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# AORTIC VALVE REPLACEMENT IN SMALL AORTIC ANNULUS

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An Essay  
Submitted For The Partial Fulfilment  
Of The Master Degree in General Surgery

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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million, from 2.5 million in 1980 to 4 million in 1998 (Department of Health 1999).

There is a growing emphasis on the need to improve the quality of care in the public sector, and to ensure that the public sector is able to meet the needs of the population. This has led to a number of initiatives, including the introduction of the Health Care Act 1999, which sets out the framework for the regulation of health care, and the introduction of the Health Care Act 2001, which sets out the framework for the regulation of health care.

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Thank to all my colleagues



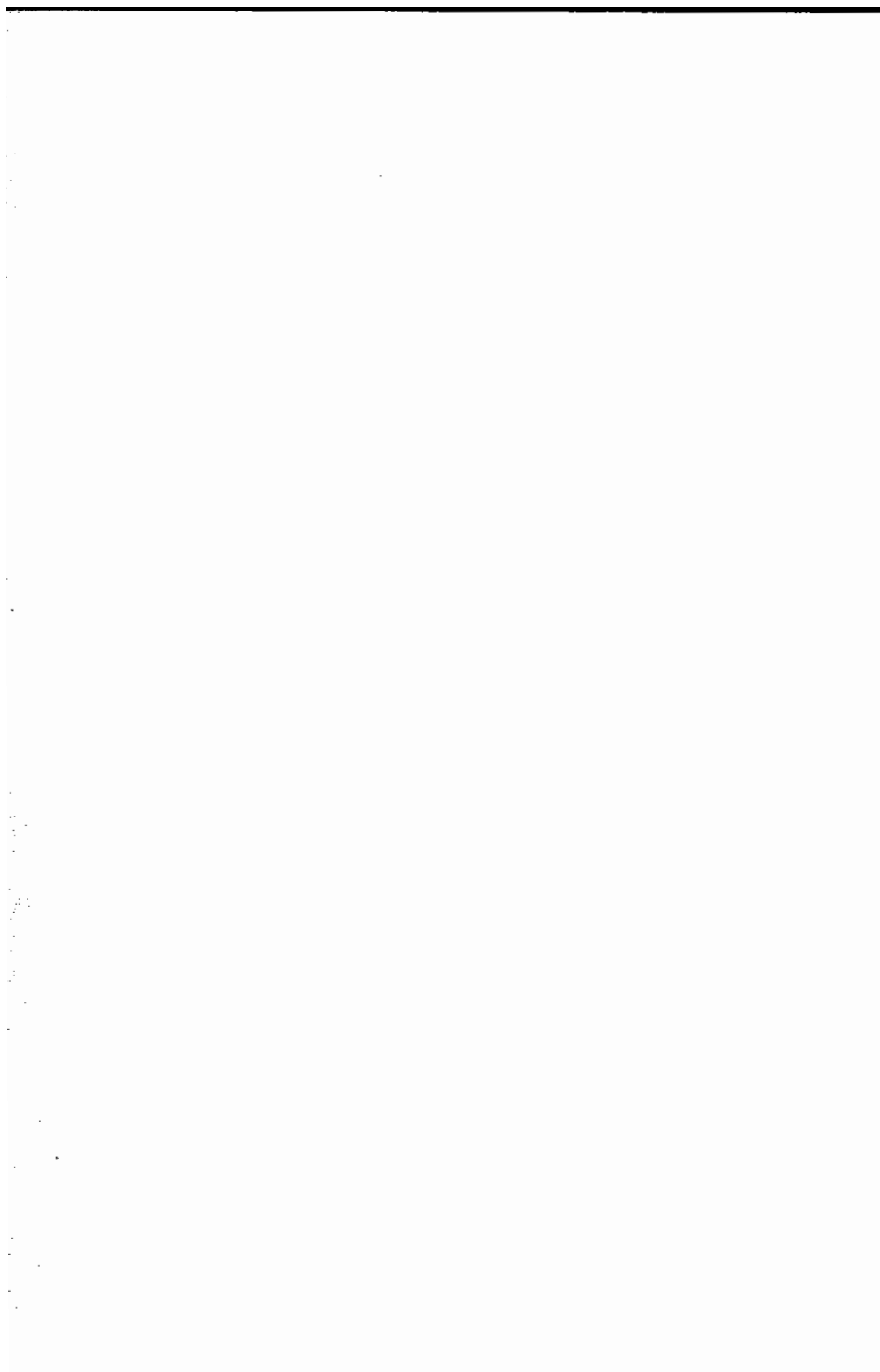
The first part of the paper discusses the importance of understanding the cultural context of the research. It highlights the need for researchers to be sensitive to the values and beliefs of the communities they are studying. This is particularly important in the field of education, where cultural differences can significantly impact learning outcomes.

The second part of the paper focuses on the methodology used in the study. It describes the qualitative approach adopted, which involves in-depth interviews and focus group discussions. The researchers aimed to explore the experiences and perceptions of the participants, rather than testing a specific hypothesis.

The third part of the paper presents the findings of the study. It discusses the various themes that emerged from the data, such as the role of family in education and the influence of community norms. The researchers found that there were significant differences in the way that different cultural groups viewed education and learning.

The final part of the paper discusses the implications of the findings for practice. It suggests that educators and policymakers should take into account the cultural context of their students and communities when designing educational programs. This could involve providing additional support for students from disadvantaged backgrounds or incorporating culturally relevant content into the curriculum.

# INTRODUCTION



Replacement of the aortic valve has become a relatively simple procedure with low mortality in most patients (Foster et al., 1986). However, the presence of small aortic root may present difficult problems to the surgeon in spite of several methods of annulus enlargement have been described (Fleming et al., 1987).

Annular enlarging procedures can be logically divided into two groups, anterior radical enlargement (aortoventriculo-plasty) and posterior limited enlargement (annular split) (Rossiter et al., 1980).

Long term follow up results after aortic annular enlargement are poor but it is known that the anterior approach causes injury to the conducting system and the septal coronary branches (David et al., 1987) and that the posterior approach allows for only a few millimeters of enlargement and risks tearing the roof of the left atrium once the heart starts beating again (Jaffe et al., 1990).

Small aortic prostheses providing acceptable palliation for short term follow up periods especially with patient with small body surface area (Kawachi et al., 1992) but no data are available for long term follow up and generally the large prostheses related to body surface area provides more successful long term results (Jaffe et al., 1990).

Mechanical aortic valves are frequently implanted in small aortic roots. Small sized bioprosthetic valves have unacceptably high gradient and the implantation of a homograft or autograft needs special setup and training (Barner et al., 1994).

Whatever aortic prosthesis a surgeon chooses to use, it will always cause some degree of obstruction to flow since its effective orifice area is smaller than the aortic annulus.

An improvement in the effective orifice area can be attained by inserting a prosthesis larger than the aortic annulus. Placement of the aortic prosthesis in supraannular position is a simple method of accomplishing that. However, this technique allow for insertion of a prosthesis only one size larger than the aortic annulus. If a larger prosthesis seems desirable enlargement of the aortic annulus is necessary.

A small aortic prosthesis may be acceptable for a small and inactive patient. The difficulty lies in determining how small the aortic prosthesis can be in a given patient (David et al., 1983).

**Anatomical  
consideration of the  
aortic valve**

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