The exeter evaluation

– A basis for hospital design and art in the millenium

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The results of the first independent evaluation of a major hospital arts project provide important data and new insights into the interactions of users with the hospital environment. Before outlining the methods and the specific outcomes for this hospital we summarise the wider conclusions of this work. The Exeter Evauation has established and reinforced five key principles which are these:

1 We *can* find out useful information about the effects of environmental quality on users of health care environments.

2 The methods used in the evaluation are simple and easy for anyone to understand and the data obtained is valid and important to all involved.

3 Data based on experiences of front-line clinical staff about the effects of environmental qualities on all users can be obtained much more easily than the results of "scientific" clinical trials based on the measurement of clinical indicators.

4 The users' assessments of environmental qualities are most useful when obtained in plain language for a specific location which has been carefully examined and recorded.

5 Inventories of art works provide valuable information for developing practical policies, for improving environmental qualities and for comparing different health care spaces and facilities.

Additionally the publication of further independent objective data obtained by our methods should provide researchers with a growing body of material from which to derive deeper understanding and useful guidance to practitioners.

Part 1. The Evaluation Research Project

The newly rebuilt district hospital in the city of Exeter in southwest England opened in 1992 and an arts project was initiated immediately. The Royal Devon and Exeter Hospital serves a population of some 300,000 people. It has over 500 acute beds and a full range of supporting departments for diagnosis, treatment and therapy.

The arts project, known as *Exeter Health Care Arts* (*EHCA*), was set up by the hospital administration and was initially directed by a professional, but part-time, arts co-ordinator.

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Its principal aim was to include art and craft works in the new hospital building *"to humanise the environment, create more attractive places to sit and wait and to help people feel comfortable in navigating their way around the building."* The *EHCA* was the subject of the research evaluation by *Arts for Health* commissioned by the NHS Trust and funded by the Arts Council of England. The evaluation of *EHCA,* from its inception in 1992 up to 1998, is described in the full Report to the Trust (1).

The background and some of the issues raised in choosing methods of evaluation were presented in the authors' paper for the UIA-PHG Seminar at Thessaloniki in 1998 (2). In addition to the preparatory literature review we undertook five separate enquiries.

1.1 An Examination of the Inception and History of the *EHCA* Project

Following the initial suggestion of introducing art into the new hospital the aims and objectives of the *EHCA* Project developed and expanded with the progress of the project itself. Its single original aim, quoted above, was augmented with newly-stated aspirations such as to *"alleviate stress for all our patients"* and, for staff, *"producing a more pleasant place in which to work",* and *"to develop links"* between the hospital and the communities it served. Performances of music, poetry readings and other events were also arranged by *EHCA.* No indicators or measures were set by which an assessment of progress in obtaining any of these objectives could be made but this is not at all unusual. In the absence of any given indicators or monitoring system *Arts for Health* has examined as many aspects as possible, augmenting new data with assessments informed by extensive experience.

1.2 An Inventory of Art Works on Display in the Hospital

It was decided to make an Inventory of the art works to be seen at the hospital on a selected date using a new database devised by *Arts for Health* for general use. The main elements of the data obtained and recorded are shown in Table 1.

Table 1. The EHCA Inventory Database.

Field Names	Data recorded
Location	Department, room or space
Tem.	Location identity code (to be related to drawn plans.)
lev.	Floor level code (e.g. 0, 1, 2 etc.)
Int.	Interior location (X)
Ext.	Exterior location (X)
Type/med.	Type of art work/medium or media used
Author/s	Name of artist or group
Act.	Active participation of patients, staff and/or other groups with artist (P) and/or with the installed art work (A)
Title/subj./set	Title or subject of work (with number of items in set if more than one)
Don.	Donated (X)
Lender	Codes e.g:- Arts Council (AC); Crafts Council (CC); Paintings in Hospitals (PIH); Devon County Council (DCC); Royal Albert Memorial Museum, Exeter (RAMM); Not recorded in making Inventory (X)
Purch.	Purchased by EHCA (X)
Comm.	Commissioned by EHCA (X)
From	Month/year installed
To	Month/year removed or, if still in place, month/year of the Inventory
Mths.	Duration of installation in calendar months
Cost	Of purchase, where known
Insured	Nominal insurance value
Notes	*adlib*

While making the Inventory a considerable number of art works were seen displayed within hospital departments that were not part of the arts project. This was no surprise. All but the very newest health care institutions have a history throughout which ceremonial, pictorial and other historic items, *objets d'art*, ephemera and so on are acquired and put on display.

Most of these works originated as gifts and donations from patients and their families to individual staff or to wards or departments, in

recognition of, and gratitude for, the care received. Similar gifts and donations came from local charitable organisations. Art works made and presented by hospital staff were also found on display. Because of the significant number of Non-*EHCA* works a separate Inventory was made as part of the research and evaluation.

1.3 An Opinion Survey of Users' Responses to Specific Art Works in their Locations.

People do not usually visit hospitals to see the art works. There is as yet little understanding of the interaction of users with displayed works as they occur. For this evaluation it was decided to obtain precise information in preference to making generalised enquiries such as "Did you enjoy the works of art?" Questionnaire 1 was designed for interviews with hospital users (patients, staff and visitors) *in situ* "About This Art Work in This Place". This was a development of the questionnaire used in our field study of environmental quality at Wythenshawe Hospital (3). The majority of questions were structured, but subjective assessments and open-ended comments were sought. A second Questionnaire, 2, was also used "About the *Exeter Health Care Arts* Project". Four locations in the hospital were chosen and a total of 378 users were interviewed.

1.4 An Opinion Survey of a Representative Sample of Front-line Clinical Staff.

An Opinion Survey was obtained from a sample of front-line clinical staff. With training and experience in observation these staff are in direct contact with patients, aware of all their responses to the health care they receive and to the hospital environment. The clinical staff's assessments and their advocacy of patients' views/needs are therefore of the greatest significance.

Questionnaire 3 was "About the Exeter Health Care Arts Project" for Clinical Staff exclusively, augmenting Questionnaire 2 in the Postal Survey, and, for interviews with Clinical Staff *in situ,* used in addition to Questionnaires 1 and 2.

The number of front-line clinical staff at the new hospital was 1768, full-time and part-time, and questionnaires were sent to a random sample of 20%. The sample was stratified to reflect proportionately the numbers in each staff grade. 348 sets of questionnaires were posted and 125 were subsequently returned completed, a 36% response, equivalent to 7% of all clinical staff. Within the total of those interviewed *in situ* (see 1.3 above) there were 40 clinical staff who had not been selected for the postal survey. These staff also completed Questionnaire 3 at the interview and this data is separately identified in the analysis. In total the responses of 9.3% clinical staff at the hospital have been obtained.

Other Interviews and/or the Written Comments.

Additional material was obtained and recorded from key hospital staff, artists and local organisations in the community. Although it was not designed for numerical analysis it has very usefully informed the evaluation. Some 31 individuals gave interviews and written comments were received from 11 commissioned artists and 13 local community organisations with an interest in arts activities.

The results of the opinion surveys have been analysed and tabulated and the Inventories are stored in a database suitable for updating. These, together with the examination of the development of the project and information derived from the interviews and written responses, are set out in the full Report.

Part 2. Results and Outcomes

2.1 Economic Aspects and Financing the Arts in Health Care

Can the arts project be seen as value-for-money? This is a difficult question to answer as there is no body of comparative detailed project data and cost information to consult. Data from similar projects cannot reliably be compared in detail as they record income and expenditure in a variety of different ways.

Some primitive cost indicators may be of

use for development in the future. The income of *EHCA* for the six years under review was £224,461. Total expenditure for this period amounted to £206,711 of which £88,639 was on art works (capital expenditure) and £118,072 on project management and sundries (revenue expenditure). In relation to total spending these sums were equivalent to approximately 0.1% of capital spending on average per annum and no more than 0.025% of revenue spending on average per annum. The cost of *EHCA* has been well below the "1%-for-art" policy implemented for some capital projects in many countries. This formula only relates the capital cost of art works to the scale of a new facility; for existing facilities another measure is needed.

Obtaining the extensive display of visual art, initiating performances, arts activities and participation, and preparing the successful bid for substantial National Lottery Funding - these have all been accomplished through the work of a part-time Arts Co-ordinator. With 90% of respondents interviewed approving of money being raised for the arts in health care the need or demand for it also seems unquestionable. The sample survey of clinical staff showed a lower but still substantial majority, 72% approving money being raised for the arts. These considerations together with the overall positive responses of users established by the surveys confirm that the arts project is excellent value-for-money.

2.2 The Inventory

Table 2 gives a broad analysis of the total display of art works installed by *EHCA* in the hospital. For comparison the Non-*EHCA* art works are analysed in the same way. This data may be used in assessing the balance for example between exterior and interior provision, between different functional spaces within the hospital and between the various ways in which art works are obtained. The Inventory contains much more useful data for analysis and it would be immensely valuable to compare it with further similar inventories from other hospital arts projects if they become available. Access to such comparative analyses would be an indispensable resource for policy development and independent research as well as for practitioners. For example it could be used to discover where art works had been placed in specific functional spaces such as diagnostic rooms, intensive care areas, delivery suites and so on. Practitioners would be able to see and learn from our collective experiences and avoid "re-inventing the wheel".

The last item in Table 2 refers to a number of visual arts projects which involved the active participation of patients, staff and/or others in creating them with the artist, or in enjoying them as installed. These are dscussed in Section 2.7 below.

3 Responses to Art Works by Users – In situ Interviews

The effect of an art work in a health care setting on an individual depends first on the individual being aware of it. Having observed it the individual may read any information on display about it and may discuss the art work with another person. These matters of fact were established for those interviewed, together with their subjective assessments and whether they would like to see the picture remain, removed or replaced Table 3 sets out the survey results for the questions put to respondents in the specific hospital locations.

Users' subjective assessments of the art works cannot be generalised which is the reason for focusing the survey on specific works in their hospital setting. A set of semantic differentials was carefully designed to be clear and simple to understand and this proved to be so in our survey. The averages of the subjective responses for six specific art works in four locations were calculated and Figure 1 shows these for three of the works. This information provides useful feedback about the commissioning and selection of works to the arts project and

Table 2. Inventory Analysis

Category	EHCA, surveyed 31.3.1999		Non-EHCA, surveyed 31.7.1999	
Entries	Art works	Entries	Art works	
Totals	164	348	112	154
Works held in store	(varies, maximum 12) 1		n/a	
Exterior location	2	2	2	2
Interior location	162	346	110	152
Circulation areas (hospital entrances, street, all corridors, stairways, lifts)	109	219	47	72
Waiting areas	28	80	5	7
'Public' areas (Chapel, 'Oasis' restaurant, cafeteria)	8	28	–	–
Departmental and other spaces (excluding all circulation and waiting areas)	18	32	57	72
Wards and day care (all areas including circulation within dept. and waiting areas)	5	5	95	124
Donations	14	23	not researched	
Loans	85	172		
Purchases	12	12	not researched	
Commissions	45	135		
Source not obtained	4	6		
Activity (P) and (A)	18	79		

to arts practitioners.

One immediate effect of arts works on users is to stimulate the need for information about them *in situ*. Of those interviewed who had noticed the art works 30.8% overall had also read the caption and 39.2% had discussed the art work with another person.

In summary we believe the tabled results of this part of the investigation demonstrate how we can find out much useful information about users' responses to art works.

2.4 Sample Survey of Clinical Staff – Effects on Morale

Table 4 sets out the results of the postal opinion survey of the representative sample of front-line clinical staff which are discussed in sections 2.4 to 2.8.

Clinical staff were asked whether, from their own experiences, they considered that the Arts Project has effects on the morale of patients and on the morale of staff, and if so, whether the effects were positive or negative. In the sample

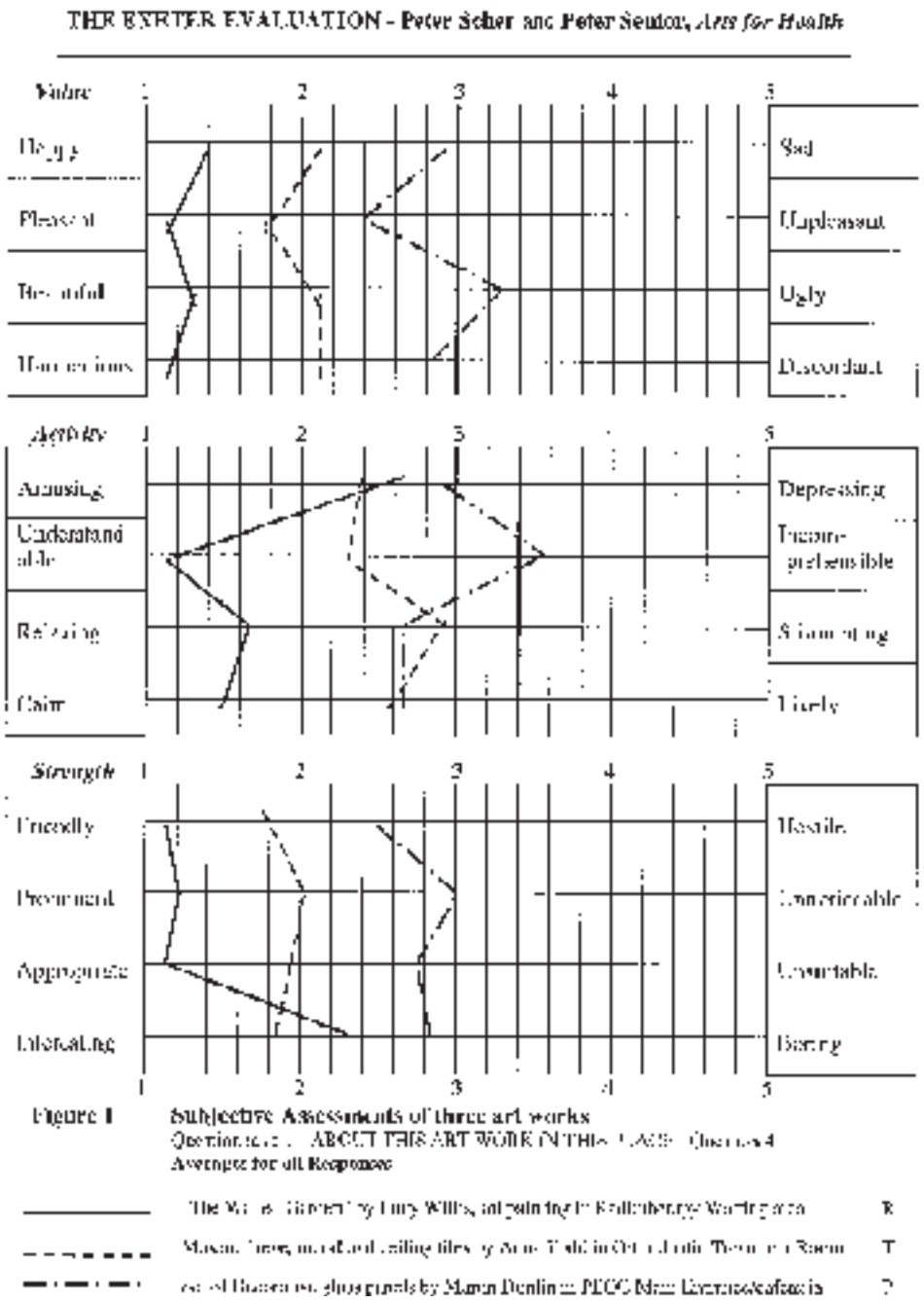


Figure 1 Subjective Assessments of three art works
Question text: ABOUT THIS ART WORK IN THIS PLACE Question 4
Averages for all Responses

Figure 1.

survey of clinical staff 72.8% answered "yes" on both counts and 68% "positive" on both, too. Only one or two respondents thought the effects were negative and 18.4% considered that there was no effect. The additional clinical staff who responded to the same questions at the *in situ* interviews gave yet more support with 92.5% considering the arts project had a positive effect on the morale of patients, and 82.5% on that of the staff. This is a very strong endorsement for the Arts Project from clinical staff on their own and on their patients' behalf, further reinforcing the users' support and approval of the arts project (see 2.1 above).

2.5 Effect on the Healing Process

Clinical staff were asked "From your own experience would you consider that the Arts project, or individual elements of it, has any effects on the healing process in patients?" Of those in the sample survey who answered the question 32.4% said "yes" with positive effect on the healing process and 51.2% said "no". The additional clinical staff interviewed *in situ* divided 70% "yes" and 25% "no". Combining the results, 40.9% are "yes" and positive, 47.3% are "no". This may be summarised as that perhaps a third or more of the staff are convinced of the positive effect of the arts project on the healing process but about a half of them are not, possibly for reasons of limited experiences.

The situation in a hospital differs markedly from exhibitions or galleries displaying works made simply to exhibit – as "gallery art". Although the hospital street may be used as an exhibition gallery, as such it has several disadvantages; at times it can be very busy indeed, the natural and artificial lighting is very variable and often unsuitable for viewing art work, and viewing distances are very limited.

Nevertheless users do look at art works in these areas at most times and a number of respondents also commented favourably about this. In particular "gallery use" of the circulation areas is notable at less busy times such as evenings and at weekends. Inpatients who are ambulant or in wheelchairs benefit from a "stroll along the street" to look at the art works and this further suggests that the arts project contributes positively to the healing process. This pattern of "gallery strolls" by inpatients has been observed in other hospitals with works displayed in extensive circulation areas. Comments confirmed that a number of clinical staff recognise this as an element of health care, providing both distraction from stressful experiences and some physical exercise.

2.6 Therapeutic Benefits

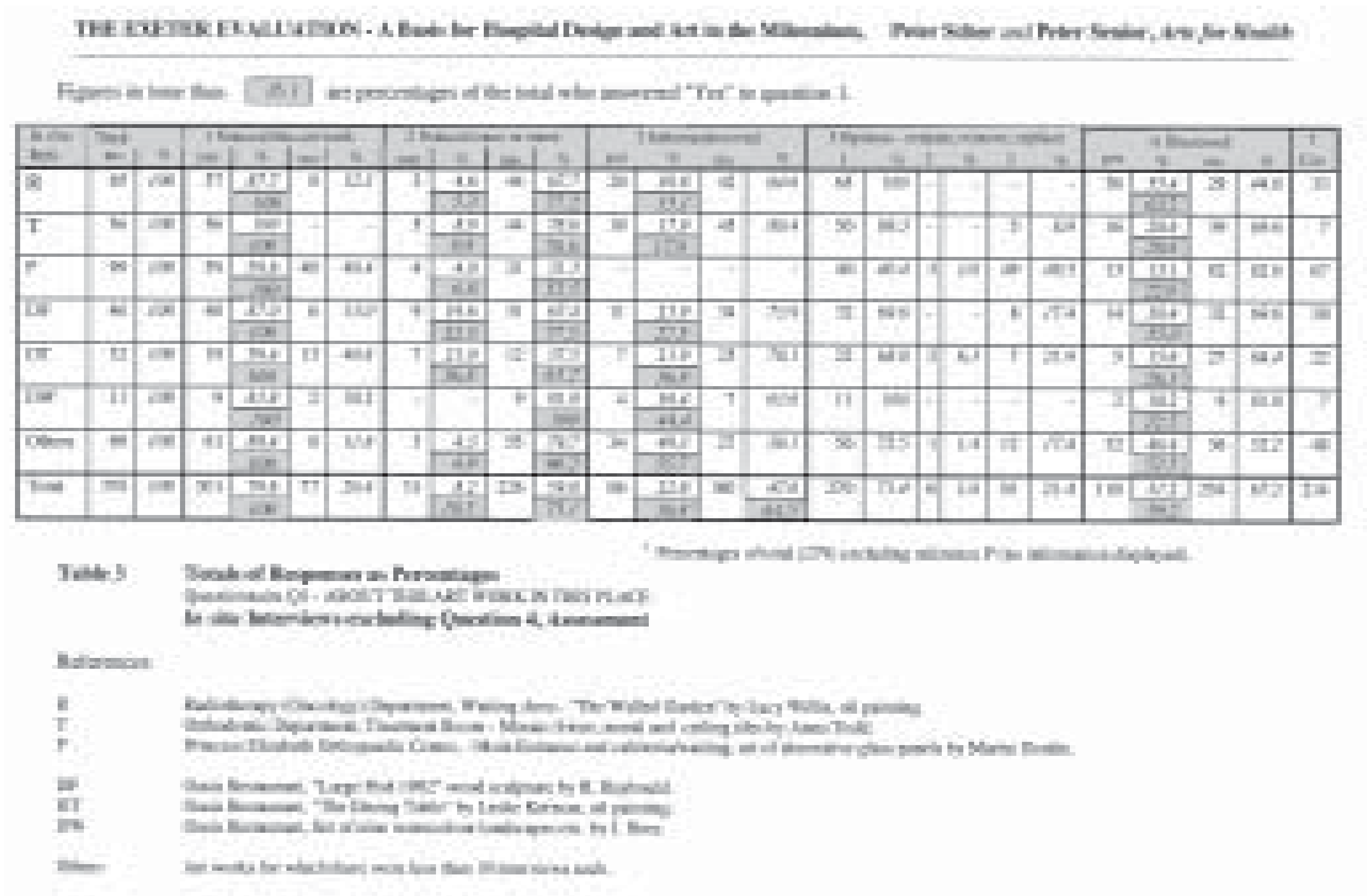
One question set for us to evaluate was whether the arts project had therapeutic benefits as distinct from the healing process. If the term therapeutic benefits is understood to mean clinical outcomes then, as with morale and with the healing process (see 2.4 and 2.5 above), the best guidance for assessment, in the absense of detailed clinical evidence, is from those in direct contact with patients.

Only 17.6% of the clinical staff sample said they were aware of therapeutic benefits from the arts project; of those interviewed *in situ* 42.5% said they were aware of them. A significant majority, 71.2% in the sample survey, were not aware of any therapeutic benefits. The evidence offered by those who responded positively described the commonest effect as that of distracting patients and, in some cases, calming or stimulating them, thus relieving some of the stress engendered by illness and its consequences.

2.7 Integration, Participation and Interaction

No more than a quarter of the sample of clinical staff surveyed and interviewed *in situ* reported that arts activities had been successfully integrated with their professional work. Some comments in response to the questionnaires confirm that those staff who do have such experience are fully convinced of its effectiveness

In the Inventory of the *EHCA* project there are 18 entries produced from a smaller number of commissions classified as "active" (Table 2). Patients and visitors have some active contact



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Figures in boxes thus [illegible] are percentages of the total who answered "Yes" to question 1.

R

T

P

DP

ET

DW

Others

Total

[1] Percentages of total (279) excluding reference P (no information displayed).

Table 3 **Totals of Responses as Percentages**
Questionnaire Q3 - ABOUT THIS ART WORK IN THIS PLACE
In situ Interviews excluding Question 4, Assessment

References:

R Radiotherapy (Oncology) Department, Waiting Area - "The Walled Garden" by Lucy Willis, oil painting.
T Orthodontic Department, Treatment Room - Mosaic (water, mural and ceiling tiles) by Anne Todd.
P Princess Elizabeth Orthopaedic Centre - Main Entrance and cafeteria/seating, set of decorative glass panels by Martin Donlin.

DP Oasis Restaurant, "Large Pod 1992" wood sculpture by R. Raybould.
ET Oasis Restaurant, "The Dining Table" by Leslie Kerwood, oil painting.
DW Oasis Restaurant, Set of nine watercolour landscapes etc. by J. Bray.

Others Art works for which there were less than 10 interviews each.

with these art works either through their authorship or in their enjoyment. There is some evidence that these art works have a greater effect than works – on loan or purchased – that are simply chosen for placing in the health care setting. Another positive aspect of these works is that in most cases detailed information about how they came about and about the participants is part of the display. In the form of photographs, text, preparatory sketches and models these are valuable – and valued – displays in themselves.

2.8 Communication and Awareness of the *EHCA* Project

People do not use hospitals on account of the art works to be found there and although health care arts projects are increasing in number throughout the world most health facilities do not have one. Awareness of an arts project is important for two reasons:

1. All hospital staff should be aware of it as a resource from which their own department can benefit and each should be aware of it so as to enable patients, visitors and new staff to share its benefits.
2. As part of the community it serves the art project should be known to a significant proportion of those who use the hospital as well as others and to local arts and arts-related organisations and to local professional artists.

In assessing the extent to which users of the hospital were aware of the arts project the survey found that only 31.1% of patients and visitors (excluding those on first time visits) knew of the *EHCA* project. The 72.8% of the sample survey of clinical staff who knew of the project was lower than might have been expected.

Key staff could become more active advocates and facilitators for the arts project and the importance of the *in situ* information was also made evident in the opinion surveys.

Part 3. Human-Centred Quality Environments

It should no longer be necessary to argue the case for investing every health care environment with high quality. This is universally the professional goal of architects, artists and other designers and we have been actively advocating and demonstrating this for a very long time. The advocacy has encountered two severe obstacles. First, budgetary limits, strictly controlled, have at times in most countries been so stringent that health care "clients", managers, and their design teams have devoted disproportionate resources to meeting them, to the neglect of ensuring high environmental quality in designs. The second obstacle is that, as advocates, we have very little persuasive evidence for the benefits of high quality environments and our demonstrations in individual projects, however successful, are often regarded as specific one-offs, not as models for other applications.

Art works are only one of the elements of the environment which make their effects on users. Thus lighting, amount of space, noise levels, comfort and so on may also influence experiences of art works. Clinical staff were asked whether they considered that the quality of the environment where health care takes place has observable effects on users. The overwhelming majority in the sample survey, 88%, and of those interviewed *in situ,* 92.5%, replied "yes" (Table 4).

At first this may seem unsurprising as, in general, most people recognise that the environment affects them. However this question was put to front-line clinical staff about the environment where health care takes place, where both staff and patients are concentrating on what is happening to the patient. We believe that these responses ought not to be seen as generalised and this is borne out by the answers given to the follow-up open question asking for a description of the qualities and their effects. There were more responses to this than to any other open question and these comments were generally clear, confident and, as a group, consistent. We believe the clinical staff's responses give strong support both to the need for obtain-

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Table 4 Totals and Percentages of Responses

ing good environmental quality and to the importance of the staff's own assessment of it.

Our background research found very little existing evidence that was not highly specific in terms of the facility, the art form or the patients' condition. And we found very little independent evaluation of environmental quality in the design of health care buildings. We surely cannot rely solely on Roger Ulrich's "View from a window" any longer? In our study of Patient-Focused Architecture (4) we proposed a method of evidence-based evaluation for health care buildings that should provide guidance for architects and their "clients" in obtaining the qualities that are valued. At Exeter we have not only evaluated a specific hospital arts project but we have employed a number of simple fact-finding techniques, developed from our researches into health care architecture. Our approach was driven by two convictions, first, that the environmental qualities for health care settings must be patient-focused and second, that the research and evaluation we are carrying out must add to our basic knowledge and understanding of how patients, staff and visitors perceive and interact with the health care environment.

Clinicians, nurses, therapists and diagnostic specialists recognise the effects on patients and on themselves of the qualities of the environment. The quality of the whole physical environment, the architecture, of which an arts project is but one element, makes a significant impact on health care and further studies of this are needed. We also need to establish the effects of the qualities of their own working environment on front-line clinical staff. If we are clear about what users recognise as positive and what negative, and if we obtain more good evidence to offer the clinical staff of the 21st century then they will also recognise that the architecture that "accentuates the positive" and "eliminates the negative" environmental qualities is essential to their work. The resulting settings that they demand of us will become truly human-centred.

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