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**TO IMMUNISE OR NOT TO IMMUNISE:
MOTHERS' DISCOURSES OF CHILDHOOD
IMMUNISATION**

**A thesis presented in partial fulfilment
of the requirements for the degree of
Master of Arts in Psychology at
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ABSTRACT

The focus of the present study was on mothers' talk about their decisions regarding childhood immunisation and the factors influencing them. This was examined using Potter and Wetherell's (1987) and Parker's (1992) approaches to discourse analysis. The participants consisted of six mothers who had chosen to have their children fully immunised and eight mothers who had chosen against fully immunising their children. The participants were interviewed about their decisions regarding childhood immunisation and the factors influencing them, using an open-ended unstructured approach to interviewing. Transcripts from the interviews were analysed. The analysis resulted in the identification of six discourses: immunisation as protection; immunisation as destruction; risk; disease severity; immune system; and the establishment discourses. Overall, analysis of these discourses revealed how they acted to construct childhood immunisation in both a positive manner, as something needed, beneficial, and safe, and in a negative manner as something unnecessary, unbeneficial, and harmful. The analysis also revealed how the discourses drawn on by mothers ultimately served two opposing functions, these being, to support and justify decisions and arguments both for and against the use of childhood immunisation. These discourses were also found to position mothers as carers and protectors of children, and children as vulnerable and defenceless. Health professionals were positioned either as experts and carers of health, or conversely, as neglectful of and incompetent at health care. Two opposing power relations between mothers and health professionals were also reproduced. Additionally, it was revealed how these discourses acted to challenge and support the institutions of conventional and natural health and medicine, and their ideologies. Overall, these discourses were shown to have positive and negative repercussions for the acceptance and use of childhood immunisation.

The key issues arising from the findings are discussed, some general conclusions presented, and consideration given to how this research strengthens understanding in this area. Finally, the potential use of the findings are discussed and ideas for future research are considered.

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INTRODUCTION

To immunise or not to immunise? Childhood immunisation in New Zealand is not compulsory, and consequently every New Zealand parent faces the question of childhood immunisation soon after the birth of each child. Parents are considered to have the responsibility of giving their children the best possible health care and they must decide whether it is in the best interests of their children's health to have them immunised or not. There are several arguments for and against the use of childhood immunisation which are available to parents in justifying their decisions. The primary arguments against the use of childhood immunisation are outlined below.

To begin with, immunisation is considered ineffective in preventing children from catching infectious diseases. This claim is backed up with evidence of immunised children contracting the diseases which they were immunised against, and mounting evidence of diseases, such as measles, being more severe in those children immunised against them (Neustaedter, 1990; Scheibner, 1993).

It is also asserted that immunisations can not achieve life-long immunity due to the routes they take when injected. That is, when vaccines are injected into the blood stream they bypass the normal passages of entry a disease would take, such as the mouth and nose. These normal portals of entry for diseases are considered essential in the natural immunological process and unless a vaccine strictly follows the natural immunity process, life-long immunity can not be obtained (Scheibner, 1993).

Another argument is that immunisation is not responsible for the documented decline in diseases during the past century. Infectious diseases are evidenced to have been on the decline before immunisation was brought

in due to improvements in sanitation, nutrition, and uncrowded living conditions, not immunisation (Neustaedter, 1990; Scheibner, 1993).

It is also argued that children do not need to be artificially immunised. It is claimed that the body has its own natural mechanisms to create immunity to diseases and so artificial immunisation is unnecessary (Scheibner, 1993). Furthermore, it is argued that diseases are beneficial to children. That is, diseases are considered part of the natural maturation process needed to develop a fully functioning immune system (Scheibner, 1993).

Further, vaccines are considered to be highly noxious substances made up of viral or bacterial components and chemicals which are known carcinogens (Murphy, 1993; Scheibner, 1993). They are also said to be manufactured in ways which adversely effect recipients (Murphy, 1993; Scheibner, 1993). For example, it has been suggested that vaccines contaminated with a certain virus (due to the manufacturing process) started the epidemic of AIDS in the United States (Scheibner, 1993).

Immunisations have also been found to cause serious local and systemic side-effects, including neurological damage (Scheibner, 1993). Side-effects include immediate reactions such as fevers, allergic reactions, and convulsions. Delayed and permanent reactions such as epilepsy, encephalitis, mental retardation, learning disabilities, and paralysis have also been evidenced (Golden, 1993; Neustaedter, 1990; Scheibner, 1993). Immunisations have also been associated with asthma, autoimmune diseases, and Sudden Infant Death Syndrome (SIDS) (Scheibner, 1993). Additionally, Coulter (1990) maintains that many learning disabilities, behaviour disorders, and antisocial syndromes are due to the effects of immunisation.

There are also a number of theories suggesting that immunisations are capable of initiating subtle and long-term damaging effects on the immune system and nervous system, thus weakening our natural ability to fight off

viruses, for example (Neustaedter, 1990). Finally, it is claimed that not enough is known about immunisation and the immune system, and until more is known it is best to take a cautious approach to childhood immunisation (Neustaedter, 1990).

As illustrated there are numerous arguments against the use of childhood immunisation. These arguments tend to focus on issues regarding the dangers of childhood immunisation, its ineffectiveness, and why it is unnecessary. Concerned parents can readily obtain access to sources detailing and providing evidence supporting these arguments through, for example, the Immunisation Awareness Society. Several arguments for the use of childhood immunisation are also available to parents.

Firstly, it is maintained that childhood immunisation is necessary to prevent children from catching diseases and to prevent the spread of disease and epidemics. This argument is supported with evidence of the reduction in disease incidence and epidemics due to immunisation programmes (Hayden, Sato, Wright, & Henderson, 1989; Ministry of Health, 1996; New Zealand Communicable Diseases Centre [NZCDC], 1992).

Additionally, it is asserted that immunisation is responsible for the continuing decline in disease incidence. It is acknowledged that the incidence of many diseases was declining before the introduction of childhood immunisation, however, it is maintained that this may only partly be due to improved nutrition, sanitation, and improved living conditions. These factors do not completely account for the decline in disease incidence. It is claimed that immunisations may have been given before they were officially introduced and so could be responsible for the decline in diseases. Furthermore, evidence suggests that the continuing decline in disease incidence is the result of immunisation programmes (Essex & Tuohy, 1993).

It is also asserted that diseases are dangerous and not all effects are treatable. Diseases that are vaccine preventable can have very serious effects or result in a number of life threatening complications including death. Although a number of the effects of diseases can be treated many of them can not and despite the level of health care available death can still occur from a number of these diseases, therefore, children need to be protected from contracting diseases (Essex & Tuohy, 1993).

Although, it is acknowledged that vaccinations can occasionally fail to achieve successful immunisation, this is attributed to inappropriate use or mishandling of vaccines (Essex & Tuohy, 1993). Ultimately, immunisation is claimed to be effective (Essex & Tuohy, 1993).

Additionally, childhood immunisation is regarded as a safer alternative to natural immunity. Recognition is given to the fact that natural immunity is usually life-long whereas vaccine immunity can weaken over time. However, the price paid for natural immunity is the risk of permanent damage to a child due to the effects of the disease. Immunising against diseases is considered safer than not immunising (Essex & Tuohy, 1993). Furthermore, it is asserted that immunisation is proven to be safe. This is emphasised with the assertion of a low risk of side-effects from immunisation, particularly the risk of brain damage (Essex & Tuohy, 1993; Ministry of Health, 1996).

Additionally, in response to the claim that childhood immunisation is associated with SIDS, it is asserted that there is no evidence to suggest that immunisation causes SIDS. It is maintained that studies have in fact shown that SIDS is more common in infants who have not been immunised (Essex & Tuohy, 1993; Ministry of Health, 1996).

As illustrated there are many arguments for the use of childhood immunisation. These arguments tend to focus on the demonstrated efficacy, safety, and need for childhood immunisation. Arguments both for and

against the use of childhood immunisation offer a wealth of convincing research and validated data supporting their positions and conflicting with research and data provided by the opposite position. These arguments feature frequently in popular and scientific literature, and in information given to parents. They are also a common occurrence in the media and are frequently debated not only in the literature but at child-care centres and parent group meetings. In light of the arguments for and against the use of childhood immunisation, White and Thomson (1995) found that when it came to making a decision regarding childhood immunisation New Zealand mothers were faced with a considerable dilemma.

FACTORS INFLUENCING PARENTAL DECISIONS REGARDING CHILDHOOD IMMUNISATION

Despite there being a fair amount of literature and evidence suggesting why childhood immunisation should or should not be used there is little understanding of parental decisions regarding childhood immunisation and the issues involved. Previous research which has attempted to provide understandings in this area has concentrated on investigating parental attitudes, beliefs, and perceptions regarding childhood immunisation. This research has consistently found specific attitudes, beliefs, and perceptions pertaining to the safety and efficacy of immunisation, and the seriousness and risk of disease to be major influences on parental decisions regarding childhood immunisation. These are offered as explanations for parental decisions.

Several studies have found safety issues to be important in parental decisions. Parents who regarded immunisations as safe were more likely to have their children immunised, whereas those who regarded immunisations as unsafe were less likely to immunise their children (Peckham, Bedford, Senturia, & Ades, 1989; Roberts, Sandifer, Evans, Nolan-Farrell, & Davis, 1995). Parents

who chose not to immunise their children were found to be more anxious about the side-effects of immunisation (Stevens & Baker, 1989). In particular, those who chose not to immunise, or who delayed immunising, did so because they were particularly concerned about adverse reactions such as fevers and allergies and long-term health problems such as brain damage (Bennett & Smith, 1992; Harding & Bolden, 1983; Lewis et al., 1988; New & Senior, 1991; Simpson, Lenton, & Randall, 1995; White & Thomson, 1995). Bad experiences with side-effects such as allergies have also caused some parents to delay or default immunisation (New & Senior, 1991). Additionally, one study also found that a number of mothers who decided against childhood immunisation did so because they preferred natural rather than artificial immunity, believing that artificial immunity adversely affected the child's immune system and made the child more susceptible to illness (White & Thomson, 1995).

Attitudes and beliefs pertaining to the efficacy of immunisation have also been shown to influence parental decisions. Parents who regarded immunisation as effective were more likely to immunise their children than those who regarded immunisation as less effective (Markland & Durand, 1976; Peckham et al., 1989; Stevens & Baker, 1989). Harding and Bowen (1983) found that a number of parents immunised their children because they believed that immunisation would eradicate disease. Many parents were found not to immunise because they had doubts of the efficacy of immunisation (New & Senior, 1991; Peckham et al., 1989). This was often due to their experience or awareness of children contracting diseases in spite of being immunised against them (New & Senior, 1991). Many of these parents believed that to immunise was to take an unnecessary risk for no apparent benefit (New & Senior, 1991).

A number of studies have also found that parents who immunised their children had a higher perception of disease seriousness than those who chose not to immunise (Markland & Durand, 1976; Stevens, Baker, & Hands, 1986;

Peckham et al., 1989). Those who immunised did so because they believed the diseases could be fatal (Harding & Bolden, 1983; New & Senior, 1991). For many of the parents this was found to be due to having seen cases of diseases or knowing of children who had serious health problems as a result of contracting a disease (New & Senior, 1991).

Research has also found that parents who chose to immunise perceived their child to have a lower risk of catching the disease when the child was immunised than do parents who chose not to immunise (Bennett & Smith, 1992; Houtrouw & Carlson, 1993; Markland & Durand, 1976; Stevens et al., 1986). New and Senior (1991) reported that one parent who chose not to immunise against whooping cough claimed immunisation to be unnecessary because they had not heard of any cases of whooping cough for a long time and therefore the risk of catching the disease was remote. Another parent who had chosen not to immunise claimed that neither she nor her children had suffered any disease as a consequence of not being immunised (New & Senior, 1991).

Simpson et al. (1995) also found several other factors to be associated with the decision against childhood immunisation. These included a belief in homeopathic immunisation, religious beliefs, beliefs that healthy children living in healthy conditions do not need protecting with immunisation, and that good health depends more on housing, food, and hygiene.

Overall, the majority of this research has been conducted overseas and there is little evidence to indicate whether the perceptions, attitudes, and beliefs identified correspond with those of New Zealanders. Literature and research has demonstrated that health beliefs, attitudes, understandings, and health seeking behaviour are culturally shaped (Heggenhougen & Clements, 1987; Tudsri, 1987; White, 1994; White & Thomson, 1995). Consequently, it is questionable as to whether these results from overseas research can be applied to New Zealanders. This makes it important to study parental

decisions regarding childhood immunisation and their influences among New Zealanders to understand them in their cultural context.

In summary, previous research has focused on investigating parental perceptions, beliefs, and attitudes regarding childhood immunisation in an attempt to provide an understanding of parental decisions and the factors influencing them. It is acknowledged that this research has contributed some valuable information to a growing body of knowledge in this area, however, these studies are limited in several ways.

To begin with they assume that psychological factors such as attitudes can be identified and quantified as influences on what people say and do regarding, for example, immunisation decisions. Potter and Wetherell (1987) challenge this position by questioning the concept of 'attitudes'. The fundamental assumption of this position is that attitudes are constantly stable and consistent across situations and over time, and it is assumed that the responses or accounts people give are a reflection of these enduring underlying attitudes (Potter & Wetherell, 1987). That is, when a person is questioned about their attitudes it is expected that there will be a high degree of consistency and stability in what that person says (Burr, 1995). Thus, the aim of attitude research is to identify these attitudes. However, Potter and Wetherell (1987) assert that attitudes, in this sense, do not exist and that evidence of this is apparent in the variable and contradictory nature of peoples' accounts. For example, on one occasion a person might describe their reason for using childhood immunisation by claiming that it is safe, however, when talking about the potential side-effects of childhood immunisation they may describe immunisation as risky or unsafe. What is evident is that the concept of an enduring 'attitude' simply can not account for this variability, and thus the claim that 'attitudes' can be offered as an explanation for what people say and do is questioned (Potter & Wetherell, 1987). As a result, the utility and relevance of investigations into 'attitudes' is questionable.

Furthermore, social constructionists challenge the assumption that mental entities such as 'attitudes' can be identified as influences on what people do and say by arguing that the existence of entities such as 'attitudes' is merely hypothesised and that there is no way of establishing and demonstrating their existence (Burr, 1995). Entities such as 'attitudes' are located inside the person and it is claimed that their presence can be inferred from what people say or do (Burr, 1995). However, Burr challenges this position by claiming that "these things [what people say and do] are not a route of access to a person's private world, they are not valid descriptions of things called 'beliefs' or 'opinions', and they can not be taken to be manifestations of some inner, essential condition such as temperament, personality or attitude" (p. 50). This view denies that there are any internal entities to a person, such as 'attitudes', which can be accessed through language. Thus, 'attitudes' and other mental entities are considered to have no status as explanations for what people say and do (Burr, 1995). Once again the relevancy and utility of investigations into 'attitudes' is challenged.

Another limitation of these studies is that participant responses are forced into the researcher's frame of reference. The nature of these studies require participants to express their 'attitudes' towards the topic or object of interest, for example childhood immunisation, so that these 'attitudes' could then be compared. The assumption behind this is that there is one meaning of interpretation given to the topic or object of interest and that is the meaning adopted by the researcher. However, Potter and Wetherell (1987) point out that this is not the case. They maintain that people may have very distinct meanings of the object of interest and that a person's evaluation is directed at these specific meanings of interpretation. This is problematic in that there is no sense in comparing 'attitudes' if the meaning of interpretation of the object of interest, such as childhood immunisation, differs among respondents. Furthermore, because these studies do not account for these differences, and instead force responses into the researchers frame of reference the validity, and relevance of the conclusions reached is questionable.

These studies also ignore or avoid the social context of decision making regarding childhood immunisation. In these studies the complex phenomena of parental decisions regarding childhood immunisation is reduced into preselected, isolated, measurable variables for the purpose of statistical analysis and hypothesis testing. As a result much of the detail surrounding parental decisions regarding childhood immunisation, is neglected. It is this social contextual information which can provide valuable information toward a much fuller understanding of parental decisions in this area.

Furthermore, by investigating specific preselected variables it is assumed that the pertinent factors regarding childhood immunisation decisions and the factors influencing them is already known and respondents merely have to indicate agreement or disagreement with these. Typically, these variables are selected from those identified in previous research. Such an assumption leaves no room for identifying unanticipated factors, that is, for making new discoveries (Guba & Lincoln, 1994; Heggenhougen & Clements, 1987). As a result valuable information in this area may be neglected and it can be questioned as to whether these studies have provided a complete investigation into parental decisions. Additionally, a question mark can be raised as to whether the findings will add any further relevant information in this area.

A further limitation is that the very nature of surveys and questionnaires, which are a predominant element in research in this area, 'strip' participant responses of the context in which they are typically produced. Responses are restricted and forced to fit into predetermined categories set by the researcher. An example is Salsberry, Nickel, and Mitch's (1994) study in which parents were asked to indicate their responses to ten belief statements on a 5-point scale ranging from 'strongly agree' to 'strongly disagree'. Respondents are also limited to providing only one response. Such a response format prevents respondents from giving alternative reactions or any doubts, or changes in response they may have. Ultimately, the responses

gathered offer little information as to why respondents would respond in such a way and under what circumstances they would respond differently (Potter & Wetherell, 1987). Such contextual information regarding peoples' responses contains important information that is relevant to understanding parental decisions and the factors influencing them.

Another limitation imposed by the use of questionnaires and surveys in these studies, is that data gathered is frequently transformed into categories which may not reflect the response provided by the respondent. For example, in the Salsberry et al. (1994) study all responses indicating strong agreement with a statement, agreement, or 'undecided' were counted as affirmative responses. Is being 'undecided' really an affirmative response? Similarly, other researchers in this area (for example, Roberts, et al., 1995) frequently use an "others" category to place responses regarding beliefs and attitudes which are infrequently reported by the majority of the respondents. By doing so researchers fail to report and explain what these "other" responses are, thus neglecting to report relevant information provided by respondents.

As illustrated these studies, by their very nature, are limited in several ways. Due to these limitations it is concluded that these studies do not provide a suitable approach to investigating parental decisions regarding childhood immunisation and the factors influencing them. One approach that is considered more suitable for such an investigation is that of discourse analysis. Discourse analysis offers an alternative to traditional attitudinal research by shifting the focus from the search for underlying entities such as 'attitudes' to a detailed examination of the accounts people produce. This approach regards what people say as intentional socially directed behaviour which constructs things and performs specific functions for them. Thus, discourse analysis adopts a different set of assumptions to that of traditional attitudinal research which enable it to not only overcome the limitations imposed on previous research, but ultimately to provide a more suitable and beneficial approach to investigating such complex phenomena as parental

decisions regarding childhood immunisation and the factors influencing them. The purpose of the next section is to explain in more detail what discourse analysis sets out to accomplish, how it does it, and highlight why it is a more suitable approach to investigating parental decisions regarding childhood immunisation.

THE DISCURSIVE APPROACH

Discourse analysis is referred to as a set of qualitative research approaches which focus on language and how it is used in every day social life (Burr, 1995). Different approaches to discourse analysis have been adopted by a variety of disciplines including; sociology, anthropology, philosophy, and media and communication studies. Each approach offers their own perspective, purpose, and style of analysis in addition to a different theoretical perspective (Chamberlain, Stephens, & Lyons, 1995; Potter & Wetherell, 1987). Potter and Wetherell (1987) and Parker (1992) have extended discourse analysis to social psychology and it is these approaches to discourse analysis which have been adopted for use in the present study.

Discourse analysis aims to achieve "a better understanding of social life and social interaction" through the study of social texts (Potter & Wetherell, 1987, p. 7). By texts, Potter and Wetherell mean all forms of written and spoken interaction, formal and informal (Tuffin & Morgan, 1995). Discourse analysis operates on the social constructionist view that language actively constructs our social interaction and our social worlds (Potter & Wetherell, 1987; Stainton Rogers, 1996). To the discourse analyst language is a social practice or form of social action which is performative and constructive, and has certain consequences and effects. People use language for various functions, such as blaming someone, validating a stance, or justifying a decision (Burr, 1995; Stainton Rogers, 1996; Tuffin & Morgan, 1995; Wetherell & Potter, 1988). Language is also used for wider functions such as positioning people in

certain ways and supporting and challenging certain institutions (Parker, 1992; Wetherell & Potter, 1988). However, Potter and Wetherell (1987) point out that people may not be aware of the functions their language is serving or the effects it achieves.

Language is regarded as constructive in that it "does not simply reflect the state of affairs, but it actively constructs a version of those affairs" (Tuffin & Morgan, 1995, p. 91). For example, when people talk about childhood immunisation they are not merely describing immunisation they are constructing a 'version' of it. In this sense language creates an individual's world. As a result, discourse analysts argue that there is no such thing as one true 'reality' or 'objective fact'. For example, there may be many conflicting accounts by parents of what immunisation is, but in discourse analysis neither account is considered more 'true' than the other. Rather, 'reality' is constructed through our language. That is, 'reality' is created which means that several different 'realities' may be present among several different people and thus there is no concern as to whether accounts are 'true' or are an accurate reflection of 'reality' (Burr, 1995; Stainton Rogers, 1996).

The assertion that language is a functional and constructive process avoids reducing complex lay explanations into underlying cognitive or psychological processes which is more often done in traditional attitudinal research. That is, the discourse analytic approach challenges the assumption that language is merely a neutral medium which gives us access to underlying mental entities such as 'attitudes' and that such things as 'attitudes' can be offered as an explanation for what people say and do (Potter, in press; Potter & Wetherell, 1987; Stainton Rogers, 1996; Wetherell & Potter, 1988). Instead, discourse analysis takes language and its use in social interaction as the focus of investigation. Rather than investigating 'beliefs' and 'attitudes' as determinants of immunisation decisions the discourse analytic approach seeks to find out how people use language to construct, for example, childhood

immunisation, what functions and effects their language use has, and what linguistic resources or devices they employ in constructing their accounts to enable these practices (Burr, 1995; Potter, in press; Potter & Wetherell, 1987).

The notion of discourses was devised as a way of helping to identify and analyse the linguistic devices or resources people draw on in constructing their accounts (Potter, in press; Potter & Wetherell, 1987). In the literature the term 'discourse' is used interchangeably with that of 'interpretative repertoire', however, in the present study the term 'discourse' has been adopted (Burr, 1995). Wetherell & Potter (1988) describe discourses (using the term repertoire) as:

the building blocks speakers use for constructing versions of actions, cognitive processes and other phenomena. Any particular repertoire is constituted out of a restricted range of terms used in a specific stylistic and grammatical fashion. Commonly these terms are derived from one or more key metaphors and the presence of a repertoire will often be signalled by certain tropes or figures of speech. (p. 172).

Thus, discourses are referred to as a kind of tool-kit of pre-existing linguistic devices or resources which are actively selected or omitted from available resources in order to serve certain purposes and functions (Burr, 1995; Potter & Wetherell, 1987; Stainton Rogers, 1996). Additionally, people will often draw on a number of different discourses, which are available, when constructing a particular phenomenon or performing different functions to suit the occasion (Potter, in press).

In addition to serving functions such as excusing or validating a person's behaviour the discourses people draw on also serve a number of wider functions. To begin with discourses position people in a number of ways (Parker, 1992). By drawing on particular discourses we may ourselves adopt a subject position or we may allocate a subject position for someone else in our talk (Burr, 1995; Parker, 1992). For example, discourses of sexuality may position us as 'gay' or 'straight'. These subject positions carry with them

certain implications. They provide a way of seeing and experiencing the world in a particular way consistent with the position adopted. Burr (1995) states that "once we take up a subject position in discourse, we have available to us a particular, limited set of concepts, images, metaphors, ways of speaking, self-narratives and so on that we take on as our own" (p. 145). Positions also provide a 'structure of rights' (Davies & Harre, 1990). That is, positions provide particular rights; these being "the possibilities for and the limitations on what we may or may not do and claim for ourselves within a particular discourse" (Burr, 1995, p. 141). For example, text may position mothers as protectors. By doing so mothers are given certain rights and responsibilities with regards to protecting the health of their children.

Discourses also benefit or support some institutions and challenge others. Discourses are implicated, in some way, with the institutions in our society (Parker, 1992). Institutions, such as family and marriage, are a part of our society which provide us with statuses and which shape our daily lives (Burr, 1995). These institutions are put into practice everyday in our talk and it is through discourses that such institutions are supported and others challenged (Lupton, 1994a). One aim of discourse analysis is to identify those institutions which are reinforced and those which are challenged when certain discourses are used (Parker, 1992).

Because discourses provide particular subject positions and support and challenge certain institutions they are thus considered to reproduce certain power relations existing in society (Burr, 1995; Lupton, 1994a; Parker, 1992). For example, if it is accepted that medical professionals, in relation to mothers, are in a more powerful position in society to make decisions regarding matters of health, then discourses which position mothers as passive and compliant with the instructions given by medical professionals serve to reproduce and uphold this power relation. Another aim of discourse analysis is to look at who benefits and who loses from the use of certain discourses, and who would want to support and promote or discourage the

certain discourses (Banister, Burman, Parker, Taylor, & Tindall, 1994; Parker, 1992). By examining how discourses reproduce power relations further understanding can be obtained of power inequalities operating in society (Burr, 1995).

Finally, discourses have ideological effects (Lupton, 1992; Parker, 1992). People draw on and reproduce certain ideologies in their talk, as a result the discourses they use have certain ideological effects (Lupton, 1992). It is argued that because discourse analysis has the potential to reveal the ideological dimension of, for example, talk regarding decisions for or against childhood immunisation, it is relevant to the concerns of public health (Lupton, 1992).

The discourse analytic approach is able to overcome the limitations (discussed earlier) which are inherent in previous research investigating parental decisions regarding childhood immunisation and the factors influencing them, in a number of ways. To begin with, because discourse analysis takes language as the focus of investigation as opposed to supposed 'enduring attitudes' it is able to overcome the major limitation imposed on previous attitudinal research, namely that 'attitudes' have no status as explanations for what people say and do and that investigations into 'attitudes', therefore, have no relevance or utility. By focusing investigations on language use researchers can provide a more appropriate and beneficial investigation into parental decisions and the factors influencing them, which previous research has attempted to provide.

Additionally, because discourse analysis does not assume that accounts reflect enduring underlying 'attitudes', accounts are not expected to be stable and consistent. Rather, discourse analysis maintains that people frequently vary their accounts according to the purpose or function of their talk (Potter & Wetherell, 1987; Wetherell, Stiven, & Potter, 1987). Although, this variability presents a problem for traditional attitudinal research, questioning the

existence of supposedly enduring 'attitudes', it is a resource for discourse analysts. It helps to identify the ways in which accounts are constructed and to determine and understand the functional aspects of these accounts (Potter & Wetherell, 1987; Wetherell & Potter, 1988; Wetherell et al., 1987). That is, discourse analysis examines the natural variation and contradiction within and between accounts to reveal the functional aspects of these accounts. For example, a mother may describe childhood diseases as dangerous and harmful or treatable and harmless depending upon whether she is justifying or opposing the use of childhood immunisation.

Additionally, the assertion that language is a constructive process avoids forcing responses into the researcher's frame of reference. Discourse analysis avoids the assumption that everyone shares the same meaning of interpretation of the object of interest, such as childhood immunisation. Instead it is maintained that individuals construct their own 'version' of childhood immunisation in their responses, for example, and that a person's evaluation of, for example childhood immunisation can not be distinguished from 'the object' of childhood immunisation. As Wetherell and Potter (1988) argue, "the language used is a constitutive part of the explanation, not a medium that the explanation is translated into" (p. 183). Thus, different constructions of childhood immunisation, for example, are recognised as an important component of the investigation.

Furthermore, discourse analysis does not ignore or avoid the social context of parental decisions regarding childhood immunisation and the factors influencing them. Rather, discourse analysis involves a focus upon the social, political, and cultural context in which peoples' talk or accounts take place (Lupton, 1992). The social context and experience surrounding parental decisions is regarded as an important element in understanding such complex phenomena. Therefore, parental decisions are not reduced into preselected, isolated, meaningless variables. Furthermore, because parental decisions and the factors influencing them are not restricted to preselected variables

discourse analysis allows for an element of discovery in the investigation.

Discourse analysis does not attempt to 'strip' responses of the context they are typically produced in. Examining the context in which accounts are expressed is an important component of discourse analysis. Such contextual information is crucial in the investigation of discourses, and the functional and constructive nature of accounts. Consequently, discourse analysis often involves working with extended sequences of talk obtained, for example, from interviews. This enables respondents to openly respond in an unconstrained manner. By doing so discourse analysis avoids reducing and distorting complex language accounts to restricted predetermined response categories such as 'agree' or 'disagree', or transforming responses into categories which do not reflect the response provided. By not constraining participants' responses this approach enables the researcher to capture the subtlety and complexity of peoples accounts in their natural social contexts. Furthermore, as such contextual information is an important element in discourse analysis this approach allows for a fuller and clearer understanding of parental decisions regarding childhood immunisation.

Finally, research using a discourse analytic approach to investigating public health issues and concerns has evidenced that such an approach is particularly fruitful in providing insight and understanding into such things as lay explanations regarding health issues, and in providing a basis for developing effective health promotion interventions (Lupton, 1992, 1994a). For example, Lupton (1994a) conducted an investigation of the prevailing discourses surrounding condoms in the age of AIDS as portrayed in the Australian press. The results offered some explanation for the lack of condom use, including the cultural anxieties and negative meanings surrounding them. These results are then available as a basis to challenge these meanings and anxieties, and to encourage the use of condoms for protection against the spread of AIDS.

In summary, discourse analysis maintains that in order to accomplish an enhanced understanding of social life and interaction researchers need to look at how accounts are organised and the consequences of such organisation (Potter & Reicher, 1987; Wetherell et al, 1987). More specifically, discourse analysis aims to identify the discourses which are culturally available and examine how these operate to construct versions of particular phenomena, what functions they serve, and what effects these practices bring about. What has been presented is a detailed introduction to Potter and Wetherell's (1987) and Parker's (1992) approaches to discourse analysis which has highlighted the main principles of these approaches and provided insight into the advantages of using discourse analysis in research. For a more elaborate discussion and illustration of these approaches see Banister, et al. (1994), Burr (1995), Parker (1992), Potter (in press), Potter and Wetherell (1987), and Wetherell and Potter (1988).

THE PRESENT STUDY

The focus of the present study is on parental decisions regarding childhood immunisation and the factors influencing them. As has been illustrated, there is little research and understanding in this area. Previous research into parental decisions is limited in a number of ways which hinder the informative and practical value of the investigations and the conclusions reached. As a result, the suitability of the approach taken in previous research is questioned. Discourse analysis is an approach that is not only able to overcome the limitations prevalent in previous research in this area but it is able to provide a more suitable and valuable investigation into parental decisions regarding childhood immunisation and the factors influencing them. The present study aims to provide a discourse analytic approach to such an investigation. To do this the talk of mothers who have decided for and against childhood immunisation will be analysed. The study aims to provide understanding and insight into the constructive and

functional aspects of mothers' talk about their decisions regarding childhood immunisation and the factors influencing them, and the effects this talk brings about. The significance of this study is that it will provide greater in-depth understanding of parental decisions regarding childhood immunisation and the factors influencing them which is specific to New Zealand. Before discussing the research process undertaken in the present study the next chapter will provide a background of childhood immunisation in New Zealand.

BACKGROUND

New Zealand currently offers free routine childhood immunisation against nine childhood diseases. The purpose of this chapter is to provide a background of childhood immunisation in New Zealand including information available to parents, rates and trends, and recent changes concerning childhood immunisation. Firstly, an outline will be provided of what childhood immunisation is and what it involves.

Immunisation is referred to as the process by which immunity or resistance to an infectious disease is induced or augmented (Anderson, Anderson, & Glanze, 1994). Immunisation can be acquired naturally or artificially, resulting in two forms of immunity: active and passive (Dick, 1986; Essex & Tuohy, 1993).

Active immunity is a form of long-lasting immunity that is acquired when an individual's own immune system produces natural disease-fighting substances, known as antibodies, against specific diseases (Dick, 1986; Essex & Tuohy, 1993; Nicoll & Rudd, 1989). Active immunity can be acquired either naturally after developing and recovering from a particular disease or artificially with a vaccination (Anderson et al., 1994; Dick, 1986; Essex & Tuohy, 1993). Vaccination involves the introduction of micro-organisms such as bacteria or viruses, that have been modified to make them harmless, into the body for the purpose of inducing immunity (Anderson et al., 1994; Webster, 1986). When people talk of conventional childhood immunisation they are referring to the use of vaccinations to build immunity. Natural immunity is typically lifelong, whereas, vaccine derived immunity may weaken over time. As a result, booster doses are usually given to maintain this immunity (Ministry of Health, 1996).

In addition to conventional immunisation homeopathic immunisation, which uses homeopathic remedies to protect from disease, is also available. The homeopathic program offers vaccinations against whooping cough, diphtheria, tetanus, poliomyelitis, measles, and mumps. There is, however, no evidence that homeopathic immunisation successfully protects against diseases (Ministry of Health, 1996; Neustaedter, 1990). Unless stated otherwise the kind of immunisation referred to in the present study is conventional artificial immunisation.

Passive immunity is acquired through the transfer of antibodies from someone who has immunity to someone who has none (Anderson et al., 1994; Essex & Tuohy, 1993). This means the individual's own body does not make the antibodies. This type of immunity can be obtained artificially by injecting blood serum drawn from an individual with active immunity against a specific disease to another individual. Conversely, it can be obtained naturally through the mother's placenta to the fetus or through the mother's breast milk to the infant (Anderson et al., 1994; Dick, 1986; Essex & Tuohy, 1993). Passive immunity is not permanent and does not last as long as active immunity (Dick, 1986; Essex & Tuohy, 1993; Nicoll & Rudd, 1989).

Information regarding childhood immunisation and childhood diseases is made available to New Zealanders in a number of ways. Information is generally given to parents during antenatal care or after the birth of a child, and is also made available at Plunket clinics, family centres, and public health units throughout New Zealand, in addition to being offered by midwives and public health nurses. The Ministry of Health (Manatu Hauora) and Wellchild (Tamariki Ora) have recently made available pamphlets and booklets which are designed to inform parents about childhood immunisation and childhood diseases. Further information about immunisation is provided in "Questions and Answers" a book published by The Royal New Zealand Plunket Society which answers a number of common questions asked by parents concerning childhood immunisation and diseases. The Ministry of

Health have also published a book titled "Immunisation Handbook", second edition, 1996. One week out of each year is also ascribed to national immunisation awareness. This week is supported by the New Zealand College of General Practitioners with the aim of raising public awareness concerning immunisation.

There also exists within New Zealand the Immunisation Awareness Society, which is based in Auckland but has members nationwide. This organisation was formed several years ago and consists of a voluntary group of parents committed to promoting an informed decision regarding childhood immunisation. The aims of this organisation include providing information and resources to enable parents to make an informed decision, campaigning to maintain freedom of choice and for the right of access and availability of information so parents can make an informed judgement, collating statistical information and research on immunisation, and informing parents, health professionals, and politicians about immunisation issues (Immunisation Awareness Society, 1995). The activities of the society include producing a regular newsletter, the lobbying of health departments and Government, and it has also organised an international symposium on the issue of immunisation (Dew, 1995). The position this society takes is one of anti-immunisation with opinions, regarding childhood immunisation, in the group ranging from the radical opinion that children should not be immunised at all, to a more liberal opinion that the selective use of immunisations may be justified (Dew, 1995).

With regards to childhood immunisation rates in New Zealand, for children up to the age of 1 year, studies have revealed an increasing trend in immunisation coverage rates over the past several years. Rates increased from 80.3% to 92.5% over the period 1992 to 1995 (Essex, Smale, & Geddis, 1995; McNicholas & Baker, 1995). However, for children between the age of 1 and 2 years immunisation coverage levels over the past several years have stayed the same. Research has found that from 1992 to 1995 immunisation

levels ranged from 84.4% to 83.3% (Essex et al., 1995; McNicolas & Baker, 1995). Overall, these levels of immunisation are regarded as low, and inadequate for controlling and eradicating diseases such as measles and pertussis (Essex et al., 1995; NZCDC, 1992).

In addition to evidencing that childhood immunisation rates (concerning these age groups) in New Zealand have consistently remained low, these studies also indicate a difference in coverage levels for children aged up to 1 year and those between the age of 1 and 2, with the later age group achieving lower immunisation coverage levels. Further research has found that while most children start their immunisation series many fail to receive following immunisations, that is, immunisation coverage levels tend to decline as children grow older, as immunisations are not completed (King, White, & Thomson, 1993; NZCDC, 1992). This decline in coverage levels as children grow older is heightened by the decrease in the number of immunisations given on time. It has been revealed that delay patterns of childhood immunisation tend to increase for later immunisations, as children grow older (King et al., 1993; NZCDC, 1992).

In an effort to improve childhood immunisation rates in New Zealand the Ministry of Health introduced a new immunisation strategy (Public Health Commission, letter to New Zealand health professionals, June, 1995). The National Immunisation Strategy: Immunisation 2000 was developed by the Public Health Commission who convened an expert working group consisting of key members from the health, education, and welfare sectors to assist in its development (Public Health Commission, 1993). Immunisation 2000 came into effect February 1996 with the aim to have at least 95% of children fully immunised by the age of 2 years, by the year 2000 (Public Health Commission, letter to New Zealand health professionals, June, 1995).

Immunisation 2000 has five principle components. These include a simplified immunisation schedule, the introduction of immunisation certificates for

school or early childhood centres, the development of immunisation coverage surveillance information, and the co-ordination of local immunisation services (Ministry of Health, 1996). At the beginning of 1996 the immunisation schedule changed. Because the change in immunisation schedules occurred part way through this study, the immunisation schedules for 1995 and 1996 are presented in Tables 1 and 2, respectively.

Table 1

New Zealand Immunisation Schedule in use until 1995

Immunisations						
Age Due	Hep B	DTPH	Polio	MMR	Td	Hib
6 weeks	**	**				
3 months	**	**	**			
5 months		**	**			
12-15 months	**			**		
18 months			**		**	**
5 years			**			
11 years				**		

Table 2

New Zealand Immunisation Schedule in use after 1995

Age Due	Immunisations				
	Hep B	DTPH	Polio	MMR	Td
6 weeks	**	**	**		
3 months	**	**	**		
5 months	**	**	**		
15 months		**		**	
11 years			**	**	**

Hep B = hepatitis B vaccine; DTPH = diphtheria, tetanus, pertussis, haemophilus influenzae type b vaccine; Polio = poliomyelitis vaccine; MMR = measles, mumps, rubella (german measles) vaccine; Td = Adult type tetanus, diphtheria vaccine; Hib = Haemophilus influenzae type b. (Source: Ministry of Health, 1995, 1996)

The new immunisation schedule involves a reduction in the number of visits to the doctor from seven to five and an added dose of pertussis vaccine to increase protection from pertussis. This new schedule also requires only one second year visit, makes all the first year episodes identical, and involves all school age boosters being given at the same time (Ministry of Health, 1996).

Following the introduction of the immunisation certificates a new set of regulations came into effect under The Health (Immunisation) Regulations

1995. According to these regulations parents are required to have an immunisation certificate for every child and to present these certificates when they enrol their children at an early childhood centre, kohanga reo, or primary school. The certificates contain a record of the immunisation status of every child in New Zealand and this information is recorded in a register. The immunisation certificates are required to be completed and signed by the vaccinator (doctor or nurse) on completion of the series of immunisations for those caregivers who choose in favour of immunisation. For those caregivers who choose not to have their children immunised, the certificate can be signed at any time.

In the case of threat of disease anywhere in New Zealand the Medical Officer of Health will check the register of that area and those children who have not been fully immunised will be offered immunisation. Children who have not been immunised will be requested to stay at home until the disease has passed to reduce its spreading (Ministry of Health & Wellchild, 1996).

These regulations do not limit or affect the rights of children to be enrolled at or attend an early childhood centre, kohanga reo, or primary school, so exclusion from schools or early childhood centres is not part of this policy. However, exclusion of unimmunised contacts of children with measles or pertussis is required by The Health (Infectious and Notifiable Diseases) Regulations 1966 (as cited in Public Health Commission, letter to New Zealand health professionals, June, 1995).

In addition to the new immunisation schedule and the immunisation certificate an attempt is being made to improve the quality of immunisation services with the use of a set of nationally agreed standards for immunisation delivery. These standards stipulate what is acceptable for delivering immunisation services including issues of informed consent, and availability and coverage of services (Public Health Commission, letter to New Zealand health professionals, June, 1995).

Improvements are also being made to the coordination of immunisation services with each Regional Health Authority (RHA) being responsible for the coordination of immunisation services. This involves monitoring progress towards Immunisation 2000, utilising recall techniques to ensure that children do not miss out on immunisation and are offered catch-up immunisation, and ensuring that children do not miss out when they are between different immunisation providers (Public Health Commission, letter to New Zealand health professionals, June, 1995).

In summary, this chapter has provided a background on childhood immunisation in New Zealand. Immunisation has been outlined as a process designed to protect from disease. It has been revealed that there is a considerable amount of information regarding childhood immunisation and childhood diseases made available to New Zealand parents. However, it has been made apparent that there is some argument or debate apparent in the community regarding childhood immunisation with some parents questioning the use of childhood immunisation and asserting the need for parents to make a fully informed decision. It has also been revealed that childhood immunisation rates in New Zealand are low, due to concern over this attempts are being made by the Government to increase these rates.

THE RESEARCH PROCESS

The purpose of this chapter is to detail the research process undertaken in the present study. The research aims are presented, the participants and recruitment process are described along with the interviews and details of the analysis procedure. The ethical concerns of the study are also reviewed.

RESEARCH AIMS

The focus of the present study was on mothers' talk about their decisions regarding childhood immunisation and the factors influencing them; examining in detail how they talk about childhood immunisation, childhood diseases, and their concerns and experiences regarding childhood immunisation. In particular, talk from mothers who had decided for and against fully immunising their children was investigated. The study aims were to explore, compare, and contrast the predominant discourses mothers drew on to talk about their decisions and the factors influencing them, and to construct childhood immunisation.

The functions, including positioning effects, the supporting and challenging of institutions, and the role of discourses in reproducing power relations, were also investigated and explored along with the ideological effects of these discourses. These functions were also compared and contrasted within and between the two sets of mothers. The effects of the functional and constructive nature of the discourses identified were also examined.

PARTICIPANTS

The participants consisted of six mothers who had decided for and eight mothers who had decided against having their children fully immunised. Recent research conducted in New Zealand revealed that the onus for childhood immunisation lies predominantly with mothers (White & Thomson, 1995). Accordingly, participants in the present study were restricted to mothers. Participants were also restricted to mothers who had at least one child no older than 5 years. This criteria was employed for two reasons. Firstly, this meant that the participants had fairly recently or were currently making decisions regarding childhood immunisation, and therefore, the decision making and any influences, experiences, or concerns regarding their decisions would still be relatively fresh in their minds, thus easily recalled. Secondly, their accounts would reflect current issues and concerns prevalent in New Zealand today. This is particularly important in terms of recent changes in immunisation services and the introduction of an immunisation certificate.

A further criteria for participation in the present study was that participants were willing to talk freely about their decisions regarding childhood immunisation and the factors influencing them. Willingness to disclose was indicated by their agreement to take part in the study.

The 6 participants who had chosen to have their children fully immunised consisted of:

Angela who had one daughter aged 3 years old who was up-to-date with immunisations. Angela intended having her daughter fully immunised.

Samantha had one son aged 10 and a half months. Her son was up-to-date with immunisations and she intended having him fully immunised.

Gillian had one son aged 2 years 3 months and she was also pregnant. Gillian's son was up-to-date with immunisations and she intended having him and her next child fully immunised.

Kate had one son aged 2 years 6 months. He was up-to-date with his immunisations and Kate intended having him fully immunised.

Fleur had a girl aged 2 years and 5 months and a boy aged 10 weeks. Both children were up-to-date with their immunisations. Fleur intended having her children fully immunised.

Phillipa had one girl aged 3 years who was up-to-date with her immunisations. Phillipa intended having her daughter fully immunised. Phillipa was the only Maori participant in the study.

The 8 participants who had chosen against having their children fully immunised consisted of:

Mary who had one boy aged 4 and one girl aged 6. Both children had received only their polio, tetanus, and diphtheria immunisations. Mary did not intend them to have any further immunisations.

Caroline had two girls aged 5 and 8 years. Neither of her children had been immunised and Caroline had no intentions of having her children immunised.

Louise had one boy aged 2 years 9 months. He had not received any immunisations and Louise had no intentions of having him immunised.

Jenny had one boy aged 3 years 6 months. Her son had received a tetanus immunisation following an accident. He had also received the first dose of the diphtheria, pertussis, and whooping cough immunisations, but without her

consent. Jenny had no intentions of her son receiving any more immunisations.

Penny had one daughter aged 15 months. Penny had used the homeopathic immunisation program to immunise her daughter. She was also thinking of having her daughter receive the conventional tetanus immunisation, but no others.

Dana had four children aged 10, 9, 7, 5. The 10 and 9 year old had received the first dose of immunisation against polio, diphtheria, and tetanus, but had received no follow-up immunisations. The other two children had not been immunised. Dana intended on having her daughter receive the rubella immunisation.

Michelle had a boy aged 4 and a girl aged 1. Neither of her children had been immunised and Michelle had no intention of them being immunised.

Catherine had an 11 year old boy and a 3 year old girl. Her son had been fully immunised but her daughter had not received any immunisations. Catherine had no intentions of having her children receive any further immunisations.

Although only 14 participants were involved, Potter and Wetherell (1987) assert that in discourse analysis the success or value of a study is not dependent on sample size. The major determinant of sample size in discourse analysis is the research question. For example, small samples, including a single text, can be used to investigate a particular common phenomenon or extensive samples are often used to investigate recurring patterns (Potter & Wetherell, 1987). However, Potter and Wetherell caution against using large sample sizes as the vast amount of data may hinder the emergence of linguistic detail from the text and, in addition to increasing the workload, may not contribute any more to the analysis. Just as much valid

information concerning discursive forms can be obtained from a few interviews as that obtained from a hundred responses on a structured questionnaire. Because discourse analysis focuses on language use, not those who produce it and because considerable amounts of linguistic pattern can emerge from a few people, a small number of interviews is considered sufficient to investigate an interesting range of phenomena of practical importance. Consequently, in the present study 14 interviews were considered adequate for the specific research questions being investigated. It was considered that this number would provide a substantial database from which it would be possible to investigate a large range of linguistic pattern. It would also allow for the investigation of commonality and divergence in the way responses are constructed, the discourses drawn on, and their functions both within and between the two sets of mothers.

The recruiting and interviewing of participants took part in two phases. The first phase involved obtaining and interviewing participants who had chosen not to have their children fully immunised. These participants were located in the Hamilton area, and this phase took place during December and January of 1995. This was before the immunisation changes were actioned, but information about the changes was being publicised at this time. The second phase involved recruiting and interviewing participants who had chosen to fully immunise their children. These participants were obtained from the Palmerston North area and this phase took place during May and June of 1996, after the changes were actioned. The location from which each phase took place was determined by the availability of personal contacts, to facilitate suitable participant recruitment, and the location of the researcher at the time.

Participants were acquired through personal contacts and by word of mouth. Personal contacts were approached by the researcher and informed of the details and purpose of the study and were then asked if they knew anyone who would be eligible to take part, and who was willing to talk about their

decision regarding childhood immunisation. Personal contacts then provided eligible acquaintances with; a brief letter inviting them to take part, a free-post envelope to reply as to whether they would like to be contacted to discuss the study further, and an information sheet detailing the purpose of the research, what it involved, and participants' rights if they agreed to take part (Appendixes A and B). Personal contacts also obtained the phone numbers of acquaintances who were interested in taking part, and agreed to be contacted. Participants also provided phone numbers of acquaintances, or passed on information sheets to acquaintances, whom they thought may be interested in taking part in the study.

The researcher then contacted those mothers who had returned their reply, or had passed on their phone numbers, and discussed the study further. Those potential participants who had not already received an information sheet had the purpose of the study, what it involves, and their rights as participants (should they wish to take part) explained to them. Potential participants' eligibility to take part in the study was also clarified.

INTERVIEWS

Interviews have been used extensively in discourse analysis as they enable the identification and exploration of interpretive practices (Potter, *in press*; Potter & Mulkay, 1985; Potter & Wetherell, 1987). Interviews are a particularly effective way of investigating the range of discourses which people draw on and the functions to which those discourses are put (Potter, *in press*).

Consequently, interviews were used in the present study. More specifically, Patton's (1990) "interview guide" approach to qualitative interviewing was used as it was considered the most appropriate for a number of reasons. Firstly, it is open-ended, enabling respondents to express themselves in their

own words and to do so at length. Responses are not restricted or limited to choices provided by the researcher as in closed quantitative interviews.

Secondly, this approach involves outlining a set of topics to be explored in each interview. This guide or outline serves as a checklist ensuring all relevant issues are discussed in each interview, thus allowing for the comparison of participant responses and linguistic practices. Additionally, the flexibility of this approach allows the interviewer to freely explore, probe, and follow-up on responses within these discussion topics, thereby enabling clarification and indepth exploration into particular issues or topics. Furthermore, topics are not arranged to be discussed in any particular order and the wording of questions is not predetermined, thus permitting flexibility and facilitating a conversational style interview. Finally, this approach allows for a systematic and comprehensive set of interviews and enables the interviewer to make valuable use of the limited time available in the interview situation.

The interviews were designed to elicit detailed talk on decisions regarding childhood immunisation and the factors influencing them including, in particular, talk on childhood immunisation and diseases, and concerns and experiences regarding childhood immunisation. A series of topics including a number of arguments for and against childhood immunisation were explored. The probes used were devised to challenge participant responses, without turning the interview into a dispute, to draw out further talk and reasoning for participant positions. This acted to ensure participants' responses and all topics and issues were thoroughly explored. Probes were obtained from a review of the scientific literature and popular New Zealand magazines and newspapers. Background information was also sought such as the age of the children and immunisation practices within the household. This enabled a profile of the participants to be developed. The interview guides combined are presented as a general guide in Appendix C.

Two pilot interviews were conducted with suitable acquaintances, who did not take part in the study, in order to assess the suitability and effectiveness of the interview guide in drawing out detailed responses, and to practise the interviewing approach. The pilot interviews resulted in a few alterations to the interview guide to refine it further. The interview approach was also modified to facilitate a more conversational style of interview.

For those mothers willing to participate in the study a time and place for an interview was arranged. Prior to the interview the purpose of the study was reviewed and any questions relating to the study were discussed. Participants were also thanked for their time and involvement. Following this, participants signed an informed consent form (Appendix D).

At the beginning of each interview the challenging nature of the interview was explained, and the interviewer disclosed her own views on childhood immunisation as neutral. This was done in the anticipation that it would facilitate elaborated responses and enhance rapport during the interview, and so the participants did not feel that the interview was a personal attack or that their decisions were being disputed. It should be noted that the study was not aimed at validating the concerns or issues expressed by the participants nor was it intended for the purpose of reproaching participants for their decisions. Because the subject of childhood immunisation is controversial the researcher has taken a neutral stance in this study.

The interviews took place in an informal atmosphere and in a setting that was accessible and suitable for both the participant and the interviewer. Interview settings included participants' homes and workplaces, the interviewer's home, and an interview room in the Psychology Department at Massey University.

Each interview took between 35 minutes and 1 hour and was audio-tape recorded. Upon completion of the interview all participants were thanked

once again for their time and participation and were asked if they wanted to receive a summary of the results of the study. All participants requested a summary.

TRANSCRIPTION

In discourse analysis the interviewer's questions and comments play an important part in forming the functional context of the interviewee's responses, and therefore are also considered in the analysis. Consequently, transcriptions including questions and interviewer comment were made from the interview audio-tapes.

The transcription notation system adopted is governed by the type of analysis being conducted. Discourse analysis does not necessitate a transcription containing fine details of intonation and timing. In fact transcriptions involving such fine detail can obstruct the readability of the transcript (Potter & Wetherell, 1987). However, it is important to obtain a clear, readable, and full transcription of all the dialogue that took place during the interview. Accordingly, the transcription notation used in the present study was a restricted selection from a system developed by Gail Jefferson (described fully in Atkinson & Hermitage, 1984). This notation system allows for features that are important for talk-in-interaction to be reported (Potter, in press). These include representations of overlapping utterances, laughter, pauses, extended vowels, and emphasised speech sounds. A list of the notation symbols used is provided in Appendix E.

ANALYSIS

The analysis initially involved reading the interview transcripts and separating talk about specific topics and issues into several categories.

During this process all instances of talk even that which seemed only vaguely related to the topic category of interest were included. This process enabled the transcripts to be divided into manageable chunks and facilitated the comparison of talk in the investigation for patterns.

The analysis then involved reading and re-reading of the interview transcripts to identify patterns in the construction of accounts. Patterns of variability and consistency in the content and form of accounts were identified and explored. The constructions, functions, and effects of the talk were also explored. This process revealed a number of discourses and hypotheses were then formed as to the functional and constructive nature, and the effects of these discourses. The interrelations between discourses were also examined by contrasting the use of different discourses across and within interview accounts and topics. The analysis was conducted with the use of Kwalitan 4.0, a qualitative analysis computer package.

ETHICAL CONCERNS

The present study was conducted within the ethical guidelines of the Massey University Human Ethics Committee and the New Zealand Psychological Society code of ethics.

A number of ethical concerns were addressed in the present study. These included informing participants of all aspects of the research and their rights, including their right to decline to participate, to refuse to answer any particular question, and to withdraw from the study at any time. Consent was also sought for the interview to be audio-tape recorded and for the use of brief quotes in reports of the research.

To protect the anonymity and confidentiality of the participants the interview data were identified by code only and was available only to the researchers.

Pseudonyms are used to identify direct quotations in this report. Any information (such as names of children) that would hint at the identity of the participants was excluded or changed.

It was not anticipated that participation would result in any harm to the participants from the research. Rather, it was anticipated that the research may benefit participants by helping to clarify personal concerns regarding the issues discussed.

ANALYSIS

The analysis resulted in the identification of six predominant discourses which were drawn on to construct mothers' talk about decisions regarding childhood immunisation and the factors influencing them, and to construct 'versions' of childhood immunisation. The purpose of this chapter is to present the discourses identified, examine the functions they serve, and compare and contrast discursive practices within and between those mothers favouring or rejecting the use of childhood immunisation.

IMMUNISATION AS PROTECTION DISCOURSE

The immunisation as protection discourse was characterised by patterns of talk which acted to associate immunisation with resistance or freedom from diseases. It was frequently organised around metaphors such as "defence", "protection", and "safeguard". This discourse appeared in a number of forms and was used by both mothers for and against fully immunising their childhood, but as will be illustrated, to serve different functions by both sets of mothers.

This discourse was drawn on by those mothers who had chosen to fully immunise their children to describe childhood immunisation in a positive manner, and in a way which justified the use of childhood immunisation.

Fleur: It helps the body form a defence against catching these diseases and if they do it's often very minor compared to a major reaction and it helps the body um yeah () form a line of defence. Helps them prepare for it if I'm speaking to someone who had no idea. Or () or what yes what I felt it did and the difference that's what I would say. It helps protect the child or the body against catching any of these diseases at or by having a much lower reaction or an illness because of it.

Phillipa: It's to build up your natural immunity. So your natural body defences will come flocking to the site where the virus is introduced and sort of do a few gestures like that. That's how I think it works. Just enough to kick the defences into being defensive.

Fleur and Phillipa both characterise immunisation as aiding the body in "defending" and "protecting" the child from disease, thus forming an association between immunisation and resistance from disease. Immunisation is considered the "trigger" to the body's own "natural defences" which implies that without immunisation the body will not be able to "protect" itself against diseases. The body is dependent upon immunisation. This discourse also implies that children are exposed to the disease but that the body acts as a "defence". Fleur also states that immunisation may not always protect against diseases, but will lessen their effects. This acts to counter any argument that immunisation does not always work. The use of metaphors such as "protection" and "defence" in the association of immunisation with protection also act to infer that diseases are dangerous and harmful, thus reinforcing the need for this protection. This is evident in a number of the following extracts also.

The immunisation as protection discourse was also used to directly persuade people to use childhood immunisation and to justify why it was used.

Interviewer: If you had to persuade someone why they should immunise their children what would you say?

Gillian: Um () I guess if they put themselves in like their child's shoes and having to suffer that illness. Surely you're making a decision on that child's behalf in the sense of um () immunising. But you also um protecting them from that disease. Which if you haven't done that then um and they end up with it () is that responsible having when the immunisation is available?

Interviewer: Did diseases play a role in your decision for childhood immunisation?

Kate: Yeah, I think that would have been the prime reason you know. I didn't want him catching anything yeah....He was precious and I was so anxious and so worried. There's no way I would even put him at any risk um of () of catching some ghastly disease ((laughter)). So that was quite quite an important part.

These extracts contribute to the association of immunisation with protection by directly claiming (Gillian) and indirectly implying (Kate) that immunisation will "protect" or prevent children from contracting diseases. Kate's comment "no way I would even put him at risk of catching disease" within this context implies that if her son is not immunised he may contract a disease. Gillian uses this association to persuade to immunise and Kate uses it to support her decision for childhood immunisation. Gillian also infers that it is irresponsible not to protect children from diseases, thus, emphasising her point that children should be immunised. Kate also suggests that diseases are easily contracted if not immunised against and that diseases are something that children need protecting from. This is emphasised by her talk about how "anxious" and "worried" she was that her child might catch a "ghastly" disease. Finally, her use of comments such as this was the "prime reason" and was "quite quite an important part" also emphasise the importance of this protection as a decisional factor.

Even when the efficacy of childhood immunisation was challenged the association between immunisation and the prevention of disease was still continued strongly.

Interviewer: Many people would argue that immunisation doesn't work 100% of the time so there's still that risk of catching a disease.

Fleur: Um () yes there is. But it's like there's no guarantees with anything but you take the best precautions that you can. I think I look at it that way. I think that if you don't vaccinate then you're not giving your child any sort of chance or um or almost nil chance of () of safety. But if you do then you're giving them the 95% chance. Um yes there's no guarantees with anything but that's how I look at it. I think that um there's just no guarantees with anything so but you always do what you think is safest. I mean it's it's like everything in life. You strap your children in it doesn't mean that if you have a car accident they're not going to they're going to be o.k. But you always do it because that's the safest way. It's just um it's the safest to me.

Here Fleur continues to draw on the immunisation as protection discourse using talk such as "take the best precautions", "do what you think is safest", and expressing that if children are not immunised then they are given very little chance of "safety". These terms in this context all act to imply that

immunisation is protection from diseases and that this is the "best" and "safest" protection, implying that there is really no other way to protect children from diseases. This enables Fleur to respond to the challenge that immunisation is not 100% effective and still argue for the use of childhood immunisation. This is further supported by her comment that there are "no guarantees with anything" suggesting that it is a common fact in life that nothing is 100% effective but that this is not a good reason not to do these things, such as immunisation. Fleur uses the seat-belt analogy to stress this point. The use of the seat-belt analogy also acts to equate immunisation with the seat-belt in a car suggesting that they do the same thing, that is, keep safe from danger or harm. Using the analogy highlights the importance of the association between protection and immunisation.

The immunisation as protection discourse also appeared in another form which acted to associate immunisation with protection in a social sense. This form of the discourse was characterised by talk that associated immunisation with the protection of others in the community, not just the immediate child, against disease. This form of the immunisation as protection discourse was drawn on only by those mothers who chose to fully immunise their children to reason for the use of childhood immunisation.

Context: Talking about whether all children should be immunised.

Gillian: I think () I still think it's very much a parental () choice. () Um () I still I guess struggle with people who decide not to do it. Also from the um point of view that child children that's not immunised and gets um whatever disease and it. Then they come in contact with a pregnant women or where there's another life affected. U:m I guess I struggle with that and that it's not your child that's solely affected but your child's in contact with pregnant women and then a foetus and yeah that, that concerns me.

Here Gillian talks about immunisation being a "parental choice" but then carries on to say that it is a choice that not only affects the immediate child, but also the surrounding community. The immunisation as protection discourse in its social sense is apparent with Gillian suggesting that by not immunising children others, such as "pregnant women" and unborn children,

will be affected by disease as a result. This implies that by immunising, other members in the community as well as the immediate child, will be protected from diseases. Gillian uses this discourse in this form to assert that parents have a responsibility to the community to stop others from contracting diseases. This also suggests that diseases are spread easily, that is, merely by being "in contact" with someone else. Another noticeable feature of this extract is that Gillian talks about "pregnant women" and unborn children, figures who are seen as vulnerable and defenceless, thus emphasising the need for others in the community to be protected.

This form of the immunisation as protection discourse was also drawn on to defend against the challenge that diseases are harmless and thus immunisation is unnecessary.

Interviewer: Some women have said they've had mumps and they've had measles and they really don't perceive them to be that dangerous because they've had it and it's a normal childhood disease. So they don't feel that vaccination is that important.

Gillian: Yeah that's yeah that's a point. Um it's probably more the inconvenience. It's more actually (). Well it is inconvenient that child's sick cause you can't work and all that sort of thing but it's actually. No it's more () other children at risk. () I guess though they're immunised. But no other babies I mean younger children that are not immunised for that particular thing are at risk. Um () and that's sort of. I just find it socially I don't think that's very acceptable.

Here Gillian starts off by agreeing with the challenge that diseases are not harmful. Instead, diseases are believed to be "inconvenient". But then her reply changes and she draws on the immunisation as protection discourse in a social sense to enable this. She changes the focus from the harmfulness of diseases to the point that "younger children" may be "at risk" of contracting diseases, implying diseases are a danger to younger children, who can not be immunised, if presumably older children are not immunised. However, it is not just other children, but "babies" and "younger children" implying that these children are vulnerable and more susceptible to diseases and thus in need of extra protection. This provides her with an argument for the use of childhood immunisation.

Those mothers who chose not to fully immunise their children also drew on the immunisation as protection discourse, occasionally to serve the same function as those mothers who chose to fully immunise their children, that is, to justify the use of childhood immunisation.

Context: Talking about her comment that she is only against using specific immunisations.

Mary: I'd try to do anything I could to protect my children from something like that. If there was an outbreak of one of those diseases I probably wouldn't hesitate in going and getting them vaccinated.

Here Mary implies that by immunising she can "protect" her children from diseases. The use of the immunisation as protection discourse in this manner enables Mary to justify her claim that she would immunise against specific diseases if there was an outbreak of these diseases.

The immunisation as protection discourse was also used for quite a different function, to justify a stand against the use of childhood immunisation.

Mary: When I was young there was an outbreak of measles. There was an outbreak of mumps. There was an outbreak of (chicken pox) and we all got them and everybody I knew got them and it doesn't seem to happen any more. I don't know what's the story cause they're vaccinating against mumps and measles. I mean little boys should get the mumps for goodness sakes what'll they do if they're older and they get it. Vaccination doesn't yeah. And little girls () what is it rubella? German measles? Something isn't it. I mean why not get it so that they're () immune to whatever. () It's stupid.

The point expressed in this account varies from that offered earlier where Mary comments that she would immunise to protect her children from diseases. Here Mary is asserting that children need diseases. The immunisation as protection discourse is evident where Mary comments that because we are immunising there are no outbreaks of disease and children are not getting diseases such as mumps and measles, thus immunisation is preventing these children from contracting diseases. This association is inferred. Mary uses this discourse to argue that that is why children should not be immunised, because children need these diseases to develop their immunity. This also acts to support the use of natural immunity (acquiring

immunity after developing and recovering from a particular disease) and, thus, the institution of natural health and medicine which supports and recommends the use of natural methods and practices to maintain health.

However, Mary's claim that immunisation frees children from contracting diseases is contradicted by her other uses of the immunisation as protection discourse.

Context: Talking about why she decided against fully immunising her children.

Mary: That's the other thing. So many kids get the diseases they've been vaccinated against.

Here Mary draws on the immunisation as protection discourse to argue that immunisation does not work. This is evident by Mary's claim that immunisation does not necessarily free children from contracting the diseases they have been immunised against, inferring that immunisation is supposed to. This is used to justify why she did not fully immunise her children. This is also at variance with the point expressed in the previous extract. Such variations highlight the different functions Mary is achieving with her talk. This use of the immunisation as protection discourse is more obvious in another example.

Caroline: Immunisations aren't a guarantee that you won't catch the bug.

Interviewer: That's right they say well they said in the pamphlets that it's not 100% but it is 90 to 95%.

Caroline: Well I read studies on epidemics. You know epidemics of various the various infectious diseases that there had been in Britain and the States um on whooping cough and things like that and um () ah the immunised kids were just as many immunised kids got it as those that weren't. So that doesn't hold either you know.

Caroline is using the immunisation as protection discourse here to warrant her decision against childhood immunisation. In this extract Caroline implies that immunisation is supposed to prevent children from contracting diseases. This is evident where she states that immunised children are just as likely to contract the diseases they have been immunised against than unimmunised

children. Caroline uses researched evidence to support this claim ("well I read studies"). At the end of her account she also implies that the medical establishment who assert that immunisation is 90-95% effective misrepresent the facts, that just as many immunised children get these diseases than unimmunised. The point Caroline is making here is that because immunisation provides ineffective protection there is no point in immunising children. This also acts to discredit the institution of conventional medicine which manufactures and promotes immunisation.

In summary, the immunisation as protection discourse involved patterns of talk which acted to associate childhood immunisation with resistance or freedom from disease. The use of this discourse by mothers who had decided to immunise their children acted to construct childhood immunisation as something that is needed and beneficial to the health of children and others in the community. Conversely, the use of the immunisation as protection by mothers who had decided against fully immunising their children constructed childhood immunisation as something unnecessary and of no benefit to child health. These constructions provided a basis which allowed for the justification or challenge of the use of childhood immunisation. Furthermore, by constructing childhood immunisation as something necessary and beneficial to everyone the institution of conventional medicine, which promotes and produces childhood immunisation, is supported and praised. However, by constructing childhood immunisation in the opposite manner the institution of conventional medicine is challenged. The overall effect this discourse has is to create or maintain an image of childhood immunisation as either an appealing means of, or irrelevant to, maintaining child health. The use of the protection discourse was evident throughout the interview transcripts and was frequently drawn on in conjunction with other discourses. This will be illustrated later on in the analysis.

IMMUNISATION AS DESTRUCTION DISCOURSE

The immunisation as destruction discourse was organised around metaphors which associated childhood immunisation with destructive characteristics, such as, "ghastly mutations", "blasting", and "blowing out". This discourse was drawn on only by those mothers who had chosen not to have their children immunised, to justify and support their decisions.

Context: Explaining why she decided not to immunise her children.

Caroline: Um () I can't remember exactly and it's too technical for me to explain and for you to understand. But um () the way that immunisations work when they get into your system and then reach all your body cells. Um some of them it's like () they're implanting in your body dead viruses which actually a virus has to use your body cells to function for them. So by by implanting these viruses in your body cells. () Oh I'm getting out of my own depth here. I () anyway it just seems to be you could be setting up the site for all sorts of ghastly mutations and when that could happen who knows. So ghastly mutations which can result in cancer. Um I really believe that AIDS autoimmune deficiency syndrome I reckon a lot of it has to do with immunisations...and we're just you know we're just BLASTING our immune systems all the time with immunisations.

Caroline describes immunisation as "they're implanting in your body dead viruses". The connotations of this statement are that something deadly or harmful is being used and that this is administered in an unnatural way - "implanted" and "they get into your system". She also draws on the term "ghastly mutations" to describe the result of immunisation, and uses consequences such as "cancer" and "AIDS". Finally, Caroline adds that "we are" "blasting our immune systems" with immunisation. This implies once again that immunisation is destructive. The biomedical terminology used in this extract also helps to add authenticity to Caroline's claim. Overall, the use of the immunisation as destruction discourse enables Caroline to justify her decision against childhood immunisation.

The immunisation as destruction discourse was also drawn on to defend Jenny's point that immunisation is harmful.

Interviewer: You must have heard mothers say that vaccines aren't harmful otherwise why are we giving them?

Jenny: Well that seems really um () I don't know if shallow's the right word. It's just um that's an easy thing to say. If it's you know it hasn't done any harm. Well maybe it hasn't but what good is it doing. You know I don't think it's actually doing anything except um just kind of blowing out your own little system.

Here Jenny refers to immunisation as "blowing out" our "systems", another metaphor for destruction. This acts to emphasise the point that she is trying to make, that immunisations are harmful and therefore should not be used. Jenny also drew on the immunisation as destruction discourse to support her decision against childhood immunisation.

Context: Talking about why people are immunising their children.

Jenny: U:m () I don't know. It's just a habit that people have got into to um immunise your kids, 6 weeks old. And this is a brand new little creature who's so pure and unaffected and yeah. It's () it's that thing of just pumping something foreign into him [her own son] and it's manufactured, it's synthetic, () it's unnatural, it's POISON. Yeah.

The immunisation as destruction discourse is evidenced by Jenny's use of terms such as "unnatural", "poison", and "pumping something foreign" to refer to immunisation. Such terms have connotations of something inflicting harm. These enable her to assert that immunisation is destructive and thus should not be used. By referring to children as "brand new", "little creatures", and "pure and unaffected" Jenny emphasises their vulnerability and defencelessness. This acts to highlight the need for children to be protected from such harm, that is not to be immunised.

In summary, the immunisation as destruction discourse involved talk which associated childhood immunisation with destructive characteristics. This discourse, used solely by mothers who decided against immunising their children, acts to construct childhood immunisation, as something harmful and dangerous to children and their health. This forms the basis of arguments rejecting the use of childhood immunisation. The effect this discourse has is to create or maintain a negative image of childhood immunisation as

something unsafe and to be avoided for the maintenance of child health. Furthermore, by constructing such a negative image of childhood immunisation the institution of conventional medicine, because it produces and promotes childhood immunisation, is once again challenged.

As with the immunisation as protection discourse the immunisation as destruction discourse was evident throughout the interview transcripts, frequently being drawn on in conjunction with other discourses. This will be evidenced later in the analysis.

RISK DISCOURSE

The risk discourse was characterised by patterns of talk referring to statistics, probabilities, and estimated risks relating to childhood diseases and the side-effects of childhood immunisation. This discourse was drawn on by mothers for and against fully immunising their children, but to serve different functions.

This discourse was frequently drawn on by the majority of mothers who chose to fully immunise their children to justify their decisions and to persuade why childhood immunisation should be used.

Context: Explaining why she decided to have her children immunised.

Fleur: Um basically because () to me reading up on not limit. I mean I haven't read into it in a deep way but all your information that's available for everyone. Um there is more chance () of () of damage occurring to the child catching the disease than um than by being immunised a () a reaction to the immunisation. Um looking at the children in the past that have you know had complications with whooping cough and measles um the chance of that is much higher, from what I've read statistically, than a reaction with um the vaccinations () so for me its a safety point of view.

Interviewer: If you had to persuade someone to immunise their child what arguments do you think you would use?

Kate: Um basically I think just that I think the risks of () of not being

immunised they've got a higher chance of getting ill than something going wrong with the immunisation I think.

Use of the risk discourse is evident where both Fleur and Kate draw on terms such as "there is more chance", "the chance of that is much higher from what I've read statistically", and "they've got a higher chance of getting ill". Fleur and Kate use these terms in a manner which plays down the estimated chances or probabilities of side-effects occurring from immunisation and maximises those of contracting a childhood disease or of having complications as a result of contracting a disease if a child is not immunised. The immunisation as protection discourse is also evident here where it is implied that by not being immunised a child is "at risk" of contracting a disease. The comparison between estimated risks and the use of the immunisation as protection discourse enables mothers to present what appears to be a well reasoned and thought out argument or justification for the use of childhood immunisation.

Samantha used the risk discourse in another manner to defend her argument for the use of childhood immunisation against challenge.

Interviewer: Some women I have talked to their views of childhood diseases are that their children are not at risk because they've you know they've got good hygiene, good diet, and they're breast fed. Some believe that the diseases just aren't around or that they're not harmful, it won't affect their babies.

Samantha: I think that that kind of attitude that they're not around is quite ignorant really. I mean it might be a one in a thousand chance or whatever the odds are of your child getting it but I mean what if your child was that one in a thousand. I mean somebody's gotta get it and you know you might be as hygienic as you can be in your own home but you're not gonna live in a vacuum ((laughter)). You can't stay inside your own house all the time you could go to the supermarket () and be in contact with somebody that's got something.

Samantha draws on the risk discourse here to suggest that the specific statistics and probabilities of a unimmunised child contracting a disease do not matter because "somebody's gotta get it [disease]". That is, no matter how high or low the statistics may be there is still a risk or probability of a

child contracting a disease if that child is not immunised (immunisation as protection discourse).

The risk discourse was also used by mothers who chose not to fully immunise their children, however, it was used in a manner which supported their decisions.

Context: Talking about her decisions against childhood immunisation.

Dana: The papers that I read it said I think I'm pretty sure I'm right in quoting this that a child () um that according to the statistics one in a hundred thousand vaccinated children would react to the pertussin vaccine and I just wasn't prepared to take. I mean I know it's a very minor risk but I wasn't prepared to do that not when the consequence is brain damage. I've () I've worked in psychiatry I've nursed kids who've been brain damaged at birth and I've if I had a child like that I don't know what I'd do it would leave me in a terrible dilemma. () Yeah () so I wasn't prepared to take the risk.

Dana uses the risk discourse here when talking about the side-effects of childhood immunisation. She uses this discourse in a similar manner to that of Samantha in the previous extract. That is, the risk discourse is used to suggest that the specific statistics involved in estimating the risk of side-effects as a result of immunisation is not as important as the consequence of the possible side-effects from immunisation. Dana draws on the side-effect of "brain damage" to illustrate the seriousness of these possible side-effects from immunisation and the importance of her point. Furthermore, by drawing on her personal experience with children suffering from brain damage Dana legitimates her anxiety of her children ever suffering from the side-effects of immunisation.

The risk discourse was also drawn on by mothers when discussing childhood diseases, to support their decisions against fully immunising their children.

Caroline: Um I don't know why measles with mumps they say there's a chance is it one in () a thousand or one in one thousand or one hundred thousand men will become sterile because of the mumps. To me that's not a good enough reason to have a vaccination.

Interviewer: I'd heard that but I didn't realise the statistics were that low I thought it was definitely (maybe it's one in a thousand).

Caroline: No it's not () I mean most men sort of my age we've all had mumps and things and there might be the odd one that's um impotent ah not impotent sterile because of it. But um and then again it would be very difficult to prove that a sterile man the reason a man's sterile is because of mumps. I mean men can be sterile for all sorts of reasons just as women can be too you know.

Caroline draws on the probability of becoming sterile as a result of contracting mumps to provide an argument against the use of immunising children against mumps. Caroline argues that the effects of mumps "sterility" could be attributed to something other than having had mumps and this acts to play down the chance of this effect which further functions to support her justification against the use of childhood immunisation. The immunisation as protection discourse is also evident here with Caroline implying that immunisation prevents children from contracting diseases. This helps to justify her decision against childhood immunisation.

Mary drew on the risk discourse in another manner, but to achieve the same function of support for her decision against fully immunising her children.

Context: Talking about why she decided not to immunise against whooping cough.

Mary: Mmm, and I think once they're past it's only from birth to () I don't know the age but it's not very old that they're really at risk from dying from it. They can get very very sick with it () but they're if they're healthy babies, they haven't got much chance from dying from it really, that's what my doctor told me anyway.

Here Mary uses the risk discourse to play down the severity of the effects of diseases on children who contract them by suggesting that children are only at "risk" of such effects as death if they are unhealthy. The risk discourse is used in this manner to justify her decision not to immunise her children against whooping cough. Again, the immunisation as protection discourse is evident here with Mary implying that immunisation will prevent children from contracting diseases. This helps her to justify her argument. Furthermore, Mary legitimates the point she is trying to make by adding that this is what her doctor told her.

In summary, the risk discourse involved talk which referred to the statistics, probabilities, or estimated risks of childhood diseases and the side-effects of childhood immunisation. This discourse serves two functions. Firstly, the use of this discourse, by mothers who decided to fully immunise their children, acts to construct childhood immunisation as something that is needed (when referring to childhood diseases) and safe (when referring to the side-effects of childhood immunisation). Alternatively, when used by mothers who decided against fully immunising their children, this discourse constructs childhood immunisation as something that is not needed (when referring to childhood diseases) and unsafe (when referring to the side-effects of childhood immunisation). These constructions enable mothers to support their justifications or arguments for and against the use of childhood immunisation. The overall positive effect of this discourse is to construct or perpetuate an image of childhood immunisation in a positive manner as something that is suitable for maintaining child health, and thus supporting the institution of conventional medicine, which produces and promotes childhood immunisation. Conversely, the negative effect of this discourse is to present immunisation as something which is irrelevant for child health and that should be avoided, thus challenging the institution of conventional medicine.

DISEASE SEVERITY DISCOURSE

The disease severity discourse involved general and specific references to the effects of diseases which acted to maximise or minimise the severity of childhood diseases. This discourse was used by both sets of mothers, but as will be demonstrated, in a different manner for a different purpose. Mothers who chose to fully immunise their children frequently drew on talk about disease effects which acted to maximise the severity of diseases to defend and justify their decisions.

Context: Talking about why she had her child fully immunised.

Kate: Um if it was just a matter of um if he didn't have it [immunisation] he might get sick and not be very well for a week or two. If that was all there was to it then that might not be so bad. But you know the diseases could () could be fatal or it could leave some um long term effect you know or disability or whatever.

Kate talks generally about the effects of diseases being "fatal", of diseases having "long term effects" or resulting in "disability", which all act to highlight the seriousness of the physical effects of diseases and thus maximise the dangerousness or severity of childhood diseases. This is emphasised by her contrasting these effects with the less serious ones - "he might get sick". Furthermore, Kate's reference to diseases in general, "the diseases" suggests that she is generalising this severity to all diseases. By maximising the severity of childhood diseases in this way it is implied that people, in particular children need protecting from these dangerous diseases. By drawing on the immunisation as protection discourse also, Kate is able to justify her decision to fully immunise her children. Later on Kate drew on specific disease effects to further substantiate her decision for childhood immunisation.

Interviewer: Some women have said that childhood immunisation is unnecessary because the diseases aren't harmful. They might use the example of measles as just being a normal childhood disease that they had when they were young so why do children need immunisation against that?

Kate: Um () some of those like mumps when they get older you know if they contract it when they're old it can like for a man he can become um sterile. I think that's certainly a you know a negative consequence of getting mumps. Um so if they're not immunised they might not necessarily get it as a child but they could get it when they're older um. () Diphtheria, my brother had that. Um he's a lot older than me but he had that as a little tot and he was very ill with it and I think he could have died from what my mother said (). So I I you know I don't know a lot about them personally. But you know just from what I've read or you know () I wouldn't like my child to be in that situation. I would not place him if there was anything I could do to prevent him from getting ill or being placed in any danger I would do it.

Here Kate draws on examples of the effects of mumps and diphtheria such as becoming "sterile", "could have died", and diseases in general "placed in any danger" to make her point that the effects of diseases can be fatal, thus

maximising the severity diseases. The fact that she uses an example of someone she knows adds further credibility to this point. At the end of the account she adds a general effect of diseases "getting ill" and children being "placed in danger", once again generalising this severity to all diseases. Kate uses these examples to imply that children, and in particular her child, need protecting from these diseases, and that by not immunising, children are in fact placed in "danger" of contracting diseases (immunisation as protection discourse).

Phillipa used this discourse in another manner by drawing on the wider social effects of diseases to maximise their severity. This was used to justify her use of childhood immunisation and to argue for others to immunise their children.

Context: Talking about why she chose to immunise her daughter.

Phillipa: Also there's a cultural reason. Early this century a lot of Maori people well the Maori population was decimated by smallpox and these communicable childhood diseases and I don't want to see that again.

Here Phillipa draws on the general effects of diseases as wiping out populations, thus highlighting the seriousness of their social effects. What could possibly be worse than this? This provides a picture of childhood diseases as a critical social problem, differing from the previous extract where diseases are expressed as a serious physical problem. This also helps Phillipa to express her concern not only for her own child but for the whole Maori population. By using the disease severity discourse to justify her decision for childhood immunisation Phillipa is also drawing on the immunisation as protection discourse, that is she is implying that immunisation will protect children from disease.

Phillipa also drew on the particular social effects of mumps to highlight the severity of diseases. Once again this was used along with the implication that immunisation is protection (immunisation as protection discourse) in justifying her decision for childhood immunisation. By drawing on the

specific effects of mumps Phillipa is able to add credence to her point. However, it also limits the force and generality of her comments.

Context: Talking about why she decided for childhood immunisation.

Phillipa: The other thing would be side-effects. Um one of my cousins he had mumps. He's about 45 now and he can't have kids. He's maori it means a lot to him he's adopted his wife's kids but I think when he talks about that he's quite sad. So these are side-effects you can get if it's allowed to run riot through a family or families.

Mothers who chose against fully immunising their children also drew on the disease severity discourse. Occasionally, this was used in the same manner and to serve the same function as mothers who chose to fully immunise their children. However, it was more frequently used in a different manner which acted to minimise the severity of diseases to defend and justify their decisions.

Context: Talking about why she decided for and against specific vaccinations.

Dana: I never had any problems about the polio sip and that and I still have fears about there being a resurgence of a polio epidemic and I see polio as primarily because it's a crippling disease you know and there's nothing that can fight it () you know. I mean if a child gets um () meningitis secondary to rubella or even whooping cough the modern medicines that we've got now you know and if I'm smart enough I can get the child in there. And um and tetanus too you know there's all there's antibiotics and anti-inflammatories that you can give them but polio no there's nothing.

Context: Talking about the side-effects of whooping cough immunisation and why she decided against childhood immunisation.

Caroline: The thing is if your child does contract whooping cough it's not a killer. They can get over it. It's treatable it's not a you know it is unsettling cause they do have this cough with a big hoof at the end I guess and that you know but um mm.

Dana and Caroline both draw on specific disease examples such as rubella, tetanus, and whooping cough and use terms like "not a killer", "they can get over it", "it's easily treatable" and referring to these diseases as treatable with "antibiotics and anti-inflammatories" to suggest that the effects of these diseases are minor. This has the effect of minimising the severity and harmfulness of these diseases and thus suggests that people, in particular

children, do not need protecting from these diseases. By using this discourse in this manner to justify their decisions against immunising their children against these specific diseases Dana and Caroline are also implying that immunisation is protection from disease (immunisation as protection discourse). Once again using specific examples like these also gives credence to the point being made. Dana also draws on the disease severity discourse in a contradictory manner in this extract. She talks about the specific effects of polio "it's a crippling disease" drawing on the serious effects of polio and thus maximising the severity of polio. Again by using this discourse to justify her decisions to specifically immunise her children against polio, Dana is also implying that immunisation is protection (immunisation as protection discourse).

In summary, mothers who chose to fully immunise their children drew on the disease severity discourse in a manner which functioned to maximise the severity of diseases, overall, this acted to construct childhood diseases as dangerous and harmful. Alternatively, mothers who decided against fully immunising their children tended to draw on this discourse in a manner which functioned to minimise the severity of childhood diseases, this acted to construct childhood diseases as harmless. These constructions have the effect of suggesting that people, in particular children, either need to be or do not need to be protected from childhood diseases. These constructions used with the immunisation as protection discourse serve two functions. Firstly, by constructing childhood diseases as harmful, this discourse along with the immunisation as protection discourse, validates the use childhood immunisation. By doing so this discourse also supports the institution of conventional medicine, as this institution produces and promotes childhood immunisation. Conversely, by constructing childhood diseases as harmless, this discourse along with the immunisation as protection discourse, invalidates the use of childhood immunisation. This operates to challenge the institution of conventional medicine.

IMMUNE SYSTEM DISCOURSE

This discourse was characterised by patterns of talk referring to the immune system. Mothers, who decided against fully immunising their children, gave a number of accounts drawing on understandings of the immune system, how it functions, and its role in disease to justify and support their decisions and arguments against the use of childhood immunisation. The immune system discourse was evident in a number of forms. One form in which the immune system discourse appeared was that which involved talk which associated the immune system with diseases to suggest that diseases are needed and beneficial for child health.

Interviewer: What about immunisation for other children are you against immunisation all together or do you think parents should have a choice?

Dana: I hate the way they now immunise for mumps, measles, and rubella. I mean to me they're normal childhood disease processes that are there BIOLOGICALLY and NORMALLY, NATURALLY to challenge the immune system. To assist it in its full maturation process or its full developmental process. So if you stop a child from going through that if you're just kind of tickling the immune system rather than giving it a full dose what you're gonna have is an immune system that functions part way.

Here Dana associates diseases with the immune system by expressing that diseases are needed to aid in the development of the immune system. This is seen as a "normal", "natural" process which implies that we should not be interfering with it. However, because immunisation prevents disease (immunisation as protection discourse) it interferes with this process. Therefore, this discourse is used to suggest that children should not be protected (immunised) against childhood diseases because these diseases are needed, thus allowing Dana to provide an argument against the use of childhood immunisation. This point is contradictory with one expressed earlier where Dana expressed that her children needed immunising. However, this contradiction is achieved by drawing on different specific disease examples. In this extract Dana is referring to mumps, measles, and rubella to help her justify her stand against immunisation from these

diseases, whereas, in her previous extract she referred to polio and it's "crippling effects" to justify the use of childhood immunisation against polio.

The immune system discourse was also used in another manner which associated the immune system with diseases to assert that children with healthy immune systems do not need protection from diseases.

Context: Talking about the fact that some of her children contracted whooping cough.

Dana: Um of course I always say well my children cope really well with the normal childhood illnesses because they haven't had their immune systems mucked around with.

Dana associates the immune system with diseases by claiming that children with healthy immune systems can cope with childhood diseases. This acts to explain why her children were not adversely affected by the whooping cough disease and suggests that protection from diseases (immunisation) is unnecessary. Dana also draws on the immunisation as destruction discourse in conjunction with the immune system discourse. This is evident when she states that her children have not had their immune systems "mucked around with" implying that immunisation "mucks up" (metaphors for damage) young immune systems. Overall, this implies that if children have healthy immune systems, which can be maintained by avoiding immunisation, they do not need protection from diseases.

Michelle also uses the immune system discourse to enable her to support her decision against childhood immunisation.

Michelle: That's another reason why I'm against vaccination is I actually believe that your immune system needs to be challenged by a lot of the infectious diseases to actually mature properly.

later she states

I believe that's [getting infections] all part of the process as well. If you don't let your immune system work you can't expect it to work well and when. You

know that's the other theory of course is that immature immune systems are much more susceptible to cancers and things.

In the first part of this extract Michelle uses the immune system discourse much in the same manner as Dana in the first extract. However, she goes one step further to support her decision against childhood immunisation by associating the hinderance of this developmental process with further disease such as "cancer". This relationship with immunisation is similar to that when drawing on the immunisation as destruction discourse - immunisation is destroying future health.

The immune system discourse was also used frequently in conjunction with the immunisation as destruction discourse.

Context: Talking about the side-effects of childhood immunisation.

Caroline: What a BOMBARDMENT for their poor little immune systems. Oh it makes me cringe.

Caroline draws on the immunisation as destruction discourse, evident by the use of the term "bombardment", when referring to immunisation and this destruction is directed at the immune system. These discourses were frequently used together to justify why childhood immunisation was not used.

Context: Talking about why she decided against childhood immunisation.

Penny: It suppresses the immune system and so children get recurrent ear problems, ear infections, colds and later can be prone to things like ME.

Penny talks about immunisation "suppressing the immune system", thus drawing on the immunisation as destruction and immune system discourse. This acts to associate immunisation with the destruction of the immune system and Penny lists the immediate and future health effects that this might have to warrant her decision against childhood immunisation.

Overall, the immune system discourse was characterised by talk referring to the immune system, how it functions, and its role in disease. This discourse

was used to provide the basis for a number of arguments against the use of childhood immunisation. These arguments included the need for childhood diseases to develop the immune system and that without this developmental process children can become susceptible to serious disease later on; that as long as children have healthy immune systems they can cope with childhood diseases; and finally, that immunisation directly destroys the immune system which can result in serious repercussions for the health of children. The effect this discourse has is to provide and maintain an image of childhood immunisation as detrimental to the immediate and future maintenance of child health. This acts to challenge the institution of conventional medicine which produces and supports the use of childhood immunisation. As illustrated the use of this discourse also supports the idea and use of active natural immunity. As a result, the institution of natural health and medicine, which advocates the use of natural methods and practices to maintain health, is supported.

THE ESTABLISHMENT DISCOURSE

The establishment discourse involved patterns of talk referring to the medical establishment (health professionals, such as doctors, nurses, and drug companies) and its actions. This discourse was evident in a number of forms and was drawn on by both mothers for and against fully immunising their children, but to serve two opposing functions. Mothers who chose not to fully immunise their children used this discourse in a manner which acted to challenge the medical establishment and its actions. This discourse was used by these mothers to help them make their point or to defend or support arguments and decisions against the use of childhood immunisation.

The establishment discourse was frequently used by mothers in response to the question of "why are we immunising children?", particularly when this question was used to challenge the argument given by the mother that

immunisation is harmful to children.

Interviewer: So if childhood immunisation is so harmful why do we use it.=

Caroline: =Money.

Interviewer: Money?=-

Caroline: =Money. Drug companies make MEGA bucks out of your immunisations. () Mega mega mega bucks and () yeah money's got to be a big one.

Here Caroline expresses that a major reason immunisation is around is to benefit the drug companies, financially. What is also evident here is that Caroline generalises this claim to all drug companies that produce immunisations. This functions to accuse the drug companies, who make and promote childhood immunisations, of acting solely in the interests of their own profit.

Penny used another dimension of this discourse to defend her argument against childhood immunisation from challenge.

Interviewer: What about the responsibility to the community argument, that you have a responsibility to the community to help get rid of these diseases?

Penny: Oh well that's just propaganda (). Diseases were well on the decline before vaccinations came in. There's lots and lots of evidence of that.

Interviewer: But the doctors would say the opposite. They would say well it was declining but it declined more when they brought in immunisation.

Penny: Everyone's entitled to their opinion. But I mean doctors get so many spin-offs trips and pens and dinners and.

Interviewer: From these companies?

Penny: Oh yeah from the drug companies yeah yeah. Definitely () yeah () of course they're going to push things that have got all these perks for them.

Penny draws on the establishment discourse here to defend her claim that immunisation is not responsible for disease decline. Here Penny discredits the claim that disease decline is due to immunisation by suggesting that doctors who support this claim and thus support and promote immunisation are doing so for the benefits incurred by the drug companies who manufacture these immunisations. Penny claims these benefits are conditional upon the promotion of immunisations. Again this claim refers to

doctors in general. This discourse functions to accuse doctors of acting selfishly, for their own personal benefit, as opposed to the well-being of children.

The establishment discourse was also evident in a form which functioned to question the opinion that 'the establishment knows best'.

Context: Talking about adverse effects resulting from immunisation and why she decided against fully immunising her children.

Dana: Yeah () cause it's only been um what eight years that they've realised that all those vaccines they gave that were in you know human blood might have been contaminated. It's not good enough. It's, it, I mean these are the people that we look up to for you know to know their stuff. I mean the common opinion well it's getting a bit you know within the last decade it's been a bit shaken about. But commonly people kind of said God oh God see doctors as God and scientists as knowing it all it. I mean so often they'll put things out there that they haven't thoroughly known about you know and a lot of that. A lot of their motivation for getting it out there and using is for monetary gain or for kudos or accolade for themselves (). It's not good enough.

Here Dana draws on an example of a medical mishap to support her claim that doctors and scientists, in general, do not know enough about the products they are using. This acts to challenge the extent of the knowledge of the medical profession and thus their qualification for judging what is good or bad for the health of New Zealanders. Furthermore, Dana accuses doctors of acting in their own personal interests, regarding childhood immunisation. This discourse is used to support her decision against fully immunising her children.

Caroline drew on this discourse in another manner when explaining why she did not discuss her decision with any health professionals. The use of the establishment discourse was also evident in Catherine's talk on the use of the new childhood immunisation certificates.

Interviewer: Did you talk with any health professionals about your decision?

Caroline: It's not something you can discuss and get () a reasonable answer from a health professional. You'll just get a whole lot of blackmailing bullshit and they'll try and scare you. They basically what they try and say is () they

portray the image that your children will die if they don't get immunised and it's bullshit you know.

Context: Talking about the new immunisation certificates.

Catherine: Oh yeah those little certificates you're gonna have to have at school and stuff like that. And they can ask your child to be withdrawn and all. I mean so what (). Yeah they'll make up lots of little () little um epidemics to try and pressure us all to immunise our children yeah.

Caroline draws on health professionals using "blackmailing bullshit" and "scare tactics" to get parents to immunise their children. This acts to depict health professionals as dishonest and devious. Furthermore, Catherine's extract functions to portray health professionals also as trying to intimidate parents into immunising their children, and as being dishonest.

Mothers who chose to fully immunise their children also used the establishment discourse, but in a different manner, to promote the medical establishment and its actions. This discourse was used by mothers to enable them to substantiate their points and arguments for the use of childhood immunisation. Fleur drew on the establishment discourse to defend the actions of health professionals from the claim that they are acting on behalf of their own self-interests, that is, for personal profit.

Interviewer: Some women that I've talked to believed that the motivation behind immunisation is the money for the drug companies. What do you think the motivation behind it is?

Fleur: There could be a little bit. I mean that's realistic that's real life um. But I certainly don't feel. I mean doctors aren't getting a cut, Plunket nurses aren't getting a cut, um a lot of people out there who are pro-vaccination aren't getting a cut. So I mean a lot of people who are keen on it or recommend it are doing it on personal belief on what they believe is good for children. They're not doing it because drug companies are slipping them something in their back pocket. So I really feel that that's fairly nothing.

Fleur refutes the claim that the motivation for immunisation is money for the drug companies. She does this by detailing that those who promote immunisation do not receive any money so this can not possibly be their motivation for immunising. This point is emphasised with her use of a three point list ("doctors aren't getting a cut, Plunket nurses aren't getting a cut,

um a lot of people out there who are pro-vaccination aren't getting a cut"). This acts to portray health professionals as sincere and trustworthy. Furthermore, Fleur claims that the motivation for health professionals to use immunisation is to benefit children, thus, also portraying health professionals as acting altruistically.

This discourse was also used when the safety of immunisations was questioned.

Interviewer: Does the number of immunisations they receive concern you at all?

Phillipa: () No no it doesn't worry me. () I think. Yeah I think maybe they [health professionals] they felt research has dictated that the child can stand that amount of () whatever vaccine.

Here Phillipa illustrates a trust and confidence in health professionals and she draws on this to support her lack of concern for the number of immunisations that children receive. Kate used another dimension of the establishment discourse.

Interviewer: I talked to one women who had decided against childhood immunisation and um she said she would have been happier not knowing she said she would have just gone along with it it's a tough decision?

Kate: Yeah I think it is good that people that people are presented with both arguments and they can make an informed decision about it. But um () I think there are a lot of people out there who probably just like me who don't know. They don't understand the sort of medical details and they just have to trust the judgement of their doctor. Or () or the they don't know if they've read something in a magazine how true it is.

Kate claims that she trusts the judgement of her doctor to guide her decision thus drawing on the establishment discourse. This functions to portray health professionals as a trustful and knowledgeable source of guidance as opposed to people who can not be trusted.

In summary, by drawing on patterns of talk which acted to denounce and discredit the medical establishment, the establishment discourse, used by mothers who chose not to fully immunise their children, constructed a less

than complimentary depiction of the medical establishment. This enabled mothers to make a point or to support or defend their arguments and decisions against the use of childhood immunisation. The effect this use of the establishment discourse has is to create or perpetuate a distrust and scepticism in the medical establishment and its actions. Furthermore, by portraying the medical establishment in such a negative manner this discourse also acts to challenge the institution of conventional medicine. This is because the members of the medical establishment talked about in these extracts (doctors and drug companies) are an integral part of the institution of conventional medicine. Therefore, because the medical establishment is portrayed in such a negative manner so too is the institution of conventional medicine.

Conversely, by drawing on patterns of talk which acted to compliment and commend the medical establishment and its actions, the establishment discourse when used by mothers who decided to fully immunise their children acted to construct a favourable portrayal of the medical establishment. This use of the establishment discourse enabled mothers to make their point and to defend their arguments and decisions for the use of childhood immunisation. The overall effect this discourse has is to create or perpetuate trust and faith in the medical establishment and its actions. Consequently, this discourse also acts to support the institution of conventional medicine by portraying the medical establishment, who as mentioned earlier are an integral part of this institution, in such a positive manner.

DISCURSIVE POSITIONING, RIGHTS AND POWER

In the previous section the particular functions served by the discourses drawn on by mothers in their talk, and how these discourses acted to support and challenge the institutions of conventional and natural health and

medicine, were discussed. The aim of this next section is to explore and discuss the positioning effects, the power relations reproduced within, and the ideological effects of these discourses.

Within these texts, three types of person were frequently referred to: mothers; children; and health professionals (doctors, nurses, and drug companies). These persons occupy particular subject positions within these discourses, which carry with them certain rights and responsibilities. All discourses discussed position mothers as carers and protectors of children. Within this position mothers are concerned with and have a responsibility for looking after children which includes protecting and caring for them and, in particular, their health. Extracts from Mary and Dana provide examples of this positioning.

Mary: I'd try to do anything I could to protect my children from something like that [disease].

Dana: According to the statistics one in a hundred thousand vaccinated children would react to the pertussin vaccine and I just wasn't prepared to take. I mean I know it's a very minor risk but I wasn't prepared to do that not when the not when the consequence is brain damage.

What is evident here is that both Mary and Dana express a concern for their children's health and safety, and a want or responsibility to protect their children from possible harm. This illustrates how Mary and Dana are positioned, as mothers, as carers and protectors of children, in particular their own children. Occasionally, within this positioning the concern and responsibility for children and their health extends to other children and even other members of the community, such as pregnant mothers. It should be pointed out that the discourses drawn on position all mothers (not just those involved in the study) as carers and protectors.

The extracts given by Mary and Dana also illustrate that the responsibility for children and their health includes protecting children from a number of

things which vary depending on the discourse drawn on and the function that it serves. For example, the immunisation as protection discourse may position mothers as protecting children from diseases through immunisation, whereas, the immunisation as destruction discourse may position mothers as protecting children from the effects of childhood immunisation through not immunising them. This not only highlights the differences in responsibilities assigned to mothers, according to the discourse drawn on, it also shows how discourses, which are essentially opposed, serve to offer the same nurturing caring position to mothers.

By positioning mothers as carers and protectors of children, mothers are given the right to decide, do, and express what is 'best' for children, and more specifically, what is best for their health including, for example, whether children should or need to be immunised or not. Therefore, this position is an active one in that mothers play an active part in child health, such as making decisions. What is also evident is that this positioning reinforces the institution of motherhood. Motherhood involves nourishing, nurturing, protecting, and caring for children. Therefore, discourses which position mothers in such a manner naturally support and maintain this institution.

In these discourses, children are positioned as vulnerable and defenceless. They are, therefore, regarded as in need of care and protection from such things as diseases or damage incurred by immunisation. Again this differs depending on the discourse drawn on. Extracts from Phillipa and Jenny provide examples of this positioning.

Interviewer: So do you feel children need to be immunised against these diseases?

Phillipa: I think so just because they're little they're vulnerable they seem vulnerable to everything and they can so easily die.

Jenny: And this is a brand new little creature who's so pure and unaffected and yeah. It's () it's that thing of just pumping something foreign into him [her own son] and it's manufactured, it's synthetic, () it's unnatural, it's POISON.
Yeah.

Here Phillipa and Jenny both draw on terms such as "vulnerable", "can so easily die", "brand new little creature", and "so pure and unaffected" which act to position children as vulnerable and defenceless. This position holds no rights or responsibilities, except for the right to be cared for and protected. In relation to the carer-protector positioning of mothers, children are identified as passive receivers and in need of this care and protection.

Within these discourses health professionals, such as doctors, are positioned in a variety of ways. To begin with, they are frequently positioned as authorities or experts on, and carers of health, particularly by discourses drawn on by mothers who decided for childhood immunisation. This position credits these professionals with medical knowledge and experience, and requires them to be concerned for the health of children and New Zealanders in general. Consequently, this position grants health professionals with a number of rights and responsibilities which include, caring for and looking after the health and well-being of New Zealanders and their children, deciding and doing what is 'right' or 'best' for the health of children, offering advice, information, and instruction on health issues, and promoting and using medicines for protecting and maintaining health, such as childhood immunisation.

As can be seen the positioning of health professionals as experts and carers of health brings with it similar rights and responsibilities as the positioning of mothers as carers and protectors of children. For example, both positions include the responsibility of caring for children and their health, and the right to decide and do what is 'best' for children. However, there are two noticeable differences between these positions and the rights and responsibilities attributed to them. Firstly, because health professionals are credited medical knowledge and experience they are given greater rights and responsibilities with regards to looking after the health of children and New Zealanders in general. Secondly, the immediate concern for mothers is to care for and protect their own children before others, whereas, health

professionals are concerned for all children. Two extracts from Kate illustrate the position given to health professionals as experts or authorities and carers.

Interviewer: Um now do you feel this way about immunisation in general or do you think that specific vaccinations are more important than others?

Kate: I haven't really given it any thought () I guess I just have to trust I do trust what my GP advises.

Context: Talking about the motivation for childhood immunisation regarding health professionals.

Kate: Oh um () I believed it was really to have a healthier community and to try and eradicate disease and um () you know () lessen the risk of children getting ill and having the long term effects from it.

In the first extract Kate expresses that her GP is a source of advice, whom she can trust, on matters concerning health, such as childhood immunisation. This acts to position health professionals as authorities in the area of health and as people whom mothers can go to for help and advice. In the second extract Kate implies that health professionals are immunising to benefit the health of children and New Zealanders in general. This acts to position health professionals as carers who are ultimately concerned for the health of New Zealanders.

A number of discourses provide health professionals with a subject position which is contradictory to that previously discussed. That is, health professionals are often positioned as neglectful of and incompetent in health care. Discourses drawn on by mothers who decided against childhood immunisation tended to position health professionals in this way. Within this position health professionals have limited medical knowledge or experience, and disregard or have no concern for the health and well-being of New Zealanders or their children, they may even do things which result in or cause damage or harm to them. Consequently, this position provides health professionals with less rights and responsibilities than that of the carer and expert position. That is, health professionals are given less right and responsibility to care for and look after the health of children, decide what is 'right' or 'best' for the health of children, and to offer advice, information,

and instruction on health issues. This positioning is evident in extracts provided by Mary and Dana.

Context: Talking about why she decided against childhood immunisation.

Mary: How many times are health professionals wrong or how many times have they you know lived out gone through the cycle of giving this and then decided that they're wrong yeah nobody asks questions it really annoys me.

Context: Talking about the serious side-effects of childhood immunisation and her decision against fully immunising her children.

Dana: Who would have willingly do that I mean for me it's like taking my six week old baby out into the street and saying well if a car hits it it hits it same as you know taking it to. The doctor saying well chances are this [immunisation] is going to disrupt this babies routine and it might cause it brain damage I mean I just that was my attitude at the time.

Here Mary argues that health professionals are often wrong which acts to position them as limited in medical knowledge, and thus incompetent in health matters. Dana implies that doctors are aware of the severe consequences of childhood immunisation and yet they still immunise children. This acts to position health professionals, such as doctors who administer childhood immunisation, as having no regard or concern for the health or well-being of children.

With regards to the power relationships reproduced within these discourses, one relationship which is evident is that of mothers having power over children. This relationship is evident in the positioning of mothers as carers and protectors of children and their health, and of children as vulnerable and defenceless, and the rights and responsibilities of these positions. For example, mothers are given the right to decide what is 'best' for children and children are passive receivers of this care. Ultimately, this relationship means that mothers can make decisions concerning (their) children without consultation with the child, for example. This relationship between mothers and children is evident in Gillian's extract where she expresses that, with regards to deciding for or against childhood immunisation, mothers are making the decision for the children.

Gillian: You're making a decision on that child's behalf in the sense of um
() immunising but you are also um protecting them from that disease.

Within these discourses a number of power relationships between mothers and health professionals are also reproduced. With regards to the positioning of health professionals as experts on and carers of health, health professionals are given the greater power over children by mothers, in particular those who decided for childhood immunisation. This relationship becomes evident when the differences between the positioning of mothers and health professionals and the rights and responsibilities attributed to these positions, are examined. As mentioned earlier the positioning of health professionals as experts and carers of health credits health professionals with medical knowledge and experience, which mothers do not have. As a result, health professionals are given greater rights and responsibilities, with regards to looking after children and their health, and therefore, are ultimately given greater power over children, than mothers. What this means is that health professionals can, for example, make decisions, and take action, for mothers with regards to matters concerning the health of their children. This relationship is illustrated in an extract from Kate.

Kate: I think there are a lot of people out there who probably just like me who don't know they don't understand the sort of medical details [regarding childhood immunisation] and they just have to trust the judgement of their doctor.

Here Kate implies that doctors have a knowledge of health and medicine that mothers do not have, therefore, doctors can make "judgements" or decisions for mothers regarding, for example, childhood immunisation.

This extract from Kate provides an example of how power over children is given to health professionals by mothers. This power relationship provides an illustration of the link of knowledge to power. That is, knowledge is equated with power, those who are more knowledgeable (in this case the health professionals) are credited more power.

This power relationship is supported and maintained by those discourses which support the institution of conventional medicine. That is, because this institution is made up of those health professionals talked about in the accounts given by mothers, when the institution of conventional medicine is supported so too is the positioning of these health professionals within these discourses and thus the power relations in which they are involved.

Another element of the discourses drawn on by mothers, in particular those who decided for childhood immunisation, is that a number of these discourses serve to support conventional medicine, and its ideology. One aspect of the ideology of conventional medicine is that good health can be promoted, restored, maintained, and protected with the use of conventional medicines. More specifically, it is held that illness and disease must and can be treated, prevented, or that people can and must be protected from illness and disease through the use of conventional medicines, such as childhood immunisation. Discourses which support this ideology include the immunisation as protection discourse. By associating childhood immunisation with resistance or freedom from disease, the immunisation as protection discourse is frequently used in a manner to suggest that immunisation prevents or protects children from disease. The disease severity and risk discourse also support the ideology of conventional medicine by reinforcing that diseases must be prevented to maintain the health of children. Furthermore, throughout these discourses, diseases are referred to as something that can only be dealt with by technical means, that is with medicines such as immunisation. Overall, by supporting conventional medicine and its ideology in this way the use of these discourses may have positive repercussions for the acceptance and use of childhood immunisation along with other conventional medicines by the public.

Investigation and exploration into the power relations reproduced within, and the ideological effects of, these discourses also revealed some resistive discourses, which offer opposition to the power relations just discussed, and challenge the dominant ideology of conventional medicine. These were used solely by those mothers who decided against fully immunising their children.

To begin with, with regards to the positioning of health professionals as neglectful and incompetent at health care, health professionals are given no amount of power over children by mothers. Once again, this power relationship is evident in the positioning of health professionals and mothers and the rights and responsibilities of these positions. By positioning health professionals as neglectful and incompetent they are credited with limited medical knowledge and experience. Consequently, health professionals are given less rights and responsibilities in terms of looking after children and their health, particularly in respect to that given by positioning them as experts and carers. As a result, health professionals are ultimately allowed no power over children, by mothers. Once again the link between knowledge and power is evident here. What is also evident, is that by positioning health professionals as neglectful and incompetent mothers are resisting the power relationship discussed earlier, of power given to health professionals over children by mothers. Instead mothers are retaining their power over children and thus also preserving their personal autonomy against invasion by health professionals. What this all means is that mothers can, for example, make decisions and take action regarding matters concerning the health of their children, such as childhood immunisation, without and perhaps even against consultation with health professionals. This relationship is illustrated in an extract from Mary.

Context: Talking about why she decided against childhood immunisation.

Mary: How many times are health professionals wrong or how many times have they you know lived out gone through the cycle of giving this and then decided that they're wrong yeah nobody asks questions it really annoys me.

Here it is evident that by positioning health professionals as being limited in medical knowledge and thus incompetent in health matters Mary is able to reinforce her decision against childhood immunisation. That is, Mary has taken the right and responsibility of health professionals to decide what is 'best' for her children and claimed it for herself.

This retaining of power by mothers is supported and maintained by those discourses which support the institution of natural health and medicine. This

institution advocates the use of natural methods and practices to maintain health. The use of natural methods such as acquiring natural immunity to disease means that mothers have to take responsibility and control over the health of their children, by for example ensuring that their children are exposed to the diseases. Therefore, by supporting this institution discourses are also supporting and maintaining the power of mothers, as opposed to health professionals, over children and their health.

Another aspect of the discourses drawn on by mothers is that a number of them challenge the traditional ideology surrounding health and medicine. That is, certain discourses challenge conventional medicine, and its ideology. The immunisation as protection discourse does so when used to argue that childhood immunisation is ineffective, thus questioning whether immunisation (conventional medicine) can prevent or protect children from disease. By constructing childhood immunisation as harmful and unsafe for children and as detrimental to their immediate and future health, the discourses of immunisation as destruction, risk, and the immune system challenge the idea that conventional medicine promotes and maintains good health, maintaining that it does the opposite. Furthermore, the use of the disease severity and immune system discourses to construct childhood diseases as harmless and to assert that they are beneficial to the immediate and future health of children contests that childhood diseases must and need to be prevented or that children need protecting from them. Additionally, throughout the use of these discourses, in this manner, diseases are not referred to as something that must and can only be dealt with in terms of conventional medicines, but instead are put into the sphere of lay treatment and control.

As hinted at above and discussed in the previous analysis section, the immune system discourse, which involves talk referring to the immune system, how it functions, and its role in disease, supports the practice of natural immunity and the development of the immune system through

natural exposure to illness and disease. By doing so this discourse ultimately supports natural health and medicine, and its ideology. One aspect of the ideology of natural health and medicine is that health can be promoted, maintained, and restored through the use of natural methods, as opposed to using conventional medicine, such as childhood immunisation. Thus, by supporting the use of natural methods and practices, such as natural immunity, the immune system discourse reinforces and maintains this ideology.

Furthermore, those discourses (previously discussed) which resist conventional medicine and its ideology by supporting arguments and constructions of childhood immunisation as ineffective protection, that immunisation is harmful and detrimental to the immediate and future health of children, and that diseases are harmless, needed, and beneficial in maintaining health and preventing disease and illness later on in life, by doing so reinforce the use of alternative and more natural methods for promoting and maintaining health. That is, by asserting that good health can not always be promoted, restored, maintained, or protected with the use of conventional medicines, such as childhood immunisation, further support is given for the use of and ideology of natural health and medicine. Overall, by challenging conventional medicine and its ideology and by supporting natural health and medicine along with its ideology these discourses are likely to have a number of repercussions regarding health care and maintenance. That is, the use of these discourses is likely to have negative consequences regarding the acceptance and use of childhood immunisation and other conventional medicines, and positive repercussions for the acceptance and use of natural medicines and methods by members of the public.

DISCUSSION

The analysis revealed that talk from mothers, about their decisions regarding childhood immunisation and the factors influencing them, serves a number of functions, constructs childhood immunisation in a number of ways, and that these practices have certain effects and consequences for the acceptance and use of childhood immunisation. The aim of this chapter is to discuss the key issues arising from the findings, to present some general conclusions, and to consider how this research strengthens understanding in this area. The potential use of the findings, and ideas for further research will also be considered.

With regards to the key issues arising from the findings, to begin with these findings indicate that mothers' talk is carefully constructed to produce powerful and convincing accounts for and against the use of childhood immunisation. Illustrations of this demonstrate that discourses are drawn on selectively to justify mothers' positions. That is, certain discourses are actively selected, and others omitted, from a range of available possibilities to perform specific functions and to suit the particular occasion. So, selection varies according to the particular function being performed. For example, at one stage to support her decision to immunise her children against specific diseases Mary drew on the immunisation as protection discourse, but later, Mary supported her decision against immunising her children against whooping cough with the use of the risk discourse. This is an indication of how mothers selectively move between discourses as they justify their positions regarding childhood immunisation. Furthermore, discourses are often selectively combined to justify positions. For example, in one extract Penny drew on the immunisation as destruction and the immune system discourses to produce a strong argument against the use of childhood immunisation.

This selective use of discourses to perform specific functions confirms the role of discourses suggested by discourse theorists. That is, that discourses are available in an "off-the-shelf character" and can be selectively drawn on to suit particular occasions and to serve particular functions (Potter, in press). Overall, what is illustrated is that mothers draw on a wide range of discourses available, suited to the context or occasion, to construct their talk.

Another important point arising from the findings is that the nature of mothers talk is quite complex and flexible. In particular, there is a considerable amount of inconsistency and sometimes even contradiction within and between the talk offered by mothers. This variability and contradiction indicates that mothers are serving or performing different, even contradictory, functions with their talk, such as to justify the stand for and against the use of childhood immunisation. Examples of this demonstrate that the discourses drawn on by mothers are used in contradictory ways, within and between talk, to achieve these different and even opposing functions.

To break this down, discourses are used in contradictory ways between talk given by different mothers. For example, Fleur constructed childhood immunisation as something needed and beneficial to children with the use of the immunisation as protection discourse, whereas, Jenny constructed childhood immunisation as something harmful or dangerous to children, and used the immunisation as destruction discourse to do so.

Discourses are also used in contradictory ways within talk given by the same mother. For example, in one extract Dana asserted that children need to be immunised against diseases, with the use of the severity discourse, however later on in another extract Dana asserted that children should not be immunised and drew on the immune system discourse to do so. Finally, discourses are also used in contradictory ways within the same extract. For example, within the one extract Dana asserted that children do and then do

not need protecting from childhood diseases and she used the disease severity discourse to do this. Again these examples also show how discourses are drawn on selectively according to what the person is trying to achieve.

Overall, this supports one of the main tenets of discourse analysis, that is, that variability and contradiction in peoples' talk is a consequence and thus an indication of the different functions people are trying to achieve with their talk (Potter & Wetherell, 1987). Therefore, variability and inconsistency is expected and is an important element in discourse analysis. Unfortunately, this kind of variability and inconsistency within and between talk produces a problem for traditional attitude theories which assume that what people say is an indication of an underlying stable attitude. As a result, this variability and inconsistency is often neglected or restrained in the more traditional approaches to research in this area.

In addition to revealing the considerable amount of flexibility in mothers' talk the findings also reveal the enormous flexible nature of the discourses drawn on by mothers. Illustrations of this demonstrate that (as hinted at above) the same discourse can serve different functions, in particular, often the same discourse serves two opposing functions. For example, on the one hand the risk discourse constructs childhood immunisation as something needed and safe. On the other hand, this discourse is also used to construct childhood immunisation as something not needed and unsafe. What is evident in the analysis is that the risk discourse, along with other discourses, is used to serve two opposing functions. What is going on here is that different or the same linguistic resources or devices which make up these discourses are being used in different and contrasting ways.

This supports the claim, of discourse theorists, that this flexibility is part of the nature of discourses. That is, discourses can be reworked according to the setting and context within which they are used and the function the

person is trying to achieve with their talk (Potter, in press; Potter & Reicher, 1987). This provides an explanation for how mothers who decided for and those who decided against childhood immunisation can draw on the same discourses but to achieve different functions.

The findings also reveal that in addition to inconsistency and contradiction there is also some consistency in mothers' talk. This consistency indicates or suggests that mothers are serving the same or compatible functions with their talk. Examples of this consistency demonstrate that discourses are used in mutually supportive and compatible ways within and between talk to achieve this. To begin with, discourses are used in complementary ways between extracts by the same mother. For example, on one occasion Caroline used the immunisation as destruction discourse to support her decision against childhood immunisation and then on a later occasion she used the risk discourse to also support her decision against childhood immunisation. Discourses are also used in complementary ways within one extract. For example, within an extract given by Penny the immune system and immunisation as destruction discourses were both drawn on in a supportive manner to justify her decision against childhood immunisation. Once again this also illustrates how discourses are used in a selective manner.

As mentioned earlier variability in accounts is a central prediction of discourse analysis as it is expected that talk will differ to serve different purposes (Potter & Wetherell, 1987). Although variability is valued more, theorists of discourse also claim that consistency may also reveal important points about people's talk, such as, that talk may be serving the same function and that people are drawing on a number of compatible discourses (Potter & Wetherell, 1987). This is supported by the illustrations of the findings provided above.

Overall, the findings illuminate how decisions taken, regarding childhood immunisation, are argued about and accounted for by mothers. With reference back to the arguments for and against childhood immunisation, which were presented in the introduction, it is apparent that a number of the arguments presented by mothers coincide with these. For instance, for mothers who decided against fully immunising their children the arguments commonly used were with reference to the questioning of immunisation efficacy, the safety and harmfulness of immunisation with particular reference to side-effects, the effects of immunisation on the immune system and repercussions this has for future health, the need for childhood diseases to develop the immune system, and the use of natural immunity. For mothers who decided to fully immunise their children the arguments frequently used consisted of supporting the efficacy of immunisation, the need for immunisation to protect from disease, that diseases are harmful and dangerous, and that immunisation is generally safe. This is an indication that mothers are using these primary arguments for and against the use of childhood immunisation, which are available to parents in justifying their decisions, and that mothers talk and perhaps also the discourses drawn on are shaped by these arguments. What this also suggests is that New Zealand mothers are making use of the information which is out there regarding childhood immunisation and diseases, and are attempting to make fully informed decisions regarding childhood immunisation.

Another key issue to be raised is that the findings show that mothers' talk provides children, mothers, and health professionals with particular subject positions and reproduces certain power relations between these persons. In particular, it is illustrated in the analysis that the discourses used position children as vulnerable and defenceless, mothers as carers and protectors of children, and health professionals as experts and carers, and conversely, as neglectful of and incompetent at health care. An interesting feature of this is that discourses provide contradictory positions, as demonstrated in the case of health professionals. Furthermore, these contradictory positions are often

provided by the same discourse, for example health professionals are positioned as both experts and carers, and neglectful of and incompetent at health care by the establishment discourse.

The findings also illustrate that these different positions, provided by discourses, carry with them different rights and responsibilities. For example, the positioning of children as vulnerable and defenceless gives them no rights or responsibilities, whereas, the positioning of mothers as carers and protectors of children gives them the right to look after them. And finally, it is illustrated that by giving and taking away specific rights and responsibilities accredited to certain subject positions certain power relations between children, mothers, and health professionals are reproduced and resisted.

Overall, this demonstrates and confirms, as suggested by theorists of discourse, that discourses position people in a number of ways, that these positions have certain rights and responsibilities, and that discourses reproduce power relations (Davies & Harre, 1990; Parker, 1992). Additionally, it also demonstrates that when there are a number of discourses operating within a text it is possible that contradictory subject positions will be provided, and that people may be positioned and repositioned by the same discourse as well as between discourses (Morgan, Tuffin, Frederikson, Lyons, & Stephens (1994). Finally, these findings also demonstrate and support the notion that certain people will benefit from and others will be disadvantaged by the use of particular discourses, and that certain people would want to support or promote and others to discourage the use of these discourses (Banister, et al., 1994; Parker, 1992).

The findings of the present study, with regards to power relations between mothers and health professionals, reveal that current views, as evidenced in the wider literature, of the power relations in the doctor-patient relationship are being reinforced within New Zealand with regards to the mother-doctor

relationship. In the literature it is recognised that a power differential exists between doctors and patients which leaves patients with the lesser power (Lupton, 1994b). From one perspective this power is seen as engendered by the knowledge and professional status of those in the medical profession (Dew, 1995; Lupton, 1994b). With regards to this it is considered necessary for patients to seek ailment from illness from the doctor and to comply with the doctor's instructions or advice. Furthermore, patients are seen as investing their trust and faith in medical professionals and as preferring to give medical professionals responsibility regarding making judgements and the management of health (Lupton, 1994b). What is evident is that even though this doctor-patient relationship is characterised by an imbalanced power relationship it is accepted and is one of consensus (Lupton, 1994b).

In the present study mothers talk reveals this to be going on in terms of the mother-doctor relationship within New Zealand with regard to childhood immunisation. For instance, mothers' talk also reveals a greater power of doctors in the mother-doctor relationship and that this power is given to doctors, by mothers, due to their greater medical knowledge and expertise. As a result mothers invest their trust in doctors and hand over responsibility to them to make decisions or judgements with regards to childhood immunisation decisions. This therefore acts to reinforce the view of a differential power relation between doctors and patients, which is accepted.

However, literature also shows that this medical power and dominance is being challenged and resisted. To begin with research indicates that people are questioning the judgement of medical professionals with regards to, for example, medical treatments (Singer, as cited in Lupton, 1994b). The literature also suggests that by encouraging patients to take responsibility for their own health alternative health therapies are also encouraging people to reject the role of the powerless and submissive patient (Lupton, 1994b). It is suggested that people are questioning the knowledge, expertise, and skills of medical professionals and this is an indication that they are challenging and

resisting the authority of medical professionals and thus allowing room for their own judgement and agency regarding health matters (Lupton, 1994b).

Once again, the talk of mothers revealed in the present study also reveals this to be going on within New Zealand with regard to childhood immunisation. That is, the findings show how some mothers are questioning the knowledge and judgements of health professionals, with regards to childhood immunisation, thus rejecting the role of the powerless submissive patient and resisting medical dominance. This, ultimately, allows for mothers to make their own judgements in terms of deciding whether to immunise their children or not. This therefore reinforces the view that patients are also resisting this medical power.

One final point to be raised is that mothers' talk promotes certain institutions and ideologies and challenges others. Illustrations of this in the analysis demonstrate that certain discourses support the institution and ideology of conventional medicine, such as the immunisation as protection discourse, whereas, other discourses challenge this institution and ideology, for example the immunisation as destruction discourse. Additionally, particular discourses support the institution and ideology of natural health and medicine, for example the immune system discourse.

This demonstrates and supports the idea of discourse theorists that by employing certain discourses the basis of particular institutions and ideologies in our society are often reproduced and are ultimately reinforced or challenged (Lupton, 1992; Parker, 1992). This also supports the notion that certain institutions and ideologies will benefit and others lose from the employment of particular discourses, and that particular institutions would want to discourage and others to promote the use of specific discourses (Banister, et al., 1994; Parker, 1992).

On another level, these findings also reveal how current views of conventional medicine or biomedicine, evident in the wider literature, are being supported and attacked within New Zealand with regards to an important public health issue, childhood immunisation. With regards to current views of biomedicine, a predominant view is that biomedicine can successfully treat and eradicate illness and disease. That is, biomedicine can provide the answer to our medical and health problems, and save lives (Dew, 1995; Lupton, 1994b; McKee, 1988). The discourses identified in the present study reveal that biomedicine is also regarded this way within New Zealand. For example, the immunisation as protection discourse, as used by those mothers who chose to fully immunise their children, was used to assert that immunisation prevents and protects children from disease, thus supporting the view that biomedicine can successfully eradicate disease.

However, this view is also currently under attack. A growing number of people, are becoming dissatisfied with conventional medicine (biomedicine) and claiming it's inability to successfully treat their conditions (Lupton, 1994b). The discourses revealed in the present study also show that current views of biomedicine are being challenged within New Zealand in particular with regard to childhood immunisation. For instance, the immunisation as protection discourse, as used by mothers who decided against childhood immunisation, was used to support the claim that immunisation does not effectively prevent or protect children from disease, thus challenging the efficacy of biomedicine. Overall, this illustrates how within New Zealand views of biomedicine are currently being supported and challenged among mothers with regards to childhood immunisation.

With regards to the specific New Zealand context within which this study was conducted it is important to acknowledge that this cultural context plays an important part in shaping mothers talk, and thus the discourses drawn on. That is, mothers talk can be considered a product of and which therefore reflects what is currently going on in New Zealand regarding childhood

immunisation and parental decisions, in particular, the debate as to whether children should be immunised or not.

One important contextual factor to be considered is the existence of the Immunisation Awareness Society. As mentioned previously the activities of this society include informing New Zealanders of the issues surrounding childhood immunisation and providing information and resources to enable parents to come to an informed decision regarding childhood immunisation. The position the society takes is one of anti-immunisation, but opinions range from against the use of all immunisation to the justifiable use of some immunisations (Dew, 1995). The findings reveal that the talk of mothers who decided against fully immunising their children reflects these issues and opinions offered by the Immunisation Awareness Society.

The concern for New Zealand's low immunisation levels is also reproduced in mothers' talk, in particular with regards to the concern that children are not being immunised. Talk also reflects on the changes regarding childhood immunisation in New Zealand, particularly the introduction of the immunisation certificate and the Governments efforts to increase the immunisation levels in New Zealand, this was particularly evident in the use of the establishment discourse. Furthermore, as mentioned previously, those arguments for and against childhood immunisation which are available to New Zealand parents in justifying their decisions are also reflected in mothers' talk.

Finally, the discourses revealed may be taken as an indication of those discourses surrounding childhood immunisation which are prevalent and available in New Zealand culture and society today. The anxiety, concerns, doubts, and confidences surrounding childhood immunisation and childhood diseases which are reflected in these discourses may also be an indication of those currently existing in society or may indeed be a reflection of how society (such as the media) portrays childhood immunisation and childhood

diseases. Overall, this suggests that mothers talk can not be considered independent of the wider context in which it is produced. It is suspected that if such a study was conducted in another country where the contextual factors surrounding childhood immunisation were different, different findings would be obtained.

By using discourse analysis to investigate the talk of New Zealand mothers (who had decided for and against childhood immunisation) regarding their decisions and the factors influencing them, the present study has provided an in-depth investigation into this complex issue. Additionally, this study has expanded upon and provided a greater understanding and insight into the immunisation decisions of New Zealand mothers which previous research has attempted to accomplish.

This has been achieved by exploring, discussing, and illustrating how mothers' talk, regarding childhood immunisation decisions and the factors influencing them, is more than a supposed reflection of underlying attitudes and beliefs but instead constructs 'versions' of childhood immunisation and serves a variety of functions. Overall, the study has provided a more suitable approach to such an investigation (as discussed earlier in the introduction), and as a result the findings from this study have also provided greater understanding and insight into this area. Furthermore, by doing this the present study produces findings that are both interesting and potentially useful.

Firstly, the findings illuminate how decisions taken, regarding childhood immunisation, are argued about and accounted for. By coming to an understanding of these various arguments and explanations these can then be addressed or perhaps changed in a manner which will support, encourage, and maintain child health in New Zealand.

Moreover, by revealing what and how power relationships between mothers and health professionals are reproduced and resisted in these discourses, and how certain discourses support and challenge natural and conventional medicine and their ideologies, an indication has been provided as to how these can be addressed and altered or changed. Also, by understanding how discourses reproduce power relations and support and challenge institutions and their ideologies further understanding can be obtained of power inequalities, and the supporting and challenging of ideologies, which are operating in society which are not just specific to childhood immunisation but are also relevant to other health issues.

The present study contributes significantly to research and understanding into parental decisions regarding childhood immunisation and the factors influencing them, and provides a number of interesting findings which are of significance to child health in New Zealand. It is acknowledged that a small select group of mothers took part in the study. This has enabled an in-depth investigation into mothers' talk which has revealed a large range of linguistic pattern and allowed for the investigation of commonality and divergence of these linguistic patterns, within and between the two sets of mothers. Further research adopting a discourse analytic approach could provide additional and complimentary information and understanding in the area of childhood immunisation. Further insight and understanding into parental decisions regarding childhood immunisation could be obtained by investigating the way in which fathers talk about decisions regarding childhood immunisation and the factors influencing them. Investigations into the talk of child carers from different ethnicities concerning their decisions regarding childhood immunisation and the factors influencing them could also prove very useful particularly in terms of providing a comparison of the different discourses drawn on from different ethnicities and their functions and effects. Further research could also explore how health professionals talk about childhood immunisation and the decision for or against, and explore contrasting and parallel patterns in their talk with that of child carers. An

investigation into the discourses drawn on in interaction between health professionals and child carers, when discussing immunisation issues, could also prove to be beneficial.

It may also be informative to explore media and literature accounts of childhood immunisation, those promoting and those criticising childhood immunisation, for how childhood immunisation is portrayed to the public. Furthermore, a discourse analytic approach into lay health explanations regarding diseases and the immune system could also, as hinted in the findings of the present study, prove to be beneficial in further enhancing understandings of issues surrounding childhood immunisation and child health in general.

In conclusion, the present study has revealed that mothers talk regarding childhood immunisation decisions is more than just talk. With the use of discourse analysis this study has contributed significantly towards understanding parental decisions regarding childhood immunisation in New Zealand and it has taken research and understanding into this area one step forward and opened it up for future research to go even further.

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Appendix A

Childhood Immunisation Choices

Invitation Letter

I am conducting a study looking at the factors influencing parental choices regarding childhood immunisation. This is for some research I am doing at Massey University and I need some people to volunteer to take part.

You are eligible to take part if you are:

- * a mother, and
- * you have at least 1 child 5 years old or younger, and
- * you have had your child or children immunised.

An information sheet is enclosed detailing what the study involves and your rights should you wish to take part.

If you are willing to take part or wish to know more about the study please write your name and phone number in the space provided and send this letter back to me in the free-post envelope provided. I will then contact you to discuss the study further and to arrange a time and place for an interview.

Your assistance in this research would be greatly appreciated.

Name:

Phone Number:

Appendix B

Childhood Immunisation Choices

Information Sheet

What is the study about?

The aim of the study is to find out what factors are influencing parental choices about childhood immunisation. The research is being done as requirement for a Masterate thesis. The study is being jointly run by Kerry Chamberlain, a Senior Lecturer, Christine Stephens, an Assistant Lecturer, and Melanie Martin, a Masterate student.

What would I have to do?

If you are willing to take part, all you need to do is participate in an interview. You will be asked to talk about your views of immunisation and your experiences of it. We will also ask you for some background information such as the age of your children and the immunisation practices within the household. The interview should take between 45 minutes to 1 hour and will be audio taped.

What can I expect from the researchers?

If you agree to take part in the study, you have the right to:

- * consider carefully whether you wish to participate and discuss this with the researchers or anyone else you choose.
- * decline to participate.
- * refuse to answer any particular question, and to withdraw from the study at any time.
- * ask any questions about the study at any time during participation.
- * provide all information on the understanding that it is completely confidential to the researchers. All records will be identified only by code, and the relation between your name and code number will be known only to the researchers. Brief quotes may be used in publications that are prepared about the study but it will not be possible for you to be identified. The audio tapes will be disposed of at the completion of the study.
- * be given a summary of the findings from the study when it is concluded.

You are welcome to contact any of the following people, either before you decide to take part or at any time during the study, for further information or to clarify any questions you may have about the study:

Melanie Martin, messages to Department of Psychology, Massey University, telephone 350 4118

Kerry Chamberlain, Department of Psychology, Massey University, telephone 350 4123

Christine Stephens, Department of Psychology, Massey University, telephone 350 4146

Appendix C

Interview Guide

1. Background questions

How many children do you have?

- what are their ages?

Are you or your children immunised?

- which immunisations have they received?

2. General Interview Schedule

Why did you decide for/against immunising your children?

- can you tell me more about that
- did you have any doubts?

Immunisation safety

- adverse reactions/long term effects - risk, seriousness, and evidence of
- content and manufacturing of immunisations
- number of vaccinations
- immune system

Immunisation efficacy

- disease decline

Diseases

- seriousness
- risk of
- effects of
- prevalence
- spread
- immune system
- prevention

Do you feel this way about immunisation in general or is it specific immunisations more than others?

- which ones?
- why/why not?

How do you feel about immunisation for children other than your own?
- why/why not?

How do you feel about adult immunisation?
- e.g., going overseas
- why/why not?

Would you have yourself immunised?
- why/why not?

Have you had much criticism/disapproval/support for your decision?
- can you tell me more about that
- who from?
- how do you deal with that?

Did you talk with any health professionals about your decision?
- who?
- what did you discuss/find out?
- did it influence your decision?

Do you feel you made an informed decision?
- how?
- can you tell me more about that

Did you feel any pressure to make your decision?
- if so who from and how did you deal with that?

Appendix D

Childhood Immunisation Choices

Consent Form

I have read the Information Sheet for this study and have had the details of the study explained to me. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I understand that I agree to participate and I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used and that the information will be used only for this research and publications arising from this research project.

I agree to the researcher audio taping the interview with me. I understand that direct quotations from the interview may be used in reports about the study but I will not be able to be identified. The audio tape will be destroyed when the study is concluded.

I also understand that I have the right to ask for the audio tape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

Appendix E

Transcription Notations

- A: So what[
B: [well you Square brackets like these indicate an overlap in utterances.
- A: So you were=
B: =And he said An equals sign at the end of one speaker's utterance and the beginning of another indicates there is no interval between the utterances.
- () Brackets indicate a pause.
- A: U::m A colon indicates an extension of the vowel sound preceding it. More than one indicates a prolonged sound.
- A: That is so right Underlined words, phrases or parts of words reflects talk which is emphasised.
- A: That's SO BAD Words in capitals is an indication that they were uttered louder than the surrounding talk.
- ((laughter)) Double parentheses enclose a description of the talk such as laughter.
- A: It's (no good) Words in single parentheses is an indication that the talk was inaudible and there was doubt in the accuracy of the transcription.