ENVIRONMENTAL FACTORS IN CHILD BEHAVIOURS IN AN EARLY CHILDHOOD SETTING

Roger A. Baxter B.A. Dip.Ed., M.Ed.

A thesis submitted in fulfilment of requirements for the degree of Doctor of Philosophy
Faculty of Education
University of Newcastle
Australia

December, 2000

DECLARATION

(Signed) _____

ACKNOWLEDGEMENTS

For me, the long and arduous journey from enrolment as a research student to submission of this thesis has been made possible by the company and support of good friends, skilled supervisors, and colleagues in early childhood, all of whom need to be acknowledged. In particular, my gratitude to Barbara for her quiet support while I studied, and less quiet enthusiasm for challenging every argument I developed. My thanks to Professor Phil Foreman and Associate Professor Bob Conway for their supervision, suggestions, and capacities to endure endless drafts. And last, but by no means least, I record my sincere appreciation to the staff of the child care centre. This study would not have been possible without their willingness to accept an "outsider" observing all the activities in their rooms and outdoor play area for more than five months. Their professionalism as staff, sense of accountability to children and parents, and both their concern for and interest in expanding knowledge about early childhood care and education commands my admiration and respect.

CONTENTS

TITLE PAGE	i
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
CONTENTS	
FIGURES	
TABLES	
TABLES	XII
ABSTRACT	xiv
CHAPTER ONE	
Introduction to the study	1
1.1 Purpose of the current study	
1.2 Research and children in child care centres	
1.2.1 Consequences of child behaviour problems in child care centres	
1.2.1.1 Negative tone	
1.2.1.2 Undesirable behaviour models	
1.2.1.3 Creating behavioural expectation	
1.2.1.4 Long-term consequences	
1.2.2 Reducing occurrences of behaviour problems by managing the child	
1.2.3 Reducing behaviour problems by modifying the environment	
1.3 Need for the current study	
1.4 A conceptual framework for the current study	6
1.5 Conceptualising the environment of child care centres	7
1.5.1 The use of terms and concepts	7
1.5.1.1 Context and environment	
1.5.1.2 Environment and milieu	
1.5.1.3 Environment and settings	
1.5.1.4 Situations	
1.5.1.5 Conclusions about the use of terms and concepts in the literatur	
1.5.2 Definitions for the current study	
1.5.2.2 A definition of milieu	
1.5.2.3 A definition of settings	
1.5.2.4 A definition of context	
1.5.2.5 A definition of situations	
1.5.3 Embedded factors	
1.5.3.1 Behaviour units or episodes	
1.5.3.2 Momentary situations	13
1.5.4 The physical relationship between setting components	
1.5.5 Describing environmental characteristics	
1.5.5.1 Descriptions of the environment	
1.5.5.2 Descriptions of settings	15
1.5.5.3 Descriptions of situations	
1 5 5 4 The limitations of describing environments	16

1.5.6 Describing properties of the environment in the current study	
1.5.6.2 The physical component of the environment	
1.5.6.3 The social component of the environment	
1.5.6.4 The structural component of the environment	
1.5.6.5 The cultural component of the environment	
1.5.6.6 Summary of component parts of the environment	
1.5.7 Magnitude of environmental influence	
1.5.7.1 Space and time	
1.5.7.2 Impact of time on the person and behaviour	
1.5.8 Models of influence	
1.5.8.1 The nature of the interface between the child and the setting	. 21
1.5.8.2 Directionality of relationship between persons and environments	. 22
1.5.8.3 The person reducible to the environment	
1.5.8.4 The environment reducible to the person	
1.5.9 Mechanism of change resulting from person:environment relationships	. 23
1.5.9.1 Interactional model	
1.5.9.2 Organismic model	
1.5.9.3 Contextual model	
1.5.9.4 Transactional model	
1.5.9.5 Summary and conclusions about child:environment relations	
1.5.10 Summary of concepts of environment in the current study	
1.6 Conceptualising problem behaviour	. 26
1.6.1 Inconsistencies and differences in definitions of behaviour	
1.6.1.1 Problems associated with defining aggression	. 27
1.6.2 Describing and demarcating problem behaviours	
1.6.3 The concept of unwanted child behaviours	
1.6.4 The arbiters of unwanted child behaviours	
1.6.5 Advantages of utilising the concept of UCBs	. 32
1.6.6 Consistency in the identification of UCBs	
1.7 Categorising the methodology	. 33
1.7.1 Raw numbers	. 35
1.8 Summary	. 36
1.9 Assumptions underlying method	. 36
1.10 Limitations of the methodology	. 37
1.11 Sources of personal bias in research	. 37
1.12 Organisation of remainder of the thesis	
1.12 Organication of formalities of the thousands.	
CHAPTER TWO	
Overview of approaches used in previous studies to identify the causes of children's	
problem behaviours	. 40
2.1 Introduction	40
2.2 Components of the child's psychological habitat	. 40
2.2.1 Nature as an explanation for UCB	
2.2.1.1 Genetics and hereditability	. 41
2.2.1.2 Temperament and personality	. 41
2.2.1.3 Prenatal trauma and preterm birth	. 44
2.2.2 Nurture as an explanation for UCB	44

2.2.2.1	Single parenthood	45
2.2.2.2	• •	
2.2.2.3	Unstable family	
2.2.2.4	Maternal depression	
2.2.2.5	Low socio-economic status	
2.2.2.6	Discipline	
2.2.2.7	Learned behaviours	
2.2.2.8	Health & medical	
2.2.2.9	Lead toxicity	
_	Food additives	
	Sugar	
	rure, nurture, and child development	
	Gender	
	Birth order and siblings	
2.2.3.3		
2.2.4 Sur	mmary	58
2.3 Children	a's problem behaviour and child care centres	60
	Id care centres as a source of influence on child development	
	Length of attendance	
	sical environment	
	The design of child care centres	
2.3.2.2	· · · · · · · · · · · · · · · · · · ·	
2.3.2.3	Social and spatial density	
2.3.2.4	Resource scarcity	
2.3.2.5	Resource use	
2.3.2.6	Play places and child behaviours	
2.3.2.7	Sound and noise levels	
2.3.2.8	Types of room lighting	
2.3.2.9	,	
	Private places	
	Outside play area	
	cial factors in the environment of a child care centre	
	Play objects as a source of conflict	
2.3.3.2	3 - 1	
2.3.3.3		
2.3.3.4	Popularity	
2.3.3.5	Unattractiveness	
	uctural factors within a child care centre environment	
2.3.4.1	Program organisation	
2.3.4.2	Routine activities	
2.3.4.3	Transitions	85
2.3.4.4	Schedules	87
2.3.4.5	A group view of children	88
2.3.4.6	Group size	88
2.3.4.7	Mixed-age grouping	89
2.3.4.8	Program duration, timing and time-of-day	90
2.3.4.9	Seasons	
	Weather and problem behaviour	
	tural factors within the environment of a child care centre	
2.3.5.1		
2.3.5.2	Staff:staff interactional processes	
2.3.5.3	Staff:child interactional processes	
2.3.5.4	·	
	Developmentally appropriate practices	
۵.5.5	Developinentally appropriate practices	50

2.3.6 Summary of environmental influences	. 101
2.4 Conclusions about overview of investigations into UCBs	102
CHAPTER THREE	
Methodology	. 104
3.1 The site of the investigation	. 104
3.2 Organisation of the data collection	110
3.2.1 The intended subjects	
3.2.2 The observation period	
3.2.3 Staff members' participation	. 112
3.2.4 Children's participation	
3.2.5 Parents	. 113
3.3 The observations	
3.3.1 Trial period	
3.3.2 The observation schedule	
3.3.3 Recording the data	
3.3.4 The observer	
•	
3.4 Interpretation and analysis of data	. 118
3.4.1 Transcription of the data	
3.4.3 Surveying the data	
3.4.3.1 Time and duration of children's attendances	
3.4.3.2 Counts and frequencies of UCBs	
3.4.3.3 Describing UCBs	
3.5 Streams of behaviour	. 122
3.6 Summary and conclusions about the methodology	124
CHAPTER FOUR	
Evidence of unwanted child behaviours	. 126
4.1 Introduction	126
4.2 The study schedule	
·	
4.3 Stability of the setting	
4.3.1 Physical factors	
4.3.3 Structural factors	
4.3.4 Cultural factors	
4.3.5 Conclusions about stability of the setting	
4.4 Data collection	
4.5 Focus-children	
4.5.1 Changes in numbers of enrolled children and enrolment days	
4.5.2 Attendance patterns of focus-children and days observed	
4.6 Observation times	
4.6.1 Observation times and gender	
4.6.2 Observation times across behaviour settings	
4.6.3 Observations of children in the centre	135

4.6.4 Observation times and days for individual children 136 4.6.4.1 Compounded behaviour settings 138 4.6.5 Observation times, gender and behaviour settings 139	
4.7 Identifying unwanted child behaviours1404.7.1 UCBs across the 54 observation days1404.7.2 UCBs and time-of-day1414.7.3 UCBs across the 22 major settings1424.7.3.1 UCBs across compounded settings1434.7.4 Number and frequency of UCBs for each focus-child1444.7.5 Initiators and targets of UCBs1454.7.6 Peer associations and UCBs1474.7.7 Instrumental or object-related actions1484.7.8 Categories of UCBs1494.7.8.1 Focus-child actions and UCBs1494.7.8.2 Physical locations and activities150	
4.8 Sequences of unwanted child behaviours	
4.9 Conclusions about the evidence for unwanted child behaviours	
CHAPTER FIVE	
Analysis and interpretation of environmental factors related to occurrences of unwanted child behaviours	ţ
5.1 Introduction	
5.2 Primary findings	
5.2.1 The process of explicating the finding	
5.3 Children's experiences of the child care centre1545.3.1 Consequences for children of different arrival and departure times1555.3.1.1 The additional impact of sleeptime on selected children1575.3.1.2 Unequal access to complex play1575.3.2 Days of attendance each week1585.3.3 Differential experiences of structure1595.3.4 Conclusions about children's experience of child care centres159	
5.4 Time and occurrences of UCBs1605.4.1 Timing of UCBs on different observation days1605.4.2 Days, months and seasons as influences on UCBs1605.4.3 Conclusions about variations in UCBs across days and times161	
5.5 Variations in UCBs of the same child on different days	
5.6 Gender and UCBs1655.6.1 Gender-based behaviours1665.6.1.1 Physically active versus verbal-only UCBs1675.6.1.2 Verbal and relational forms of aggression1675.6.1.3 Instrumental aggression1685.6.2 Conclusions about gender and UCBs169	
5.7 Physical factors in the environment and UCBs	

5.7.3.2 Variations in the intent of peer association	
5.7.4 The home area	175
5.7.5 Block area	
5.7.6 The children's toilet	179
5.7.7 Social and spatial density	179
5.7.8 Resource availability	180
5.7.9 Climbing and standing on objects	180
5.7.10 Cosy corners and places to rest	
5.7.10.1 UCBs and television	
5.7.10.2 Soft places	
5.7.10.3 Conclusion about quiet and cosy areas	
5.7.11 Private spaces	
5.7.12 Outdoor area, toys and play equipment	185
5.7.13 Other physical factors	
5.7.14 A response to the research question about physical factors	
5.8 Social factors in the environment and UCBs	
5.8.1 Involvement of peers in UCBs	
5.8.2 Initiating and being a target of UCBs	
5.8.2.1 Dominance, submission and role acceptance	
5.8.2.2 Bullies and reactive aggression	190
5.8.3 Dyads, triads, and groups in UCBs	191
5.8.4 Friendly and hostile peer associations in UCBs	191
5.8.5 Intra-day shifts in peer relationships	194
5.8.6 Intra-relationship shifts in peer relationships	
5.8.7 A response to the research question about social factors	196
5.9 Structural factors in the environment and UCBs	
5.9.1 Characteristics of free play and staff-directed sessions	
5.9.1.1 The characteristics of UCBs in free play sessions	197
5.9.1.2 The characteristics of UCBs in staff-directed sessions	
5.9.2 UCBs and transitions	
5.9.2.1 Unscheduled transition periods	
5.9.3 The impact on UCBs of enforced passivity after active play	
5.9.4 Mixed-age grouping of children	
5.9.5 Group size	
5.9.6 Program duration, timing, and time-of-day	
5.9.7 A response to the research question about structural factors	206
5.10 Cultural factors in the environment and UCBs	207
5.10.1 Staff interventions and the gender of children	
5.10.2 Behaviour management strategies	
5.10.3 Variations in rates of response to the same child by different staff	
5.10.4 The child as an elicitor of staff responses	
5.10.5 The child's differential response to different staff	
5.10.6 A response to the research question about cultural factors	
5.11 Reducing occurrences of UCBs	215
CHAPTER SIX	
Summary, discussion, and conclusions	218
6.1 Introduction	218
6.2 Conceptual framework	218
6.2.1 The environment	
6.2.2 Unwanted child behaviour	

6.2.3 Lite	erature review	219
6.3 A summ	nary of primary findings from the current study	221
	Idren's different experiences of time in child care centres	
	iations in occurrences of UCBs across times and days	
	uence of physical factors on the production of UCBs	
	uence of social factors on the production of UCBsuence of structural factors on the production of UCBs	
6.3.5.1	•	
6.3.5.2	Structure and the culture of staff-directed sessions	
	uence of cultural factors on the production of UCBs	
	The child as an elicitor of responses	
	Staff targets of child attacks	
	ng occurrences of UCBs	
6.5 Limitation	ons of the study	232
6.6 Concep	tual and methodological implications of the study	233
	ff interventions and UCBs	
	I-day continuous observations Ethics and observations	
	Idren's experiences of child care centres	
	·	
	raturein neurology	
	n deficiency	
	asonal affective disorder (SAD)	
6.7.4 For	ms of aggression	238
	ff of child care centres	
	otive views of child care mmary of new literature	
	·	
	study	
	veloping a conceptual framework for investigating environments Idren's different experiences of the same child care program	
	antages and disadvantages of mixed-age grouping	
	nefits of soft and cosy corners, and private places	
6.9 Postscri	pt	240
REFERENCE	LIST	243
APPENDICES		
Appendix 1	Letter to Parents with an outline of the study	
Appendix 2	Consent form	291
Appendix 3	Arrival and departure times of focus-children	292
Appendix 4	Minutes each focus-child was observed in major settings	293
Appendix 5	UCBs involving focus-children in each major setting	296
Appendix 6	Initiators and targets of UCBs	299
Appendix 7	Setting, child action, and child associates for each UCBs	300

FIGURES

Figure 1.1	Behaviour stream for PF03 preparing to paint12
Figure 1.2	The physical relationship between setting components 14
Figure 1.3	Contextualisation of the child's experience in a child care centre25
Figure 3.1	Site plan of the child care centre
Figure 3.2	Floor plan of the child care centre
Figure 3.3	Floor plan of the nursery108
Figure 3.4	Floor plan of the preschoolers' playroom
Figure 3.5	The outdoor play area110
Figure 3.6	The behaviour stream for PF03 at easel painting123
Figure 4.1	Arrival and departure times of focus-child for each of the 54 days 133
Figure 4.2	Variations in duration of observations across the 54 days of recording . 134
Figure 4.3	Distribution of observation time across the 22 major behaviour settings 135
Figure 4.4	Variations in the duration of morning indoor free play observations 136
Figure 4.5	Comparative duration of all observations for each focus-child
Figure 4.6	Duration of observations across compounded behaviour settings 139
Figure 4.7	The number of UCBs recorded on each of the 54 observation days 141
Figure 4.8	Occurrences of UCBs at different times of the day and the number
	of days on which the times were observed141
Figure 5.1	Typical early morning nursery playroom activity and equipment layout . 173
Figure 5.2	Typical preschoolers' playroom activity and equipment layout 176

TABLES

Table 3.1	The 22 major behaviour settings	106
Table 3.2	Components of major behaviour settings within compound settings	120
Table 3.3	Descriptions of peer relationships during occurrences of UCBs	122
Table 4.1	Comparisons of audio-tape and video-film records of event numbers .	130
Table 4.2	Variations in children's enrolments over the observation period	131
Table 4.3	Number of observations made on each of 30 focus-children	132
Table 4.4	Gender balance in number and observations of enrolled and observed	d
	children	134
Table 4.5	Number of children observed and total time in each major setting	137
Table 4.6	Percentages of time female and male focus-children were observed	
	in the major behaviour settings	139
Table 4.7	Number of focus-children and frequencies of UCBs across settings	142
Table 4.8	Frequency of UCBs across genders and compounded settings	143
Table 4.9	UCBs and females	144
Table 4.10	UCBs and males	144
Table 4.11	Preschool female initiators and targets of UCBs over 54 days	145
Table 4.12	Preschool male initiators and targets of UCBs over 54 days	146
Table 4.13	Staff targets of UCBs initiated by focus-children	146
Table 4.14	UCBs and 11 categories of peer associations	148
Table 4.15	Females and objects	148
Table 4.16	Males and objects	148
Table 4.17	Major headings for describing activities attracting staff intervention	149
Table 4.18	Physical locations and activity settings for UCBs	150
Table 4.19	Number of UCBs within SUCBs	151

VIGNETTES

Vignette 5.1	The earlier arrival	156
Vignette 5.2	The later arrival	156
Vignette 5.3	Ignoring the challenge	162
Vignette 5.4	Responding to challenge	163
Vignette 5.5	Eating Iollies	164
Vignette 5.6	Pretend fighting	172
Vignette 5.7	Rocking the boat	173
Vignette 5.8	Throwing the baby's rattle	174
Vignette 5.9	Spilling the milkshake	177
Vignette 5.10	Deliberately out-of-area	177
Vignette 5.11	Does not retaliate	178
Vignette 5.12	Climbing the chair stack	180
Vignette 5.13	Impressing father	181
Vignette 5.14	Possessing the easy chair	182
Vignette 5.15	Dominant partners	189
Vignette 5.16	Bullying and reactive aggression	190
Vignette 5.17	Run like a plane	192
Vignette 5.18	Third party peer intervention	193
Vignette 5.19	Retribution by entrapment	193
Vignette 5.20	Initiating by entrapment	193
Vignette 5.21	Shifts in peer relationships	194
Vignette 5.22	Accepting peers	195
Vignette 5.23	Rejecting peers	195
Vignette 5.24	UCBs and the structure of toilet routine	199
Vignette 5.25	UCBs and the structure of transition time	200
Vignette 5.26	Avoiding helping to pack-away	202
Vignette 5.27	Sharing dough with toddlers	204
Vignette 5.28	Sharing area with babies	204
Vignette 5.29	Protecting babies	205
Vignette 5.30	Mothering babies	205
Vignette 5.31	Confronting staff at morning tea	212
Vignette 5.32	Confronting staff at story time	212
Vignette 5.33	Confronting staff at lunch time	212
Vignette 5.34	Targeting specific staff	213
Vignette 5.35	Denying attacking a toddler	213
Vignette 5.36	The threading table	214

ABSTRACT

This thesis addresses the issue of environmental influences on the manifestation of unwanted child behaviours (UCBs) in early childhood services. Specifically it examines the evidence for UCBs that result from the interface of physical, social, structural, and cultural components of the environment of a child care centre with the psychological habitats of individual children over the full day of their attendances. The identified unwanted behaviours are used as starting points to analyse children's behaviour streams for indication of environmental influences in the production of UCBs and to establish common patterns of influence across different children.

To facilitate a systematic investigation of the complex child:environment relationships in a child care centre, a conceptual framework was developed to describe time-space locations of settings and situations, the basic components of environmental influence, the child's psychological habitat, UCBs, and the contextualisation of child behaviours *in situ*. The framework was utilised to review literature associated with components of both the child's psychological habitat and the environment of a child care centre, implement an appropriate data collection strategy, as well as guiding data analysis and interpretation of findings.

The qualitative approach to data collection involved full-day observations of individual children and recording on audio-tape a continuous concurrent narrative of their actions within a variety of settings and situations. Observations of 30 different children over 54 days yielded almost 400 hours of recordings, which were transcribed onto more than 1000 typed pages. Examination of the transcripts provided evidence of 1384 manifestations of UCBs embedded in 1028 distinct sequences of unwanted behaviours within behaviour streams. Analysis of the behaviour streams and interpretation of antecedent events implicated a variety of interrelated physical, social, structural, and cultural factors in the production of UCBs, which are considered in light of findings from previous studies.

Overall, no single factor was found to influence the behaviours of all children, or the same child across different settings and situations. The findings serve to reinforce the known complexity of person:environment relationships, which is further intensified in children between the ages of 3-5 years by their developing socio-emotional and

cognitive systems, innate and learned within-child characteristics, and different experiences of centre-based child care. The findings also reinforce the need for practitioners and researchers to consider more fully the individuality of each child when planning programs and investigations into the impact of child care on children. Implications of the findings for practitioners are stated and recommendations are made for future research.