TRANSCENDENTAL PHENOMENOLOGY AND CLASSIC GROUNDED THEORY AS MIXED DATA COLLECTION METHODS IN A STUDY EXPLORING FETAL ALCOHOL SPECTRUM DISORDER IN NEW ZEALAND

Jenny Salmon, Stephen Buetow
Department of General Practice and Primary Health Care, The University of Auckland, New Zealand

ABSTRACT

Background
Despite the risk of ‘method slurring’, researchers have triangulated within a single qualitative study methods that are philosophically incongruent or in a limited context, are congruent, as with hermeneutic phenomenology and constructivist grounded theory.

Methods/Materials
We aimed to make the case that what works best can be to mix two qualitative methods that are philosophically congruent. Thus, we used transcendental phenomenology (TP) and classic grounded theory (CGT) in synergetic sequence to answer our research question. These methods have not previously been used together and one method would not have sufficed. Using the same participant sample, we sought to explore and understand the daily challenges of living with fetal alcohol spectrum disorder (FASD) since no study to date had addressed these issues within New Zealand. Our retrospective exploratory two-phase sequential design was framed by the meta-theory of pragmatism. It mixed qualitative strategies that are ontologically and epistemologically compatible (i.e. TP and CGT are ontologically realist, but epistemologically idealist). They are useful together for the aim of meaningfully studying the lived experiences of purposively selected participants. Empirical data, as secondary results, provide supportive evidence.

Conclusion
The first paper from this study was published in J Popul Ther Clin Pharmacol Vol 19(1):e41-e50 when the main findings were reported. This second paper gives greater focus to the methodologies employed and data analysis from the second phase.

Key Words: Classic grounded theory, fetal alcohol spectrum disorder, mixed methods, pragmatism, qualitative approaches, transcendental phenomenology, triangulation

The mixed methods (MM) approach has emerged as a ‘third wave’ (circa 1990s) for social and health sciences research. It is formally defined as the class of research that mixes or combines quantitative and qualitative research techniques into a single study. MM inquiry has been described as a new research paradigm which determines inter-related design criteria, i.e. identifying the reasons for mixing research methods in a given study, the implementation of sequence (concurrent or sequential) and the phase of research in which the integration or relationship between mixed data collection and analysis takes place. It is stated that sequential studies (two-phase studies) are when the researcher first conducts a qualitative phase of a study and then a quantitative phase or vice-versa. The two phases are separate, yielding two separate data sets. In our innovative single qualitative study we used TP as the first phase and CGT as the second phase. This paper predominantly highlights the data set of the second phase.
Other researchers\(^5\) believe that a MM design is stronger than one that uses a single method because the supplemental component enhances the validity of the project \textit{per se} by enriching or expanding understanding or by verifying results from another perspective. Although the dominant component dictates the theoretical drive of a MM study, there must be adherence to the methodological rules and assumptions inherent in each method which is related to the sample selection, method purpose and the contribution of the results to the overall research plan. More latterly, MM has been defined as the incorporation of one or more methodological strategies drawn from a second method into a single research study\(^6\) as with our own project. Methods are mixed to access some part of the phenomena of interest that cannot be accessed through the use of the first method alone. MM research therefore, is a systematic way of using two or more research methods to answer a single research question with one set of findings validating the other.

Moreover, the methods that nurse researchers tend to mix are commonly qualitative, naturalistic in design and from within the same methodological tradition.\(^7\) That is to say some investigators have combined elements of grounded theory and phenomenology in one qualitative study without acknowledging the assumptions that underpin their use of these different methods\(^7,8\) (i.e. ‘method slurring’). They may be unaware of these assumptions or take the pragmatic position that the assumptions are unimportant on the basis that what matters most is the usefulness of combining the methods. Indeed, it is stated that while methods are often presented and discussed in detail in relation to the empirical findings, questions concerning methodological differences are placed on a highly abstract level with little obvious connection to the findings.\(^9\)

However, our position is first, that researchers should be aware of and accept the assumptions underlying different methods\(^10\) and then make those assumptions transparent. This will minimize the risk of ‘method slurring’ and produce research that has rigour. Second, the different qualitative methods that are useful and meta-theoretically congruent can then be most easily mixed. In other words, pragmatism is not necessarily an alternative to purism. It is noted that pragmatists “eschew methodological orthodoxy in favour of methodological appropriateness”.\(^11\) However, the pragmatist approach does not ignore the relevance of epistemology and other concepts from the philosophy of knowledge. In fact, the great strength of the pragmatic approach to health research methodology is its emphasis on the connection between epistemological concerns about the nature of the knowledge that we produce and technical concerns about the methods that we use to generate that knowledge.\(^12\) Furthermore, pragmatism is viewed as “offering an attractive philosophical partner to MM research, providing a framework for designing and conducting MM research”.\(^13\)

Perhaps what may work best in a given situation is to mix the methods that are the simplest to mix. These methods have philosophical premises that are commensurable with each other\(^14\) and with pragmatism. Patton\(^11\) wants to “leave the world of theory and enter the world of practice and pragmatism. Not all questions are theory based”, but we contend that theory is always at least implicitly present. In its empirical emphasis on practical consequences, pragmatism is “deeply concerned with the union of theory and practice”.\(^15\) It draws on theory to inform decisions regarding which methods to mix in order to facilitate dialogue and practical action. Pragmatism and theoreticism ‘it seems’, are interwoven.

Consequently, our: (1) pragmatically purist approach used (2) Glaserian classic grounded theory (CGT)\(^16-20\) and (3) transcendental (pure) phenomenology (TP).\(^21\) Each angle of this triangle reflects realist ontology and an objectivist epistemology\(^8\) that assumes a correspondence theory of knowledge.\(^22\) More simply, we used TP and CGT in a single pragmatic study because their like qualities usefully complement each other on the basis of similar assumptions about the nature of reality and knowledge. Furthermore, their exact methods have not been previously mixed. Our pragmatic approach enabled us to oscillate between our data sets through an inductive process of inquiry\(^12\) maximizing strengths and
minimizing weaknesses (or deficiencies) of each one. At the same time it offered intersubjective-transferable aspects of our research through the connection of theory and data. Thus, new ways to think about classic methodological issues in health and nursing research were created.

**DESIGN**

Based on the novel approach as described above, presented below is a case example of the principles discussed. Rather than use the new term ‘core’, we will continue to use the term ‘dominant’ for the theoretically driven component of our inquiry of individuals with a neurodevelopmental disability and the level of our research programme. We believe that the term ‘dominant’ gives greater meaning to a data component rather than the term ‘core’.

Consequently, the lead author developed and applied a sequential design that mixed two different qualitative collection and analysis phases (see Figure 1) in order to produce dual data. The design incorporated McMillan and Schumacher’s sequential forms whilst acknowledging Morse’s simultaneous qualitative MM designs. The sequential design was particularly useful in serving the MM purposes of development (e.g. using the analysed results from the first method to inform the development of the second method) and elaboration (e.g. using the results from one method to enhance the results from the other method.

A sequential data collection design was also used because of a time order issue with CGT (QUAL) being the dominant component. In Denscombe’s terms, “methods were mixed to produce a more complete picture, to avoid the biases intrinsic to the use of mono-method design and as a way of building on and developing initial findings”.

**FIG. 1**

Sequential Data Collection Strategy

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>qual (TP)</td>
<td>QUAL (CGT)</td>
</tr>
<tr>
<td>Unstructured interviews</td>
<td>Unstructured interviews</td>
</tr>
</tbody>
</table>

Interface ↓ Interpretation of two separate data sets

Note: “qual” stands for supplemental component; “QUAL” stands for dominant component; ⇒ stands for sequential. The two methods meet at the point of interface and were conducted separately in between.

Innovatively-since no study previously undertaken has used our design (Morse, 2010)-strategies from TP (qual) comprised the supplemental component and were applied first. This approach reverses the order advocated by Morse and Niehaus. Therefore, the saturated data collected from Phase 1 interviews were analyzed before applying constant comparative data analysis principles in the CGT (QUAL) data collection for the Phase 2 interviews. The data were interpreted using a two-phased analytic process whereby data from each phase were analyzed independently and inferences were made at the point of interface. Inherent to our pragmatic approach was the use of abduction (backward exploration of the data to infer its most likely
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Qualitative methodology was chosen for our study since it seeks to understand the experienced phenomenon through narrative rather than statistics. Because some individuals with FASD have great difficulty in reading and understanding the written word, verbal communication within the setting is desirable and sometimes essential. Unlike Annells’ who used a different sample for each approach, we used purposive sampling sequentially for both approaches borne out of the difficulty encountered in recruiting participants. The sample was identified through three Fetal Alcohol Spectrum Disorder (FASD) agencies throughout New Zealand. Eligible participants were aged 14 and over, had been diagnosed with FASD and were able to converse verbally. Recruited participants were interviewed once. Face-to-face in-depth questioning was used to elicit individual participants’ narratives that responded flexibly to their cognitive needs, avoiding complex questioning that could increase suggestibility, confabulation and acquiescence.

Rather than adopting Annells’, recommendation to engage grounded theory as the first of the two approaches, our first phase used phenomenology to gather descriptive accounts of 14 people with FASD. Initial questions asked participants to describe their experiences of living with FASD. We felt that individuals with this neurodevelopmental disability would initially be better able to describe their experiences rather than interpret them. CGT was used to understand the meanings grounded in the experiences of their condition, as described in Phase 1. Questions posed in Phase 2 emerged from Phase 1. Following the gaining of written assent and consent (using the process of both affirmations for each participant), the interviews were audio-recorded (in opposition to Glaser’s [1978] recommendations) to give an accurate account of each participant’s testimony.

Although Morse appears to have mixed simultaneous (+) and sequential QUAL +/- qual mixed method designs in her paper, she recommends that the data for the dominant component be collected and group analyzed. In our study, adoption of this suggestion would have contravened the constant comparative method of analysis intrinsic to CGT. However, group analysis did not prove an issue with the analytical structure of TP which used Moustakas’s (1994) modification of the Stevick-Colaizzi-Keen (1971, 1973, 1975) method of analysis. Its constant comparative method of analysis fractured the data into concepts, categories and themes. Emergent theoretical propositions were used to generate substantive theory contextually-grounded in the social processes of reality. That is to say, “grounded theory is not findings, but is rather an integrated set of conceptual hypotheses…”

Through different handling, separate data sets were produced from the same interviews through two phases whose methods were congruent. Although Thorne states that one can use the same interviews to generate data for each
component, we collected some data specifically for the second component. This approach was adopted because the descriptive data collected through the first method were insufficient to address dominant questions using the second one. Moreover, we applied CGT to the TP data to add voice to the participants’ perceptions and perspectives of their disabling condition. This also enabled us to gather up pertinent rich textural data that might otherwise have been omitted by TP and incorporate issues and themes which emerged from the supplemental component.

In contrast to Morse\textsuperscript{26}, we found that by applying a different analytical structure, including different sets of questions, each component was methodologically complete and constituted a separate, valid and credible project, albeit one made possible and informed by the other. We further suggest that our mixing of two methods, which we believe to be publishable as two separate reports (supported by Onwuegbuzie and Leech\textsuperscript{33}), does not constitute multiple methods as claimed by Morse.\textsuperscript{26}

Hence, this purist but pragmatic mixing of methods enabled us to address our study by triangulating different types of qualitative data and then analysing them at different levels to enrich our ability to tender warranted assertions. Through different forms and levels of analysis, the components - being different methodologically-contributed different valuable information about our context-bound, single area of inquiry.

**RESULTS**

In Phase 1, the disability revealed itself through invariant characteristics that constitute a thematic continuum of life events. Related concepts and relationships from Phase 2 data analysis were drawn upon in order to reveal the emerging theory which sought to explain and help resolve the main descriptive challenges as well as revealing the perspectives of the participants in Phase 1.

Of the 31 sub-themes emerging from TP analysis, six were categorized as essential themes.

These were:
1) Daily challenges in the classroom;
2) Daily challenges in the workplace;
3) Coping with mental health issues;
4) Memory issues;
5) Socialization issues;
6) Involvement with the law and authority.

Of the 10 categories that emerged from the CGT analysis (all being related to some degree), three were core categories.

These were:
1) People with FASD are under-supported by the social and health systems;
2) People with FASD are seen to have criminal behaviours;
3) People with FASD grow up and look back.

These results are fully reported in the first paper on this study, but a few of the more prominent findings from Phase 2 analysis are now highlighted.

**People with FASD feel under-supported in the social and health systems**

Receiving a professional diagnosis of FASD appeared difficult. “It is of no help” was the reason that one participant believed he was not initially diagnosed. Many participants had been diagnosed as having ADHD rather than FASD for which they had been prescribed Ritalin. This drug made the condition of many of the participants worse, so they refused to take it. Incorrect medication and lack of knowledge by doctors, as perceived by the participants, further eroded their trust.

**People with FASD are seen to have criminal behaviours**

All participants in the middle and older age groups reported mental health behaviours from the use of alcohol and recreational drugs. Pain and anxiety relief, boredom, addiction and impulsivity were major reasons. For five individuals (all males) marijuana calmed them down.

A few older participants became involved with the justice and/or legal system, e.g. through sentencing, assessment of fitness to stand trial and dealing with people working within the justice system. They reported that the police were...
uninterested in having FASD. Because one male individual did not know the difference between ‘yes’ and ‘no’, the courts had to examine him to establish whether he was fit to stand trial.

These individuals appear to others to understand more than they do. For them to receive fair treatment and appropriate support, their disabilities need to be accommodated within the criminal justice system.

**People with FASD grow up and look back**

Some older and middle-age participants acknowledged their FASD and its impact on their families and themselves by identifying with its signs and symptoms. Their own knowledge of signs and symptoms can act as a support strategy as it helps them to understand themselves and be understood by others.

They reported that their quality of life and coping skills would be improved with the supply of an FASD-trained support worker in the home and workplace. As such, they would not have to rely on other people to help them with their numerous issues. Group homes were also mentioned whereby they could live independent lives.

Some older participants stated that the loss or weakening of relationships, friendships, self-esteem and identity during their lives were major issues. They have heard parents and teachers describe them as ‘stubborn’, ‘deviant’, ‘not motivated’, whereas in fact, they are overwhelmed with the sights, sounds, smells, textures and information bombarding them.

These findings pertain to our sample in which only four participants were reared or still nurtured by their biological mothers. Seven were reared by foster parents, one by biological grandparents, one by non-biological family members and one by guardians. In support of Streissguth’s findings, 10 participants had been in trouble with the law with 12 dropping out of or being expelled from school, which contributed to their entanglement in the criminal justice system.

**DISCUSSION AND INTERPRETATION OF RESULTS**

The results, being linked to the methodological thesis, indicate that what worked most easily was to mix two realist approaches. Annells believed that Wilson and Hutchinson’s discussion of grounded theory reflected the positivist philosophy of Glaserian CGT based on realist ontology with a received view of knowledge. She therefore, warned that unless the two approaches used share the same ontological foundation, the study will lose integrity from lack of harmony. Greene disagreed in explaining how there can be value in dialectically comparing and contrasting inferences from multiple worldviews and perspectives when they are conceived merely as conversational partners.

Strauss and Corbin subsequently predicted that adaptation of the grounded theory approach “will include combining it with other methods (hermeneutical, phenomenological, for instance)”.

However, it is unclear if they meant some kind of fusion or instead two entirely separate phases, as proposed by Wilson and Hutchinson who were nevertheless, silent on the matter of sequential and concurrent data collection methods.

Through TP, we learnt from participants’ descriptions of their lived experience what daily life had been and still was like for them. This process helped us to understand the same types of issues that the participants subsequently raised in relation to the CGT questioning. However, the latter approach also required them to interpret their experiences by unveiling their perceptions and perspectives on their disability.

Although the theoretical level of analysis of the dominant component yielded richer data than did analysis of the supplemental component, the results from the two separate data sets were consistent with each other with some slight data overlap. Therefore, through verification and incorporation into the results narrative, this exploratory qualitative MM study demonstrated itself able to produce rich, thick descriptive and interpretive narratives through the pragmatic use of TP and CGT.

**CONCLUSION**

This paper has shown how it was useful in practice to triangulate congruent MM within a post-positivist frame. Ockham’s Razor emphasizes the methodological principle of taking the simplest
approach first. Our study has indicated that the qualitative methods that are the easiest to mix in a useful manner are those that are meta-theoretically congruent. Hence, pragmatism is able to complement purism. This conclusion builds on earlier writing, for example by Wilson and Hutchinson\(^{35}\) who had noted that when using grounded theory (the positivist classic mode of the approach), a second phase should use a form of phenomenology which is ontologically realist or critical realist and have an objectivist or modified objectivist epistemology. The second phase should also adopt a suitable methodology, such as Husserlian phenomenology\(^{36}\) (as adopted in our study) or phenomenology from the perspective of Merleau-Ponty\(^{37,38}\) or van Manen.\(^{39,40}\) The views that pragmatism most easily compares nevertheless are ontologically and epistemologically compatible. Our use of TP and CGT met this standard because both methods are meta-theoretically post-positivist\(^5\) which supported their integrity and harmony when used in sequence.

The study was based on a small sample. We cannot claim that the empirical findings it offers in support of our thesis are transferable beyond the individuals studied, although it is claimed that pragmatism can increase the generalization of the results.\(^{29}\) The principle of pragmatic complementarity (use of both methods)\(^30\) has also been novel and advantageous in enriching and illuminating the research, with CGT enabling identification of what society should seek to address to improve the quality of life of disabled people.\(^{43}\) The use of TP and CGT in sequence revealed increased complexity and depth of understanding of the study phenomena.

The employment of mixed methods has been extremely useful for researching our population and would indeed, be useful for engaging and researching other individuals with neurodevelopmental disabilities. Through methodological triangulation, the accountability, validity and credibility of the findings were enhanced when compared with the only other similar study. This work used single methodology and was undertaken in Canada in 2011.\(^{44}\) Our findings corroborate, add to and build on existing methodological knowledge and to understanding of how prenatal alcohol exposure can impact development across the life-course and suggest new paths to managing FASD.

Although our combination of TP and CGT may fall under Denzin’s\(^{45}\) rubric ‘interpretive interactionism’, each method possesses its own integrity and yielded useful outcomes. Methodological purism and pragmatism can be used together to overcome the incompatibility thesis\(^{46}\) and move qualitative inquiry forwards.

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**Declaration of Conflicting Interests**

None declared.

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**Ethical Approval**

Ethical approval for this doctoral study which was completed in 2010, was granted by The University of Auckland Human Participants Ethics Committee.

**Corresponding Author:** jvsalmon@ihug.co.nz

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