Consent Form

Informed Consent Form

- I understand that participation in this study is voluntary and that I may withdraw myself and/or my data at any time prior to the de-identification of my data without penalty or consequence.

- I understand and grant permission to have my audio data from the interview to be recorded and saved by the student researcher for the purpose of analysis and publication in research.
- I understand that some questions in the interview may be distressing, and that I will be provided with adequate helplines and support in the case of distress arising from the study.
- I understand that my data will be recorded, saved, protected, and disposed of as according to GDPR, including making and treating my data as confidential.
- I understand and grant permission to have my data made anonymous and/or confidential by the changing or censoring of identifying information by the researcher.
- I understand and grant permission for a transcript to be made from my data, which will be recorded, saved, protected, and disposed of as according to GDPR
- I am aware of who to contact and how, should I wish to withdraw, have a complaint, or have any further questions.
- I understand a copy of my signed informed consent will be recorded by the researcher, and that a copy will be provided to me should I wish.
- I am above the age of 18 and under the age of 80
- I do not have a medical condition that requires a mask exemption

Having read and understood this document, I give my informed consent to participate in this study. To indicate this informed consent, please type the word “consent” beside Participant Consent, do not make a signature.

Participant Consent: Researcher Signature:

Date:

Appendix D – Debriefing Sheet

Debriefing Document

I would like to thank you for participating in this study and let you know that it would not have been possible without your help and contribution. Your participation will help us to further understand the reasoning behind mask refusal and your experiences and will be a vital contribution to my undergraduate thesis.

We would like to remind you that you may withdraw your data from the study at any time prior to the de-identification of your data, and that all data collected during this study will be kept confidential and in compliance with GDPR. Furthermore, if you have any other queries or complaints, including wanting to withdraw, the student researcher can be contacted at: rory.sheridan12525@gmail.com and their supervisor at: Amanda.Kracen@ncirl.ie

If at any point during this study or interview you felt a measurement of distress, discomfort or upset we would encourage you to contact either of the following numbers.

Samaritans: 116 123

Aware: 1800 80 48 48

Once again, I would like to thank you for your time and honesty, and if you wish to learn more about the study or its progress, to contact the student researcher at any time. Thank you!

Appendix F – Interview Schedule

1 What has been your experience with covid over the last two years?

1 In general, what are your thoughts about people wearing masks?

2 Is there anything you think could sway your opinion on masks, and if so, what would that be?

3 In your opinion, what makes someone want to wear or not want to wear a mask?

4 What are the main factors in you choosing not to wear a mask?

5 How do you feel about people who wear masks?

6 Do you believe there are differences between people who do and don't wear masks? If so, what?

7 Tell me about a good experience you had with not wearing a mask. How did it make you feel?

8 Tell me about a bad experience you had with not wearing a mask. How did it make you feel?

9 Do you feel your experience with covid has been different than those who have worn masks? And if so, how?

10 How have you been treated by others for your beliefs about mask wearing?

11 Have you ever experienced any doubts about your decision in not wearing masks? And if so, can you discuss this?

12 If there is anything I missed or didn't ask, or that you want to say in relation to mask wearing or experiences, could you share it?