

The Synergy of Critical Realism and Case Study: A Novel Approach in Nursing Research

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Christy Cabote¹ , Yenna Salamonson², Lucie Ramjan¹, Della Maneze², Suza Trajkovski¹, and Jed Montayre³

Abstract

Critical realism is a framework that explains causations of observable events. It is useful in exploring and explaining complex nursing phenomena. It is grounded in the stratification of reality and the understanding that the world is complex, open, and has interactions that support or cancel each other whether we observe it or not. It can be used as a theoretical foundation of case study approach, an in-depth inquiry that seeks to understand a particular phenomenon within specific settings. This paper introduces the basic concepts of critical realism and how it can inform a qualitative case study methodology. To support this approach, we present a study on caregiving experiences for older people with dementia from culturally and linguistically diverse backgrounds which we believe highlights the value of combining critical realism and case study to inform future nursing research.

Keywords

critical realism, case study, aged care, dementia, culturally and linguistically diverse, caregiving, carer, methodology

What is Already Known

- Critical realism is an emerging framework used in nursing research.
- When applied to case study methodology, researchers find critical realism difficult to implement because the overall guidance available for critical realist case studies is limited, particularly in nursing.

What This Paper Adds

- We have demonstrated in this paper the synergy between critical realism and case study methodology in nursing research which makes it a useful framework in investigating the context and causation of social phenomena.
- This paper outlines a step-by-step process of utilising a critical realist case study which

enables understanding of the intricacies of identified phenomena such as the physical, social and economic contexts.

- While limitation on the generalisability of these methods is acknowledged, the paper provided several remedial measures that could enhance its utility in nursing research.

¹School of Nursing and Midwifery, Western Sydney University, Australia

²School of Nursing, Faculty of Science, Medicine and Health, University of Wollongong, Australia

³School of Nursing, The Hong Kong Polytechnic University, Hong Kong

Corresponding Author:

Jed Montayre, School of Nursing, The Hong Kong Polytechnic University, 11 Yuk Choi Rd, Hung Hom, Hong Kong SAR.

Email: jed-ray.montayre@polyu.edu.hk



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Introduction

Critical realism is an emerging framework in advancing nursing knowledge (Williams et al., 2017). It has been increasingly applied in quantitative and qualitative studies across a range of nursing topics (Schiller, 2016). Given that critical realism was conceptualised only in the 1970s (Bhaskar, 1978), the applications in healthcare research, particularly in the nursing discipline, have been limited. While critical realism does not endorse specific methodology, its compatibility with case study approach in analysing causation has been reported (Sayer, 2000). However, novice researchers can find implementation of case study research framed within the critical realist perspective challenging because its methodological process is not well understood (Fletcher, 2017). Hence, this paper introduces the basic tenets of critical realism and demonstrates its synergy with case study methodology. A research project will be used as an exemplar in the implementation of case study methodology underpinned by critical realism to illustrate the steps that can guide future research.

Theoretical Perspectives in Research

Generally, researchers situate their studies from a certain worldview and philosophical assumptions (Crotty, 1998). These views guide and inform the choice of research approaches, which in turn influence data collection and analysis. Researchers can have different assumptions about the nature of truth and knowledge (ontology) and its acquisition (epistemology) (Crotty, 1998). Two classic opposing worldviews utilised in most research are positivism and interpretivism (Junjie & Yingxin, 2022). Positivism proposes that there is only one existing reality based on truth and objectivity and that the aim of research is to provide a measurable account of this reality (Gray, 2009). In contrast, interpretivism aims to elucidate the meaning of experiences and acknowledges the existence of multiple realities, which consequently leads to the extraction of truths derived from different perspectives (Gray, 2009; Ryan, 2018). Due to positivism's tendencies towards empirical evidence, the examination of abstract causes is usually excluded. On the other hand, interpretivism asserts that reality is based mainly on our perceptions therefore its subjectivity limits its application to healthcare professionals, patients and policymakers (Alderson, 2021). This is because subjective truth or reality makes it difficult to transfer meaning or make generalisations and therefore there is inability to connect causes to outcomes (Alderson, 2021).

A relatively new paradigm referred to as critical realism provides a middle ground that bridges the opposing views proposed by positivism and interpretivism. While positivism supports a single reality usually measurable by quantitative means, critical realism relies on the belief that the nature of being or existing may not always be visible and therefore may not have a quantifiable equivalent (Alderson, 2021).

Furthermore, interpretivism does not include the concept of causation in its quest to provide an explanation, which contrasts with critical realism. The different perspectives of reality account as one of the main advantages of critical realism. It has a strong emphasis on causation and explores beyond what is visible to identify reasons for why certain phenomenon occur in a particular way. Critical realism was founded by Roy Bhaskar in the 1970s and has been extended by other philosophers (Alderson, 2021). Many disciplines have acknowledged the usefulness of critical realism including information research (Bygstad et al., 2016), sociology (Sayer, 2000), religious studies (Schilbrack, 2013), management (Ackroyd & Fleetwood, 2004) and nursing (McEvoy & Richards, 2006; Schiller, 2016).

The basic concepts of critical realism are outlined below. It is not an exhaustive list, but specifically chosen because they ground this research project situated within the chosen methodology. An understanding of these concepts will be used in subsequent discussions, specifically when elaborating on how to implement a critical realist case study. As a word of caution, Alderson (2021) advises those new to critical realism to concentrate on applying a few concepts rather than using a range of them inaccurately.

Basic Concepts of Critical Realism

Separation of Ontology ('What is') From Epistemology ('How we Know What we Know')

Ontology is concerned with 'what is' or what constitutes reality while epistemology is about establishing 'how we know what we know' (Crotty, 1998). In addition, while ontology is about basic independent reality, epistemology is related to how knowledge is gathered and understood (Crotty, 1998). According to Bhaskar (1978), critical realism separates these two concepts otherwise their conflation constitutes epistemic fallacy. In clinical research, for instance, there is a tendency to see empirical evidence (the 'what is' which equates to ontology) in the same way as thoughtful observations (summaries, reports, statistics, images and other epistemology). By doing this, real people are reduced to abstract ideas or subjective interpretations and thus collapse things into thoughts. This is epistemic fallacy which, in Bhaskar's words are: "the view that statements about being can be reduced to or analysed in terms of statements about knowledge" (Bhaskar, 1998, p. 27).

For example, if a patient falls in the nursing home, nurses may perform interventions related to the epistemology of pain (based on evidence-based knowledge), while family members may consider the ontology – personal and the social contexts (social reality) – of their loved one who had suffered the fall. To treat the pain without the consideration of the personal or social contexts of the patient is what epistemic fallacy is about, in that 'real people' are reduced to an abstract idea ('pain'). When ontological questions are addressed in epistemological

terms, there is a disregard of the unseen elements which may or may not be responsible for the observable features. This contradicts Bhaskar's proposition of separating epistemology from the independent world of ontology. Table 1 shows some examples for epistemic fallacy set within the aged care context.

Stratified Reality (Domains of Reality)

Critical realism proposes that there are three domains of reality (Bhaskar, 1978). The *empirical* domain is composed of the observations made, experienced, and interpreted by observers. The *actual* domain is where events occur whether humans observe them or not. In this domain the world exists independently of our thoughts (Alderson, 2021). The *real* domain consists of unseen causal mechanisms causing the events at the empirical level to occur (Bhaskar, 1978; Sayer, 2000). The iceberg analogy illustrated by Fletcher (2017) in Figure 1 can be used to explain these domains as shown below:

The Concept of Causation

Central to critical realism is the concept of causation. This is different from the Humean successionist understanding of 'cause and effect' as causality in critical realism does not predetermine the outcome (Pratten, 2009). Critical realism does not suggest that whenever there is X, there is Y because the world is an open system with many competing, interacting, and overlapping events and occurrences that sometimes even contradict and negate each other (Bygstad et al., 2016; Easton, 2010). This non-deterministic aspect of causality focuses on tendencies and explanations, not laws (Fletcher, 2017; Wynn & Williams, 2012). Critical realism believes that knowledge is derived from the tendencies or regularities collected and drawing conclusions regarding causation through reasoning or logic (Bygstad et al., 2016; Eastwood et al., 2014). By way of example as seen in Figure 1 above, a very common way of conceptualising causation in an illness begins with what is causing the illness (i.e., virus) (real level), followed by the events that occur as symptoms develop (actual level) and lastly, the experiences and response to symptoms (empirical level). These three domains can interact so that when interventions such as medication is administered, the interplay between observed and unobserved factors can either reduce or stop the infection or increase its severity (Alderson, 2021).

Table 1. Reducing Ontology into Epistemology (Adapted From Alderson, 2021).

Ontology	Related Epistemology
Hip fracture	X-ray images
Dementia	Confusion, reversion to original language
Food	Menus, diets
Medications	Medication regime (frequency, dose)

Critical realism does not prescribe a specific method or methodology of research. This decision is not to be randomly made but must be based on the nature of the research question and the phenomena under study (Sayer, 2000). Within nursing research, it has been applied in areas such as rehabilitation (Davenport et al., 2022), leadership (Aspinall et al., 2019), and infant pain management (De Clifford-Faugère et al., 2022). Its utility in nursing is premised by acknowledging that health, illness and healing have to be understood within the complex physical, social, economic and even global contexts (Alderson, 2021; Clark et al., 2008). The interplay between these contexts is familiar to nurses but instead of simply identifying and describing patterns, critical realism offers to explore the wider causes of a phenomena (Clark et al., 2008.) While it has been compared with other theoretical frameworks, its potential to advance nursing practice has been acknowledged to a lesser degree (Clark et al., 2008; Williams et al., 2017), despite its success in both quantitative and qualitative research, including case studies.

Case Study

From this section onwards, a reference to an ongoing project is made to demonstrate how case study approach has complemented the critical realist framework. The focus of this project is on the experiences of care staff and families regarding the care delivered to residents with dementia from culturally and linguistically diverse backgrounds.

Case study is an in-depth empirical inquiry of a contemporary phenomenon within its real-world context set within a boundary without manipulating the behaviour of those involved in the study (Yin, 2003, 2018). Contemporary in this setting refers to the changing presentation of the recent past and the present, not just the present (Yin, 2018). Boundary provides specificity of the case regarding its breadth and depth, while the context refers to what surrounds the phenomena of interest. Applying boundaries ensures that the study remains reasonable in scope (Baxter & Jack, 2008). Boundaries applied in a case study do not necessarily transform it to a closed system. Unlike the 'open system' proposed by critical realism, a closed system is one that is controlled so that the phenomenon under study will be visible (Wynn & Williams, 2012). This is like a scientific experiment in which the impact of compounding variables is minimised or eliminated. However, in the sample study, no alterations have been introduced to the participants in their existing context. The boundaries set are only to define the time and location where the activities and observable manifestations (empirical domain) occur. It remains an open system, in a real-world setting. Therefore, bounded case studies align with the critical realist perspective. In addition, that boundaries in case studies can be fuzzy, fluid and porous has been proposed by Segar et al. (2015) and Bartlett and Vavrus (2014). As a consequence of this, consideration of the cases in their wider contexts is essential. This is where it is helpful to substantially define the

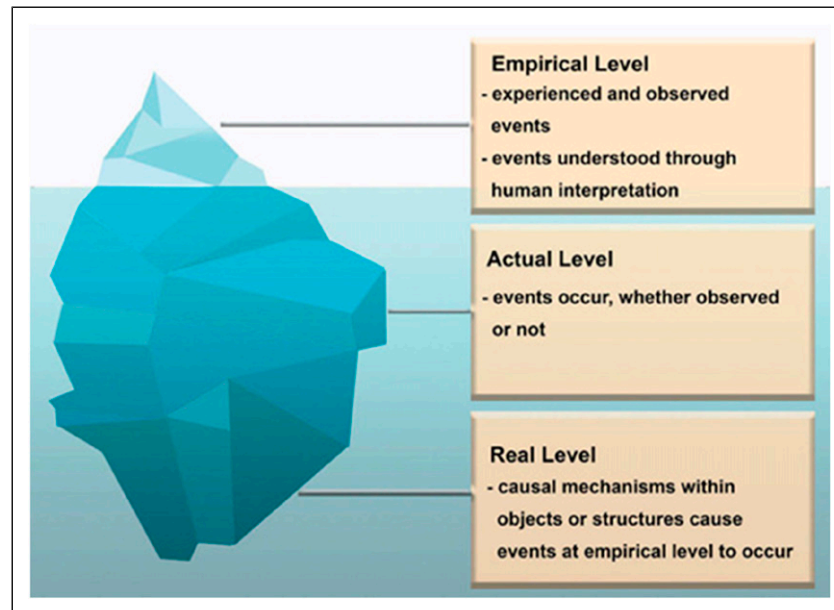


Figure 1. Domains of reality (Fletcher, 2017).

phenomenon of interest in its specified setting and boundaries. According to Easton (2010) and Wynn and Williams (2012), a critical realist case study must ideally set clear boundaries at the start of the project however, it is not uncommon to extend or narrow the initial boundary owing to the nature of the causal mechanisms and the dynamic nature of the components of that system.

The contemporary phenomena in this current study are the caregiving experiences of families and care staff. They occur in real life, manifesting concretely. The boundary and context include the families and care staff of people with dementia from culturally and linguistically diverse backgrounds who reside in a residential aged care facility in Western Sydney, during a specified time between 2022 and 2023.

There are three types of case studies according to Yin (2003), namely, the explanatory, exploratory and descriptive. An explanatory case study explains causal events, or relationships. The exploratory case study is used when the intervention being evaluated has no clear, single set of outcomes (Yin, 2003). The descriptive case study describes the intervention or phenomenon and the real-life context in which it occurs (Yin, 2003). Furthermore, a case study can be designed as a single case study or multiple case studies (Yin, 2003). Single case study pertains to a single unit of study or phenomenon, referred to as a 'case', while a multiple case study contains more than one single case to allow the researcher to analyse within and across settings (Baxter & Jack, 2008). In this current study, there is one residential aged care facility (setting), and one set of participants comprised of families and care staff that aims to explore the causal mechanisms of experiences on the quality of care. Therefore, it utilises an explanatory single qualitative case study. The study design is

qualitative because the objective is to explore experiences and find out why and how these experiences occur.

Case Study and Critical Realism

The qualitative case study approach has several aspects that make it compatible with the philosophy of critical realism. The first aspect is the nature of the case study question. Case study as a research design is useful for investigating problems that seek to answer the 'how', 'why' or 'what' questions about a social phenomenon in context (Yin, 2018). Since the current study aims to explain causation, predicated by the words 'how', 'why' and 'what', it aligns well with critical realism. In essence, a case study asks, "What caused those events to happen?" This type of questioning looks for the mechanisms responsible for the observable events which is also the goal of critical realism.

The second aspect is its amenability to obtain multiple sources of evidence. Yin (2018) noted that no single source of evidence is superior to others and therefore having multiple sources can increase confidence in the findings. This is significant with respect to the concept of open systems proposed by critical realism (Bhaskar, 1978). As the forces in these systems may support, oppose or cancel out each other's effect, it is therefore sensible to gather data from a variety of sources to explain causation. Lastly, critical realism acknowledges that social phenomena are intrinsically meaningful (Sayer, 2000). For meaning to be fully understood, a qualitative type of research would be appropriate. A qualitative case study approach is apt as it captures the subjective component of the meaning of phenomenon under investigation (Sayer, 2010). It is in this way that qualitative case study aligns well with

critical realism because it is inclusive of the subjective perspective of the actors in the phenomenon under study as it describes, explains, and identifies the causation of those perspectives.

Implementation of the Critical Realist Case Study

The implementation of the current case study is based on Yin's (2018) multi-step process and Fletcher's (2017) application of critical realism in qualitative research, specifically in the data analysis. The decision to utilise Yin's approach over others is given below.

Yin's case study approach is chosen over other seminal case study approaches by Stake or Merriam mainly because of its epistemic commitment. Although none of the three case study proponents embody a critical realist view, Yin's approach is arguably the closest. Stake and Merriam offer a view of the world, albeit limited, by focusing only on the discourse, meaning, experiences or knowledge constructed by people as framed in a constructivist view (Yazan, 2015). On the other hand, Yin's epistemology leans toward an emphasis on objectivity and validity which support characteristics of positivism as described by Crotty (1998). For example, Yin's emphasis on the development of theoretical propositions to guide data collection and analysis facilitates production of objective knowledge as afforded by the research study (Yazan, 2015). This is a positivistic view and is not explicitly described as such in Yin's work, which is probably because of the allowances he made on the utilisation of either quantitative or qualitative research (Yazan, 2015). On the other hand, Stake and Merriam's approach strongly supports largely qualitative research. Here you can see that Yin has the advantage of holding part of the critical realist view by testing and eventually producing a deduced theory or knowledge. This approach works well however, after the most probable conclusion is arrived at (abduction) there is an uncertainty about which direction to take. This can occur when under-researched phenomena yield outcomes that have no fitting explanation from existing theories or frame of references. Critical realism picks up where Yin has left off and offers a way forward through establishing the contextual conditions that best explain observations (retroduction). More elaboration on abduction and retroduction is given later in this paper.

Yin's (2018) case study approach comprises six steps which are linear in nature but involve an iterative process. At the *plan stage*, the researcher will determine the research questions and establish the relevance of using a case study methodology. The *design stage* is where the case is mapped out and theoretical propositions are developed to guide the findings. Prior to the collection of data is the *prepare stage* where the researcher determines the skills and information required to conduct the case study. Data are gathered from multiple sources in the *collect stage*. At the *analysis stage*, the

researcher uses relevant analytic strategies to guide analysis until the main research questions are answered. Finally, the *share stage* consists of imparting the conclusions from a case study bringing the results and findings to closure. Figure 2 shows how Yin's (2018) methodological approach is adapted to the current study on dementia caregiving as an example. It indicates the activities at every step of the process, from beginning to end.

Plan

This stage involves stating the research questions and a rationale for doing a case study approach. In the current study the aim is to explore the experiences of family and care staff regarding the quality of care delivered to older adults with dementia from culturally and linguistically diverse backgrounds. The two questions are:

1. What are the experiences of the family and care staff regarding the quality of care delivered to older people with dementia from culturally and linguistically diverse backgrounds living in residential aged care?
2. How and why do these experiences occur?

The Setting. This study is conducted in a privately-owned residential aged care facility located west of Sydney NSW. In addition to dementia specific care, it provides palliative and respite care. Staffing in each unit within the facility comprise of a registered nurse who acts as team leader, enrolled nurses, and assistant nurses whose main responsibility is to provide care and services in all aspects of the activities of daily living. When required, there is also access to services from physiotherapists, allied health assistants and lifestyle and recreation workers who support the physical, emotional, cognitive, social, or spiritual well-being of the residents. Facility record showed that in 2023, residents consistently received more than the target goal of direct care requirements (measured in minutes) from registered nurses, enrolled nurses, and nursing assistants which meant that there was sufficient staffing to provide care to residents. The dementia specific unit has single rooms with easy access to the outdoor garden. More than half of the residents are Caucasians and the remaining residents have culturally and linguistically diverse backgrounds. This is contrary to the staff who predominantly have multicultural backgrounds, speaking other languages aside from English. As part of continuing education requirements, staff have some dementia training and are rostered to work in this unit almost exclusively, except when requested to cover sick leave in other areas of the facility.

Following human ethics approval, the Nursing Unit Manager of the residential aged care facility was contacted regarding the study to obtain approval. An information pack was sent to the manager. This was followed up by a phone call and a face-to-face meeting. Any questions and concerns requiring clarification were addressed in that meeting.

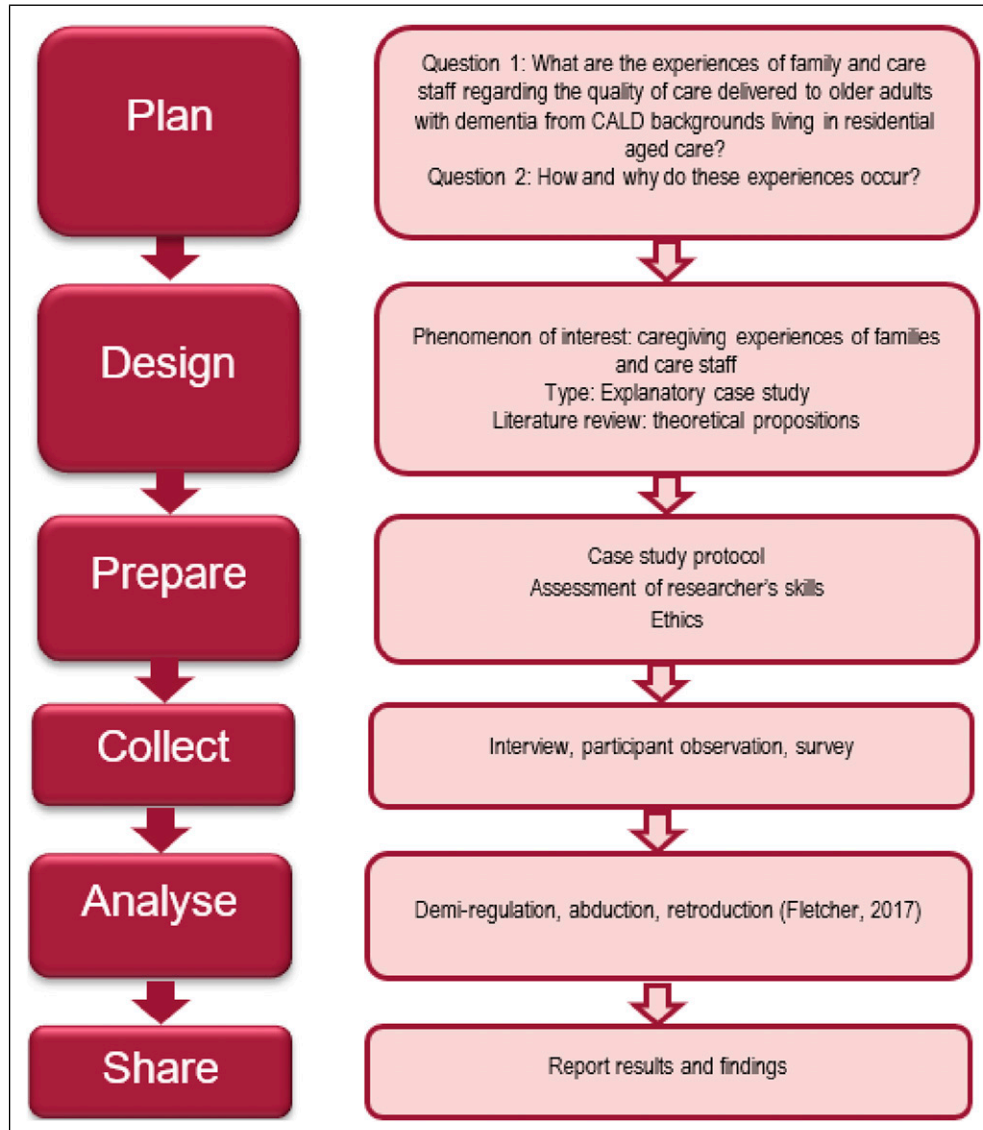


Figure 2. Yin's (2018) case study approach, adapted to the current project.

Recruitment. Families and care staff were invited to participate in the project through emails and posters displayed at the facility that contained the researcher's contact details. Participants who decided to join the project ($n = 25$) were given detailed information and able to advise a convenient time for the interview. Non-English-speaking family members were eligible to participate as interpreters were available.

Design

This is an explanatory single case study design which aims to examine the experiences of families and care staff regarding the quality of care. The boundary and context include the families and care staff of older people with dementia from culturally and linguistically diverse backgrounds living in a residential aged care facility in Western Sydney, NSW. Within

the design stage, the theoretical propositions from literature or existing theories need to be considered which can assist in identifying what the evidence is and where it can be collected. For this project, an example of a theoretical proposition was informed by a literature review conducted earlier indicating that to improve quality of care among older people with dementia both dementia and culture-specific contexts must be considered (Cabote et al., 2023). Theoretical propositions will be refined, tested or rejected based on the empirical data collected (Kozhevnikov et al., 2020; Yin, 2018).

Prepare

Preparation can include acquiring skills needed for the sound and ethical conduct of the project. This can include developing competence in interviewing participants and preparing a case

study protocol which contains questions, procedures and general rules that govern the study (Yin, 2018). Ethics must be obtained prior to data collection. In the sample study, the ethics protocol included a rationale for how the researcher would gauge assent from residents with dementia during observations and how distress would be monitored if it occurred. Although family members provided the consent for observations of the residents, it was necessary that the researcher knew the usual demeanor of the residents and gauged assent throughout the duration of the observation.

Collect

Yin (2018) suggested drawing evidence from multiple data sources to encapsulate the holistic view of the case under study. This favours the critical realist approach of collecting evidence from multi-layered reality to zero down on responsible causative mechanisms of the “how” and “why” caregiving experiences of families and care staff happen the way they do. In the sample study, data were collected through semi-structured interviews, participant observation and a short survey. An interview guide was developed with general and open-ended questions that focused on the understanding of the phenomenon of interest (Creswell & Creswell, 2018). The location of the interview was negotiated with the participants. Interviews were done face-to-face, via telephone or Zoom based on participant’s preference. These interviews were digitally recorded and transcribed verbatim by a professional transcriber. If needed, interpreters were available to facilitate the interviews. Drawing on the critical realist approach, interview questions were informed by previously known theories or information about dementia caregiving in residential care for residents with culturally and linguistically diverse backgrounds. The interview provided an avenue to explicate visible observations as well as different perspectives from different participants which may not be apparent. In this way, the different layers of reality espoused by critical realism are explored. For example, one question for families is: Tell me about how your spouse or parent manages their daily activities? Some answers to these questions centred around observable manifestations such as being settled, eating well, and compliance with care activities. Another example is a question about traditional food and mealtimes in residential aged care facilities which is based on published literature that families bring in traditional food if the facilities do not provide it (Cabote et al. (2023).

Participant observation in this project gave the researcher the opportunity to observe what care staff and residents in the ‘real-world’ context actually do without interpretation or influence from others (Caldwell & Atwal, 2005). In contrast to the interviews, observation does not rely on the participants to give accurate verbal information, but their value lies on how they help reveal characteristics of the phenomenon in the multi-layered reality espoused by critical realism. A disadvantage of observations is the chance that participants could

alter their behaviour once they are aware that they are being watched (Schneider et al., 2013). The key to alleviate this concern is to build trust and rapport and as relationships develop this can also deepen the insights gained in the participants’ world (Mills et al., 2009). In this study, observations are made after the researcher was known to participants for a considerable period and has formed relationships with them. No variables in the study setting were controlled or altered so that real-life events manifest. Any alterations made can transform such an open system into a closed one, which opposes the view of critical realism. Participants’ demographic information was collected and a short survey was included as part of the data collection. The purpose of the survey was to identify workplace culture that enhanced the performance of the care staff in a way that supported their ability to deliver quality care. Workplace culture can be used to explain causative mechanisms responsible for either positive or negative caregiving experiences of participants, which in the critical realist perspective reside in the “real” domain of reality. Yin (2018) suggested that data from multiple sources is ideal to corroborate study findings, also called triangulation. Triangulation is valuable for understanding underlying causal mechanisms of the phenomenon under study and despite how different data might appear and may even conflict with each other, they are the expressions of the different layers of reality as proposed by critical realism.

Analyse

In line with the stance of critical realism, there are three stages of data analysis: identifying demi-regularities, abduction and retrodution, using Fletcher’s (2017) example. Each stage will be discussed separately below. Data analysis by Fletcher (2017) is easy to follow and is synonymous with Stutchbury’s (2022) six-stage process. Both of these exemplars are uncomplicated and easy to understand.

Demi-Regularities. ‘Demi-regularities’ is a critical realist term that refers to the tendencies, regularities, trends or patterns in the empirical data collected (Eastwood et al., 2014; Lawson, 1997), which can be effectively identified through qualitative data coding (Fletcher, 2017). Fletcher’s (2017) approach to finding these patterns consists of a deductive approach by creating provisional codes based on the existing theories and literature about the research phenomenon. These provisional codes will be compared against the data collected and the chances of them increasing in number is therefore to be expected. However, this large number of codes will eventually decrease as some will be combined in a way that is informed by critical realism. For example, assigning codes into critical realist-acceptable terms as “structures”, “entities” and “events”. Sayer (1992, p. 92) defined structures as the “set of internally related objects or practices” that make up the real entities in a case study. They can be part of a larger structure, or they can have substructures (Wynn & Williams, 2012).

Based on this conceptualisation, examples of structures can therefore be the aged care system, a residential aged care facility, or the dementia specific unit. The key to understanding structures is that their characteristics and tendencies cannot be reduced to the entities that they make up (Wynn & Williams, 2012). For instance, the individual characteristics of care staff in a residential care facility do not adequately define the overall characteristics or properties of the organisation, instead it is how individual entities, in this case, the care staff, relate with each other giving the distinct properties of the organisation. For example, workplace culture is a result of the relationships of the actors within the organisation creating the observable or unobservable 'events' in the empirical or actual domains. Further elaboration is given below.

All the codes generated, as explained above, are considered important. However, as Fletcher (2017) suggested, the most dominant ones will be utilised as a starting point to identify demi-regularities. In the current study, an important demi-regularity is from the survey. Participants were asked to answer questions in order to identify the organisation's culture. There were no right or wrong answers, just as there are no right or wrong culture (Cameron & Quinn, 2006). The emerging culture in this current study has been identified as the clan culture. Cameron and Quinn (2006) described the clan culture as like a family-type organisation characterized by a friendly place to work where leaders act as mentors, similar to being parent figures. The value that binds this organisation is loyalty and tradition. Furthermore, there is high commitment and emphasis to the long-term benefit of individual development. Teamwork, participation and consensus are esteemed in this organisation. This is an important demi-regularity because residential care facility is considered the home of residents so having a clan culture means that care staff have assimilated the values of being a member of that 'home'. This is important because it can contribute to uncovering the causative mechanism, the 'why' of the caregiving experiences among staff and families.

Abduction. After demi-regularities are identified through coding as described above, the next step of the process is abduction. This process involves redescribing the empirical data using theoretical concepts (Mingers, 2014), and therefore this process is also known as theoretical redescription. It is the making of inferences of a particular phenomenon or event based on an interpretation from a set of general ideas, concepts, or theory, but with the understanding that the chosen theory is fallible and therefore should be critiqued throughout the process (Fletcher, 2017).

One of the findings from the study is from interviews with participants and has been assigned a code, staffing. Participants defined this code as having someone who can speak the residents' language. This is an important finding in the context of this research which explores caregiving for residents from culturally and linguistically diverse backgrounds. In the aged care literature, the role of nurses is to provide safe and quality

care towards older people in residential and community settings with the understanding that older people entering residential care are frailer and more dependent on services than before (ANMF, 2013). Care staff, therefore, are dealing with residents with complex needs requiring skills and staff ratios that support appropriate skill mix in each shift. Furthermore, besides clinical competencies of care staff, a huge concern is the dropping proportion of nurses over the years (Royal Aged Care Commission into Aged Care Quality and Safety, 2021). Both issues (clinical skills and numbers) are part of the theoretical propositions found in literature which have been identified prior to data collection and as mentioned, this was not consistent with the participants perception which prioritises instead the capacity to speak a similar language than skills or numbers. This is an example of how theoretical concepts are re-organised and by doing so constitute the process of abduction. The new code is yet to be assigned as analysis for all data is ongoing for this study.

Codes do not have to differ from scholarly information to be reorganised. This stage of analysis goes beyond the thick descriptions to an interpretation of their experiences and behaviours taking into account all the data, whether they contrast or compliment theories or other scholarly information from the literature (Stutchbury, 2022).

Retroduction. Retroduction is the final stage of the data analysis. In a critical realist concept, its outcome is to identify the necessary conditions of the causal mechanism. Sayer (2000) pointed out the possibility of assigning the wrong causal mechanism to a phenomenon considering the complexity of systems being studied. There are different mechanisms that can cause the same events and there can be one or more mechanisms at work in a particular system (Easton, 2010). Putting forward different causal explanations is not only possible but pragmatically desirable (Pawson & Tilley, 1997). The key outcome of successful retroduction is to modify, support, or reject existing theories or available scholarly explanation and frame of references that provide the most accurate explanation of reality.

In the current study, retroduction involves finding the causative mechanisms and the necessary conditions responsible for the preference of participants regarding the language characteristic of staff who provide care to residents with dementia from culturally and linguistically backgrounds. Many families report multiple incidences whereby their parent or spouse is disengaged from activities or interaction with other residents and care staff due to the absence of a common language to facilitate communication. Families observe that during their visits, the interaction between them and their loved ones occurs because there is no language barrier. Most of the care staff interviewed have confirmed this observation. Generally, care staff can motivate residents to participate in activities when they communicate in the residents' language. Despite this reasoning, it is to be noted that there are other contributing factors that explain disengagement, such as the

stage of dementia, reverting back to original language, general wellbeing on a given day, injuries and dislike to the proposed activity.

At this point of the project, we are certain that the preference for having staff who speak the residents' language is interconnected with another emerging code. This is mentioned because it is possible that mechanisms can be related with each other (Easton, 2010). However, considering what has been discussed so far, it can be inferred that a possible causative mechanism at play is the limited nursing workforce. New legislations in the Australian aged care sector stipulate a specific amount of time to be spent with residents based on their individual needs however, recent reports show that overall, less than a quarter of the facilities have adequate staffing to meet their targets (Sutton et al., 2023). Regardless of any improvement on this, we can assume that even if there is enough number of well-trained staff working in each shift, the dissatisfaction of families and care staff will remain if there is no shared language for the interaction between staff and residents, which in turn impacts their overall caregiving experiences.

Share

The last stage of the case study process involves bringing the results and findings to a closure by sharing the conclusions from the case study, whether in writing or orally (Yin, 2018). Deciding what to share starts during the early stages of the project and can be accomplished by making drafts about certain portions of the project that are completed first and leaving the incomplete portions until a later time when evidence is clearer. It is important to display credible evidence in reporting the results and in presenting conclusions (Yin, 2018). Part of this stage is giving participants an option to review findings to ensure they reflect accurately the participants' views.

Limitations of Case Study Research

One of the common concerns related to case study research is its ability to generalise. Generalisability refers to the extent by which findings are applied to a wider population (Denzin & Lincoln, 2018). Of particular concern is the single case study, such as the one described in this article, which involves limited participants. Yin (2018), however, argued that the application of generalisability in case study research is focused on "theoretical propositions and not to populations" (p. 21). This is particularly relevant to critical realism because of its intention to explain rather than generalise. In critical realism, generalisability bears no obligation to represent populations. Referring to the Information System research, Wynn and Williams (2012) commented that arriving at the same results in a broader population is not to be expected because systems are highly complex and the events that are initiated at one point may

not be the same in the future even if it occurs in a similar system; this can also be true in nursing research. Nurses are aware that two patients with the same medical condition can have different responses when given the same medications. The influence of age, weight, co-morbidities and genes are some of the known factors that account for differences in drug responses. Similarly, the generation of different outcomes when a case study is replicated is not surprising. However, this variation can be useful in refining an existing theory or any scholarly explanation, elucidating events observed in that new setting or context instead of predicting outcomes based on generalisation (Wynn & Williams, 2012). Nevertheless, there are ways to address this limitation (Yin, 2018). Firstly, the process of data gathering on site can be extended. This will enhance accuracy of findings by gaining more concrete information over time broadening the basis of interpretations. Secondly, conducting peer consultation prior to drafting of the final report. This involves the researcher consulting with colleagues to establish rigor through pooled judgment (Hancock & Algozzine, 2006). Lastly, a consideration to conduct multiple case studies whenever possible is recommended in order to compare, contrast and confirm results (Mills et al., 2009).

Conclusion

Critical realism is a framework that seeks to identify mechanisms responsible for events to occur the way they do, given the context they are in. Using critical realism in nursing research is important in order to understand the complex influences of the physical, social, economic contexts of disease causation. As critical realism provides a wider exploration of phenomena under study, this supports nurses in providing wholistic care relevant to the patient's context and needs. A basic understanding of this framework as it applies to case study methodology can assist researchers to justify their decisions on identifying what evidence is available, where it can be collected and how to analyse and interpret the collected data. This article has highlighted the compatibility and synergy between critical realism and case study methodology using an exemplar study. This provides guidance to researchers interested in qualitative case study informed by critical realism.

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Christy Cabote: Conceptualisation, Writing – Original draft, Review & Editing. **Jed Montayre, Yenna Salamonson and Suza Trajkovski:** Conceptualisation, Writing – Review and Editing and Supervision. **Della Maneze and Lucie Ramjan:** Writing – Review and Editing and Supervision.

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ORCID iD

Christy Cabote  <https://orcid.org/0000-0001-8575-7931>

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