#### PART 1

### 1.0 INTRODUCTION

Research using qualitative methods offers a unique perspective on complex issues in health and public health (Luciani et al, 2019). Isaacs (2014) finds qualitative methods particularly useful for studying social and behavioural aspects of public health. Despite being underutilized, qualitative methods can complement quantitative research, allowing for a deeper understanding of health and health services (Hamilton & Finley, 2020). Public health research using qualitative and mixed methods requires careful consideration of study design, data collection, and ethical considerations (Padgett, 2011).

This essay describes qualitative research, emphasizing its characteristics, features, and methodological unity. This article examines the diversity of qualitative methodologies, emphasizing how they can complement quantitative methodologies. The following sections provide qualitative insights into obesity research, examining studies that employ different qualitative approaches, such as in-depth interviews, grounded analysis, and ethnography. It provides a comprehensive understanding of qualitative research's value in unraveling the complexities of health and obesity through discussions of its strengths, methodologies, and potential limitations.

# 2.0 NAVIGATING THE QUALITATIVE LANDSCAPE IN PUBLIC HEALTH AND HEALTH RESEARCH

In public health and health research, physical, social, cultural, and environmental factors are considered (Gatchel & Schultz, 2012). An interpretive exploration of human experiences is at the heart of qualitative research (Jackson *et al.*, 2007). In psychological science, qualitative research includes observations that traditional quantitative methods can't adequately deal with (Willig, 2019). defines qualitative research as noncontrolling, holistic, and case-oriented, about processes, open and flexible, diverse in methods, humanistic, inductive, and scientific.

Among the unique characteristics of qualitative research in public health is its ability to explore complex social and behavioural issues (Isaacs, 2014). In addition to providing an understanding

of the personal meaning of stress factors and illnesses, it also examines the social and biographical contexts of health (Ahlich *et al.*, 2021). A qualitative research tradition has five distinct traditions, each of which has its own unique approach, making it applicable to different kinds of inquiry. For public health journals to remain relevant in the future, more qualitative research needs to be recognized and published (Stickley, 2022).

(Grim et al., 2015) and (Joshi et al., 2017) both highlight qualitative research's innovative and diverse nature. Camic emphasizes its ability to complement quantitative methods. With an emphasis on in-depth interviews and group discussions, Clare Kitchen (2013) provides a practical overview of qualitative data collection and analysis. As Joshi et al., (2017) emphasizes the importance of theory development, cultural understanding, and contextual analysis, he discusses the methodological principles of ethnography. Qualitative research can be applied across a wide range of fields and settings, as demonstrated by these studies.

There are differences between qualitative methodologies, but they are ultimately united by their common focus on understanding the subjective experiences and meanings of individuals (Slevitch, 2011). Consequently, they emphasize the importance of context and the researcher's role in interpreting the data (Clare Kitchen, 2013) in their inductive approach to data collection and analysis. In qualitative research, this shared focus is balanced with the need for consistency and coherence (Padgett, 2011). By considering the philosophical underpinnings of different approaches and being context sensitive (Ahlich *et al.*, 2021), this tension can be navigated. Ponizovsky-Bergelson *et al.*, (2019) encourages methodological pluralism, since qualitative and quantitative methods are not as clear-cut as they seem.

### 3.0 QUALITATIVE INSIGHTS ON HEALTH BEHAVIORS

The study by (Ali et al., 2020) explored weight management perspectives among 75 Emirati women at risk for type 2 diabetes in the UAE. Utilizing focus group interviews and qualitative research methods, the study identified barriers like low motivation and lack of culturally sensitive exercise facilities. Social support emerged as a key facilitator, with participants suggesting enhanced support, access to dietitians, and culturally appropriate exercise facilities. The findings

contribute valuable insights for developing culturally congruent weight promotion programs in the UAE and offer implications for obesity interventions in other Arabian Gulf countries.

The qualitative study by da Silva and da Costa Maia (2012) delves into the perceptions of 30 morbidly obese individuals regarding obesity and bariatric surgery. Through individual interviews, participants expressed views on obesity as a stable and hereditary trait, emphasizing the difficulty in changing eating behavior. Bariatric surgery is seen as the sole solution, portraying it as a transformative moment where health professionals play a pivotal role. Participants view surgery as a miraculous event, requiring minimal personal involvement. The study underscores the need for validation through further research and emphasizes the importance of empowering patients in the weight loss process, both pre- and post-bariatric surgery.

# 4.0 QUALITATIVE APPROACHES IN HEALTH RESEARCH: ADVANTAGES AND DISADVANTAGES

In this study, (Ali *et al.*, 2010) used a qualitative methodology with a modified grounded theory approach to explore Emirati women's attitudes toward weight management when at risk of type 2 diabetes. A purposive sampling strategy was used to collect data from eight focus groups in primary healthcare centers in Al Ain, UAE. Data were collected by audiotaping sessions, transcription, and thematic analysis. Three broad questions were addressed in the study, including attitudes, perceptions, and interventions among the target population. Incorporating defined research questions while maintaining the key features of grounded theory, a modified grounded theory approach enabled participants' perspectives to be understood in greater depth. The data collected was enhanced by purposeful sampling, which ensured diversity within the target population.

The qualitative methodology, particularly the modified grounded theory approach, allowed for indepth exploration of participants' perspectives, this approach, as highlighted by Charmaz (2016), allows for systematic, hypothesis-driven research, promoting in-depth understanding through iterative data collection and analysis, ensuring rigorous exploration of defined research questions. In addition to facilitating a systematic and hypothesis-driven approach, iterative data collection and analysis facilitate the use of defined research questions Alam, (2020). The focus of this research was on context and diversity within the target population, and the technique employed

enhanced the richness of the study's insights by using purposive sampling. Furthermore, the data were more reliable due to a constant comparison method and multiple researchers participating.

There are many problems associated with the qualitative approach, including excessive resource consumption, subjectivity, and restricted generalizability, which inhibits insights' transferability (Lahti, 2017). Small sample sizes and possible bias also threaten the results' representativeness Although modified grounded theory facilitates systematic analysis, subjectivity in coding and interpretation is a concern, since it introduces bias into data interpretation as explained by Slevitch (2011), Lahti, (2017) stated that this could affect its reliability and objectivity. Due to the study's cultural focus, findings may not be universally applicable or understood due to cultural nuances.

As part of their study, Da Silva & da Costa Maia (2022) interviewed 30 patients undergoing bariatric surgery in a Portuguese obesity treatment center to explore their experiences, perceptions, and expectations. In this study, a grounded analysis method was employed, emphasizing emergent understanding through data analysis, as well as theoretical sampling and constant comparison. Indepth exploration of obesity and treatment was possible with grounded analysis, which captured nuanced patient perspectives. As a result of theoretical sampling, research questions were continuously refined.

An understanding of obesity is enhanced using open-ended questions and grounded analysis, which allows for nuanced interpretations. As a result, the study's findings are enhanced in validity and depth due to highlighting its multifaceted dimensions, including personal, social, and psychological aspects. By delving into the subjective realm, the research captures the complexities of participants' perspectives, shedding light on a variety of factors influencing their perspectives on obesity and bariatric surgery. As a result, the research outcome is shaped by an understanding of the phenomena explored in a comprehensive and nuanced manner.

In grounded analysis, data interpretation is subject to subjective interpretation, which may lead researchers inadvertently to project their preconceptions onto coding (Scott & Howell, 2008). Moreover, the smaller sample size used in this study also limits the generalizability of the findings because subjectivity influences the identification and categorization of themes. It is a strength that there are many perspectives, but it is also a challenge to manage and analyze all the data. As a result, this research has difficulty navigating the depths of qualitative data, which might result in

the researchers overlooking crucial insights, or making the interpretation more susceptible to their biases.

### 5.0 CONCLUSION

Qualitative research methods offer a unique perspective on complex issues that is crucial to health and public health research. By examining individual subjective experiences and meanings, they provide a deeper understanding of health behaviours and their relationships with social, cultural, and environmental influences. By using qualitative research methodologies such as in-depth interviews and grounded analysis, nuanced perspectives are captured, offering valuable insights into health issues. Research conducted qualitatively can fill significant gaps in quantitative health/public health research by focusing on the "why" question and placing human emotion and behaviour at the center of the study. Qualitative approaches amplify the voice of the researched, allowing for a richer understanding of human emotion and behavior despite challenges such as resource consumption and complexity.

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#### PART 2

A CRITICAL APPRAISAL OF THE RESEARCH PAPER "USING PARTICIPATORY ACTION RESEARCH TO EXAMINE BARRIERS AND FACILITATORS TO PHYSICAL ACTIVITY AMONG RURAL ADOLESCENTS WITH CEREBRAL PALSY". (ASHLEY et., al 2020)

### INTRODUCTION

In this part, a critical appraisal of the research paper is conducted. Key aspects of the evaluation include clarity of research aims, congruity with methodology, recruitment strategies, justifications for data collection, analyses, researcher-participant relationships, participant representations, ethical considerations, and coherence of conclusions drawn from the analysis.

## 1. Is there a clear aim/research question(s) for the study?

The study articulates a clear and focused aim: to identify perceived facilitators and barriers to physical activity among adolescents with cerebral palsy (CP) in a rural community using the qualitative, community-based participatory action research method - Photovoice. In accordance with Simon (2014), the objective is clearly defined and emphasizes the use of a specific research methodology to explore the experiences of the target population. Wang (2016) used Photovoice signals in this study as a way of empowering participants and capturing their lived realities, aligning with the overarching goal of understanding the factors influencing physical activity among adolescents with cerebral palsy in rural settings ("Value in Healthcare Delivery Should Be 'Overarching Goal, 2011").

Although the abstract provides a summary, research evidence indicates that a well-defined research question is critical for guiding the study and clarifying research objectives (Hulley et al., 2013). It is possible that the concise abstract does not convey the full scope of the research inquiry, thereby affecting the granularity of the results.

2. Is there congruity (i.e. an appropriate 'fit') between the aims/research questions and the research methodology and approach?

Using participatory action research (PAR) as described by Walker et al (2019) and Abid et al (2022), the study aligns seamlessly with its aims and research questions. According to Conchar et al (2016), this methodology is also effective in capturing authentic experiences. In a study by Chambers (2014), researchers need to be aware of power dynamics within the research process while using participatory methods. It is important to acknowledge this to gain a greater understanding of the participatory approach, and to ensure that adolescents with cerebral palsy have a genuine voice. Taking part in these approaches empowers participants, ensuring they are actively involved in shaping the research narrative due to their participatory nature. Gilbert et al., 2022 advocate patient-centred research agendas for patients with cerebral palsy, and this study is in accord with this view.

Participants' participation in the study is crucial to ensuring a comprehensive understanding of the population studied, according to Schenker et al (2015). As Abid et al (2022) explain, this inclusive methodology enhances the study's internal validity as well as aligns it with contemporary ethical and patient-centred research practices.

## 3. Is there a specific recruitment and sampling/case selection strategy?

By using Photovoice, a qualitative and community-based participatory action research method, the paper identified perceived barriers and facilitators to physical activity among rural adolescents with cerebral palsy. In Shields & Synnot's (2014) study, adolescents with cerebral palsy and their parents were included in the study, providing a comprehensive understanding of this context's challenges and opportunities. Its findings were similar to those of Sienko, (2019) and Boucher et al., (2010), who identified a variety of factors that influence physical activity participation among persons with cerebral palsy.

Motor impairments, old age, pain, attendance at regular school, communication difficulties, upper limb impairments, visual deficits, cognitive attributes, adapted physical environments, positive attitudes, and family support are some of these factors. (Cantarero-Arévalo & Werremeyer, 2021): The use of Photovoice in the study is particularly noteworthy, since it enabled the target population to participate directly in the research process, thus increasing the study's relevance and impact.

# 4. Are data collection methods justified and does the data help answer the research questions?

By utilizing participatory action research, specifically the Photovoice method, prominent researchers have substantiated this practice. Walker et al (2019) advocate for this approach, pointing out that it is effective in identifying perceived barriers to physical activity among rural adolescents with cerebral palsy and facilitators. Conchar et al's (2016) study, using the Photovoice method, examined the experiences of South African adolescents with cerebral palsy, shedding light on the factors that affect the ability to engage in physical activity. In Abid's scoping review (2022), facilitators and barriers to physical activity are identified in children and adolescents with cerebral palsy, which strengthens the justification.

Likewise, Verschuren (2012) emphasizes the importance of personal and environmental factors in determining youths with cerebral palsy's participation in physical activity. Based on the amalgamation of evidence from these studies, the data collection methods used in the study are not only justified but have significantly contributed to answering the research questions in the study. The purpose of this study is to gain a comprehensive understanding of how rural adolescents with cerebral palsy are impacted by a variety of barriers and facilitators.

## 5. Is there a clear description of how data was analysed and represented in the findings?

Walker (2019) describes how Photovoice, a qualitative, community-based participatory action research method, was employed in the study exploring barriers to physical activity among rural adolescents with cerebral palsy (CP). Also utilized by (Khani et al., 2023), this meticulous nine-step process involved a variety of data collection methods, such as the Barriers to Physical Activity Questionnaire for People with Mobility Impairments, in-depth interviews, focus group discussions, and meticulous transcript analysis. In rural settings, this comprehensive methodological approach allowed for a thorough exploration of the factors influencing physical activity engagement of adolescents with CP.

A meticulous effort has been made to gather quantitative insights, complementing Photovoice's qualitative richness, as demonstrated by the incorporation of the Barriers to Physical Activity Questionnaire for People with Mobility Impairments. In-depth and focus group interviews provide a nuanced picture of participants' experiences, capturing both their individual perspectives and

shared narratives (Seus & Weissenberger-Eibl, 2020). In order to extract common themes and patterns, the transcripts were rigorously analyzed for content. Walker et al. (2019) method justified the participatory nature of this research, enabling adolescents with CP to actively participate in the research process, ensuring that their voices were authentically represented.

# 6. Has the relationship between researcher and participants been adequately considered? Is there a statement locating the researcher culturally or theoretically?

A participatory action research method, Photovoice, was used to demonstrate conscientious consideration of the relationship between researchers and participants. It allowed participants to engage actively, contribute meaningfully, and create an action plan in collaboration with one another (Paquet et al., 2022). However, a significant gap lies in the absence of a clear articulation of the culture or theoretical location of the researcher, a critical factor for contextualizing findings. Research would be more interpretable and more applicable in diverse cultural and theoretical contexts if this aspect were transparently stated.

In Abid's (2022) exploration of cerebral palsy rehabilitation facilitators and barriers, he emphasizes the importance of individualized interventions for children with cerebral palsy. Walker et al's (2019) study, too, lacks explicit clarification on the researchers' cultural or theoretical orientation, which may pose a challenge when applying their insights broader.

Furthermore, the study fails to address potential biases and power dynamics, which could have a significant impact on the validity and transferability of their research findings. In order to ensure their research is robust and applicable within varied cultural and theoretical contexts (Olukayode, 2019), researchers need to be explicit and transparent in stating their cultural and theoretical positioning, alongside a thorough examination of potential biases.

### 7. Are participants, and their voices, adequately represented?

Using the participatory approach of Photovoice to engage rural adolescents with cerebral palsy directly in the research process, the research paper adeptly amplifies the voices of rural adolescents with cerebral palsy. It is important to note, however, that the study had a small sample of 15 participants, which may make the findings difficult to generalize to the larger population (Hamad & Folorunsho, 2023). As with Conchar's (2016) study, the small sample size of 15 participants in

Conchar's (2016) study, potentially limiting the broader representativeness of its findings, limits its valuable insights into the experiences of South African adolescents with cerebral palsy.

Providing a comprehensive overview of the factors influencing physical activity among youth with cerebral palsy, (Elshahat et al., 2021) provides a comprehensive analysis of personal and environmental factors. (Verschuren et al., 2012) study, while identifying significant personal and environmental factors shaping physical activity participation in ambulatory youth with cerebral palsy, may not fully capture those with more severe mobility impairments' experiences. These studies provide valuable insights, but they are limited by small sample sizes and, sometimes, limited representativeness. In order to fully comprehend cerebral palsy experiences and contextualize the findings within broader populations (Pandey et al., 2021), this acknowledgment is vital.

# 8. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?

This study explores the barriers and facilitators of physical activity among rural adolescents with cerebral palsy, while emphasizing ethical considerations. However, a potential concern arises from the absence of explicit mention of formal ethical approval from an Institutional Review Board (IRB) or equivalent body in the published article, raising questions about adherence to current ethical standards.

Abid et al (2022) recommend that personal and environmental factors may influence physical activity, but the study lacks specific details regarding the ethical approval process, which warrants further investigation. In order to evaluate the study's ethical conduct comprehensively, additional information would be needed, including details about consent processes, safeguards for data privacy, community engagement strategies, and reflections on power dynamics in order to fully assess its compliance with current ethical standards.

# 9. Do the conclusions draw in the research paper flow from the analysis, or interpretation, of the data?

As a result of the analysis and interpretation of the data, the conclusions drawn in the research paper make sense. In addition to Photovoice, in-depth interviews, focus groups, and community forums, the study involved a comprehensive collection and analysis process. Based on participant

perspectives, both quantitative scores and qualitative themes consistently identified barriers and facilitators to physical activity. By systematically gathering, analysing, and involving children and parents with cerebral palsy in the process, the conclusions become more credible and coherent, as they are informed by a thorough examination of the data gathered.

15 participants may limit generalizability, focusing purely on rural adolescents with cerebral palsy may overlook urban experiences, self-reported data introduce potential bias, and the absence of explicit ethical approval raises concerns about adherence to ethical standards despite incorporated considerations.

### **CONCLUSION**

The research work effectively investigates barriers and facilitators to physical activity among rural teenagers with cerebral palsy utilising Photovoice in participatory action research. The study integrates aims with methodology, justifies data gathering methods, and portrays participants' voices. However, disadvantages, such as a small sample size and ambiguous ethical approval, merit investigation. Overall, the results generated from the complete data analysis give useful insights but may be hampered by certain aspects.

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