Social Indicators Research (2007) 80: 79–104
DOI 10.1007/s11205-006-9022-1

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ACHIEVING CONSENSUS IN DEVELOPING A NATIONAL SET OF CHILD WELL-BEING INDICATORS

(Accepted 27 September 2005)

1. INTRODUCTION

This paper provides an account of the methodology used to gain consensus around the development of a national set of child well-being indicators in the Republic of Ireland. This development was identified as a key objective in the National Children's Strategy (2000) to provide the basis for the State of the Nation's Children report, which will be published in 2006. This objective reflects a growing national and international awareness of the need to understand and represent the complexity and multi-dimensional nature of children's lives in a way that is easily understood by different stakeholders (Ben-Arieh et al., 2001).

Although there was no overall policy focus on measuring child well-being in Ireland prior to National Children's Strategy (Fitzgerald, 2004) several important developments by individuals (including for example, the work of Carroll, 2002; McKeown et al., 2001, 2003), agencies (see for example, Costello, 1999; Combat Poverty Agency, 2000; Nolan, 2000; New Policy Institute, 2001; and Quinlan et al., 2001) and Government Departments (Department of Health and Children, 2000, 2001, 2002a, b) had already taken place. Their work, coupled with Ireland's participation in a number of international initiatives and surveys (Rigby and Kohler, 2002; Kohler and Rigby, 2003; Zeitlin and Wildman, 2003, Zeitlin et al., 2003a, b; Kelleher et al., 2003; Cosgrove et al., 2003) set up to advance the measurement of child well-being provided a basis on which a national set of child well-being indicators could be developed.

The National Children's Strategy (2000) is underpinned by a holistic understanding of children's lives and a commitment to the 'whole child perspective'. The perspective recognises the child as an active participant in shaping their own lives and, takes as its starting point, nine dimensions of

children's development which are manifested in different ways as they grow, develop and express themselves. Two other domains are also identified as important and these are 'formal and informal supports' and 'children's relationships'. The use of the 'whole child perspective' to underpin the development of a national set of child well-being indicators facilitates a broad and holistic understanding of children's lives and ensures that key principles, such as 'respect for the voice of the child' permeate all developments. It was important in the development of a national set of child well-being indicators, therefore that a holistic understanding of children's lives would be achieved. Further, the need to give children and young people a voice in the national set of child well-being indicators was central to the development.

The definition of well-being used to guide this development was that of Andrews et al. (2002) who note that well-being is:

> 'healthy and successful individual functioning (involving physiological, psychological and behavioural levels of organisation), positive social relationships (with family members, peers, adult caregivers, and community and societal institutions, for instance, school and faith and civic organisations), and a social ecology that provides safety (e.g., freedom from interpersonal violence, war and crime), human and civil rights, social justice and participation in civil society'(Andrews et al., 2002, p. 103).

This definition was used because the inclusion of many different dimensions of children's lives as well as the importance of relationships and formal and informal supports meant it was coherent with the conceptualisation of the child as described in the 'whole child perspective'.

1.1. *Development*

A multi-stage incremental approach was taken to the development of the national set of child well-being indicators and there were four main components. These were:

(a) a background review of indicators sets in use elsewhere and the compilation of key indicators, domains and selection criteria (Brooks and Hanafin, 2005);
(b) a feasibility study of the availability of national statistics to construct the indicators identified in the previous step (Fitzgerald, 2004)
(c) a study on 'children's understandings of well-being (Nic Gabhainn and Sixsmith, 2005); and
(d) a consensus process referred to as a Delphi technique, where participants on 'a panel of expertise' agreed indicators for use in the Irish context (Hanafin and Brooks, 2005a, b).

A small advisory group ($n = 4$) was convened at the outset of the Delphi study and each member was chosen for their capacity to provide expertise in a specific area. The Delphi technique provided an over-arching mechanism for integrating data from the three previously described studies as well as enabling consensus to be achieved around the final set of well-being indicators.

1.2. *Delphi Technique*

The Delphi technique has been defined as a research approach used to gain consensus through a series of rounds of questionnaire surveys, usually two or three, where information and results are fed back to panel members between each round (Linstone and Turoff, 1975). The main purpose of adopting a Delphi technique to decision-making is to provide a structured approach to collecting data in situations where the only available alternative may be an anecdotal or an entirely subjective approach (Linstone and Turoff, 1975). A systematic review of empirical studies ($n = 25$) comparing the Delphi technique with standard interacting groups concluded, with some caution, that Delphi groups outperform groups in decision-making and forecasting (Rowe and Wright, 1999).

The Delphi technique as a methodology has been in use for almost 60 years and the types of situations where it can be useful have been well described. Although some methodological issues remain outstanding, it is noted that the Delphi technique has been found to be particularly useful in the following situations:

(1) Where a problem does not permit the application of precise analytical techniques but can benefit from subjective judgements on a collective basis;
(2) Where the relevant specialists are in different fields and occupations and not in direct communication;
(3) Where the number of specialists is too large to effectively interact in a face-to-face exchange and too little time and or funds are available to organise group meetings; and
(4) Where ethical or social dilemmas dominate economic or technical ones (Linstone and Turoff, 1975; Gupta and Clarke, 1996).

2. OVERVIEW OF STUDY

The aim of this study was:

'To reach consensus about a national set of child well-being indicators that can be used as the basis for the biennial report 'the State of the Nation's Children'.

The objectives of this study were, as follows:

- To gain consensus about indicators that take account of key aspects of the 'whole child perspective' as set out in the National Children's Strategy (2000);
- To gain consensus about indicators that can facilitate comparisons between the Irish and international context regarding child well-being; and
- To gain consensus about indicators that meet key selection criteria.

In the context of the current study, the multi-dimensional nature of the 'whole child perspective', coupled with a desire to create a 'national' set of indicators meant that two options arose in respect of the expert panel. These were:

- That a single expert panel, heterogeneous in formal knowledge and experiential base, could be developed or,
- That a number of separate panels could be developed each of which could focus on a particular dimension or aspect of the 'whole child perspective'.

Advantages and disadvantages of adopting one or more panels are set out below (Table I).

3. PANEL OF EXPERTISE FOR THIS STUDY

Understanding children's lives in a holistic way was centrally important to the development of the national set of child well-being indicators and we were therefore, committed to reaching consensus across many different areas of their lives. Consequently, it seemed logical to have a single panel of expertise because this could protect against fragmentation and lack of coherence within the indicator set. This, in turn, led to some difficulties in determining the extent to which specific indicators, which would require considerable knowledge of the most appropriate indicator, should be agreed by all panel members. In order to surmount this difficulty, we used the Delphi technique to identify the broad areas for inclusion in the indicator set rather than the individual indicators themselves. When broad areas were identified, organisations or people with specific expertise in an individual area were asked to recommend the most appropriate indicator for inclusion. A snowball sample was drawn using the Research Development Advisory Group of the National Children's Office as a starting point. This group comprises 18 researchers, policy makers and service providers all of whom

TABLE I

Advantages and disadvantages of single and multiple panel

Advantages multiple panel	Disadvantages multiple panel
The pool of expertise for any individual area would be larger	May be conceptually inappropriate because the unifying feature of the 'whole child perspective' is the underlying commitment to understanding children in a holistic way
A more inclusive approach to stakeholders could be adopted and this could be advantageous in terms of 'buy-in'	The breadth of focus of any individual panel may be difficult to determine
Stakeholders would only be involved in identifying indicators that they have specific areas of expertise	The complexity of the study would increase exponentially
	Anonymity may be difficult to maintain
	The balance between selecting experts who would be relatively impartial and yet have information that reflects current knowledge may be difficult to strike
	It is possible that having initially adopted a reductionist approach that the complexity and number of 'experts' involved in different panels may lead to several practical problems in the subsequent integration of the material
Advantages single panel	Disadvantages single panel
The identification of each indicator would be situated within the context of the overall 'whole child perspective' and this may have a synergetic quality.	It may not be possible to include the same number in the panel so the subsequent level of buy-in may be lower
The study would be less complex than that of multiple panels	Panalists may respond to areas where they do not have expertise and this may invalidate the results
The focus of the development would be on the 'whole child perspective' and consequently it may be easier to strike the balance between impartiality and expertise.	It may not be possible to reach consensus because the diversity of the panel experts may be too great
The expertise held by individual panel members in particular areas could be by the participant themselves throughout the course of the study rather than being predetermined by the study organisers	

TABLE II
Composition of the panel of expertise

	Frequency	Percent	Valid Percent	Cumulative Percent
Parents	11	15.9	15.9	15.9
Policy makers	25	36.2	36.2	52.2
Researchers	21	30.4	30.4	82.6
Service providers	12	17.4	17.4	100.0
Total	69	100.0	100.0	

have a specialist expertise in areas of children's lives. Parents were also included in the panel (Table II)

3.1. *Data Collection*

The main approach used to data collection was on-line completion of the questionnaires. This was done using the software package Keypoint© and technical support was provided by the Information Technology section at the Department of Health and Children. Keypoint software was particularly appropriate for this study because it combines questionnaire generation, data collection, analysis and presentation in a single package. This meant that it was possible to provide feedback relatively quickly and therefore shortened the length of time between rounds. In addition to on-line access, the software allowed for questionnaires to be printed, published on a client's own website, sent as an e-mail or through the provision of a host server. In general, questionnaires were completed through the host server although where participants requested, printed copies were provided.

3.2. *Analysis*

Analysis that takes place in a Delphi study has two purposes. First, analysis should provide feedback between rounds for respondents and, second, it should be able to identify when consensus has been reached. In this study, we used the mean and standard deviation as the main statistical measures in round one. This was particularly useful in facilitating a reduction in the number of areas for inclusion in the indicator set. The cut-off level was determined by relative rating and the 25 broad areas with the highest mean average rating were included in the indicator set. This approach was used in conjunction with the standard deviation, which provided a measure of

dispersion. In round two and three, percentages were also used to identify if consensus had been reached. A 90% level of agreement was considered the optimum level of agreement in these instances (Zeitlin et al., 2003b).

3.3. *Feedback*

Iteration is a key feature of the Delphi technique and feedback on questionnaire analysis is provided to each respondent at each round. Feedback has been defined as:

> 'The means by which information is passed between panellists so that individual judgement may be improved and de-biasing may occur'. (Rowe and Wright, 1999, p. 370)

Levels of feedback vary and may be provided in a number of different ways. The purpose of feedback is to allow each expert to revise his or her own judgement in light of the judgement of others (Munier and Rondé, 2001). Crisp et al. (1997) notes that one of the most common forms of feedback is measures of central tendency (mean, median), which may or may not be accompanied by a measure of dispersion (standard deviation). The timing of feedback is also an issue and it has been suggested that the quality of the Delphi study increases as the time between filling in a questionnaire and the next one being mailed becomes shorter (Waldron, cited in van Zolingen and Klaassen, 2003). We provided both individualised and group feedback in rounds two and three so that members of the panel of expertise were able to situate their responses within the broader context.

3.4. *Consensus*

Consensus has been identified as one of the most contentious components of the Delphi technique, and debates have centred on the position of consensus in such a study. The aim of the Delphi technique is to achieve consensus but this is not a straightforward concept and is generally poorly explained (Williams and Webb, 1994). The *Longman Dictionary of Contemporary English* (Thompson, 1995) defines consensus as '*a general agreement; the opinion of most people in a group*'. Although some authors have presented qualitative judgements of consensus (e.g. Millar, 2001), in general an empirical approach is taken. Consensus is usually determined through statistically measuring the variance in responses across rounds. Less variance is understood to mean greater consensus (Rowe and Wright, 1999) although this has itself been the subject of some controversy (Bardecki, 1984, cited in Rowe and Wright, 1999). Studies focussing on the number of rounds needed

in a Delphi survey to achieve consensus suggest that most changes occur in the transition from the first to the second round (van Zolingen and Klaassen, 2003).

In this study, three questionnaire rounds were undertaken and in the final round participants were asked to indicate their views about the use of the Delphi technique itself.

4. FINDINGS

4.1. *Round One*

A two-round pilot study was carried out and three questionnaire rounds were undertaken in the course of the study. Response rates varied between 72% (round three) and 84% (second round).

Two sequential processes preceded the development of the first questionnaire.

- First, a systematic search for indicator sets commonly used elsewhere was undertaken and more than 2,500 indicators were identified. Although some of these indicators were clearly of less relevance to the Irish situation (for example, an indicator of 'percentage of children carrying guns to school'), and some were almost identical to each other, it was decided not to exclude any indicator at that point (Brooks and Hanafin, 2005).
- Second, an expert in the area of data sources for child statistics was contracted by the National Children's Office to examine the feasibility of each of the indicators identified. These indicators were then categorised according to whether data sources were or were not available (Fitzgerald, 2004).

On the basis of that work, a semi-structured approach was adopted and some 56 main indicator areas, agreed with the Advisory Group were presented to participants in an 'event list' format. Participants were then asked to rate each one on a scale of 0–10 (where 0 = not important and 10 = very important). Participants were also given an opportunity to identify additional areas if they wished and to make any other comments. Finally, demographic information about each participant was also collected on the first questionnaire round. This type of approach has been used by others (for example, Schuster et al., 1997; Millar, 2001; Rogers and Lopez, 2002; van Zolingen and Klaassen, 2003) and it has been reported that an 'event list', similar to that used, is more preferable than a blank piece of

paper because it provided participants with a context in which to provide their responses (Snyder-Halpern, 2002).

The table provided below gives an overview of the main statistical feedback provided to study participants.

In general, the 56 broad areas identified in the questionnaire were considered '*comprehensive*' and it was felt they would, '*add richness to the picture we need on children's lives*'. The focus on both structural issues, such as poverty and social expenditure, and on objective and subjective measures of child well-being was also welcomed.

Given the importance of all of the areas outlined in the questionnaire however, the group did experience some difficulties in assigning differential ratings to each of them, and many identified challenges in doing this. As one participant noted:

'hard to fill in as all these areas are worth knowing about and prioritisation is difficult. The mere fact of filling in the form forces some rank ordering but all have a validity'.

This is, to a large extent, illustrated in Table III, which shows a universally high average rating for almost every area. Just 9 of the 56 broad areas had an average rating which was less than 7 out of ten. Since the purpose of the exercise was to force prioritisation of areas, it is unlikely that any other approach taken would have been easier. In addition, the rating of all areas as important to children's lives supports the construct validity of the questionnaire.

4.2. *Round Two*

In keeping with the Delphi technique, preliminary analysis of responses from round one took place prior to round two and the findings formed the basis for the second questionnaire. The round two questionnaire provided a prioritised list of indicator areas with a drop down list of those that had been excluded as a result of the first round prioritisation. An analysis of first round answers in respect of areas identified by participants was also included in the second round. Participants were given an opportunity to provide feedback on the prioritised indicators and were also asked to identify three areas not prioritised in the first round that they felt should be included in the final set.

The main findings from this round centred on three areas. First, whether participants, in light of feedback received, agreed with the 26 proposed areas around which indicators would be identified. Second, the extent to which participants wished to see other areas included; and finally, their views about the areas prioritised by children.

TABLE III
Round one results

	Lower	Upper	Mean	SD	Order
Abuse and maltreatment	1	10	9	1.555	1
Availability, accessibility, affordability, quality and utilisation of basic health services	6	10	8.85	1.296	2
Economic security	4	10	8.78	1.333	3
Mental health	4	10	8.71	1.378	4
Relationships with parents and family	5	10	8.65	1.252	5
Availability, accessibility, affordability and quality of housing	5	10	8.5	1.618	6
Public expenditure on services for children and young people	2	10	8.45	1.627	7
Self-esteem	5	10	8.43	1.257	8
Crimes committed on children and young people	1	10	8.38	1.747	9
Children and young people with additional needs	1	10	8.32	1.723	10
Nutrition	5	10	8.3	1.356	11
Relationships with peers	5	10	8.29	1.116	12
Screening for growth and development	4	10	8.2	1.561	13
Completion of school	5	10	8.17	1.562	14[a]
Enrolment in education	5	10	8.17	1.336	14[a]
Children and young people in care	2	10	8.04	1.874	15
Sexual health and behaviour	4	10	8.01	1.562	16
Health of the infant at birth	2	10	8	1.952	17
Self-reported happiness	4	10	7.97	1.560	18
Chronic health conditions	2	10	7.96	1.613	19
Parental time with children	4	10	7.93	1.312	20
Immunisation	1	10	7.91	1.869	21
Use of tobacco, alcohol or drugs	1	10	7.88	1.705	22
Attendance at school	2	10	7.86	1.570	23
Availability, accessibility, affordability, quality and utilisation of child care services (informal and formal)	5	10	7.83	1.325	24
Values and respect	2	10	7.78	1.731	25
Children and young people dependent on supplementary welfare and/or charitable donations	2	10	7.71	1.787	26
Parental or family characteristics	3	10	7.69	1.476	27
Self-reported health status	4	10	7.67	1.462	28[a]
Injuries	1	10	7.67	1.936	28[a]
Availability, accessibility, affordability, quality of, and enrolment in early childhood education programmes	4	10	7.66	1.679	29
Crimes committed by children and young people	1	10	7.64	1.734	30
Availability, accessibility, affordability, quality of, and participation in, arts cultural and play facilities	4	10	7.63	1.688	31
Weight and height	2	10	7.55	1.730	32

TABLE III
Continued

	Lower	Upper	Mean	SD	Order
Community characteristics	2	10	7.5	1.602	33
Relationships with significant others	3	10	7.41	1.411	34
Safe mobility and transport of children and young people	2	10	7.4	1.775	35
School characteristics	2	10	7.39	1.505	36
Participation in decision-making	2	10	7.26	1.655	37
Participation in out-of-school activities	3	10	7.22	1.518	38
Academic commitment	3	10	7.17	1.416	39
Pre-natal behaviour	2	10	7.12	2.076	40
Dental health	1	10	7.1	1.608	41
Academic attainment	4	10	7.09	1.520	42
Availability, accessibility, affordability, quality and utilisation of educational resources	3	10	7.03	1.569	43[a]
School readiness	3	10	7.03	1.565	43[a]
Participation in school activities	3	10	7.03	1.550	43[a]
Youth employment	3	10	6.96	1.491	44
Pastimes	3	10	6.91	1.841	45
Hospitalisation	2	10	6.9	2.179	46
Permanency and stability	2	10	6.82	2.022	47
Hours of sleep	1	10	6.55	2.056	48
Helping others and volunteering	2	10	6.5	1.813	49
Breastfeeding	1	10	6.14	2.137	50
Spirituality and religion	1	10	5.89	2.056	51
Pets	1	10	4.71	2.110	52

[a]Indicates joint ranking

There was overwhelming support for the proposed list of indicators as illustrated in Table IV. The findings showed levels of agreement that ranged between 90 and 100% and for the following 5 areas there was 100% agreement that indicators should be included in the national set: basic health services; family relationships; public expenditure; attendance at school; and child care services.

The two areas with lowest levels of agreement were 'values and respect' (90% agreement) and 'self-reported happiness' (91% agreement). The rationale for not agreeing with an indicator area around 'self-reported happiness' was explained by one participant who wrote:

'... I am not sure about self-reported happiness as in my experience children do not always reliably tell or admit when they are not happy'.

Study participants were asked to identify their first, second and third choice of indicator areas that were not included in the prioritised list but which they

TABLE IV
Round two findings

Indicator area	% Should be included	*N*
Abuse and maltreatment	98	57
Basic health services	100	58
Economic security	98	57
Mental health	98	57
Family relationships	100	58
Housing	98	57
Public expenditure	100	58
Self esteem	97	56
Crimes committed on children	98	57
Additional needs	98	57
Nutrition	98	57
Relationships with peers	98	57
Screening	98	57
Completion of school	98	57
Enrolment in education	98	57
Children in care	97	56
Sexual health	98	57
Health of the infant	95	55
Self-reported happiness	91	53
Chronic health conditions	97	56
Parental/family time	98	57
Immunisation	93	54
Use of tobacco, alcohol and drugs	98	57
Attendance at school	100	58
Child care services	100	58
Values and respect	90	52

felt should be included in the final set. In order to assist this process the complete list of all indicator areas included but not prioritised in the first round were presented. In addition, participants were able to refer to the list of 'additional areas' generated from the first round questionnaire ($n = 77$). Participants were also asked to provide a rationale for their choices.

4.2.1. *Consultation Regarding Key Indicators*. On completion of round two, broad areas for inclusion in the indicator set had been identified and the next step in the process was to identify the most appropriate indicator (s) for each. At this stage of the process, a set of indicator selection criteria first suggested by Moore (1997) and later adapted by Carroll (2002) for the Irish context had been identified and agreed with the Advisory Group.

A thorough examination of the inventory of indicators was then undertaken using the selection criteria as a framework for analysis. Specific

indicators were then identified for each indicator area and where possible these included indicators from existing international (for example, CHILD and PERISTAT) and national (for example, Department of Health and Children interim data set, the Department of Education and Science Education Statistics) indicator sets.

On completion of this, a consultation process then took place with relevant Government Departments and Agencies and others with expertise in data about children's well-being in Ireland. The National Advisory Council on Drugs, for example, were consulted about the most appropriate indicator to adopt for 'use of drugs' and the National Nutrition Surveillance Centre were consulted the most appropriate indicator of children's 'nutrition'. This consultation was particularly useful when there were a number of potential indicators that could be used since each indicator area had to be limited to only one specific indicator, where possible.

The selection of indicators, particularly for the more subjective areas such as self-esteem and relationships with parents and family, also relied on the existing data sources available. The inventory of child well-being indicators demonstrated the paucity of both subjective and positive indicators in use in other countries; therefore, for many of these areas, existing data sources were examined for potential indicators. In cases where indicators could not be found to measure a key area, this was noted and indicator development in the key area advocated. This was the case, for example, for 'pets/animals' and the 'quality of early childhood care and education'. The indicators were then discussed with the Advisory Group, which provided an opportunity to ensure that, as far as possible, the overall set met the selection criteria.

4.2.2. *Integration of data from the study on 'children's understandings of well-being'.* A parallel study on children's understandings of well-being was commissioned by the National Children's Office (Nic Gabhainn and Sixsmith, 2005). This study was explicitly designed to reflect Goal One of the National Children's Strategy, that of giving children a voice in matters that affect them. The design of this study, which used photography as a core method, incorporated individual level data collection, group level data analysis and feedback with a final group level integration process with children aged 7–19 years. The findings demonstrated the breadth of perspective that children have on well-being; the centrality of inter-personal relationships with family and friends (including school friends); the importance of pets and animals in their lives and the value of activities or things to do. A full description of the integration of the findings from this

study into the overall development is available elsewhere (Brooks and Hanafin, 2005).

Data from the children's understandings of well-being was integrated with that of the other Delphi participants. On completion of each stage of the process, discussions and written communication took place between the researchers engaged on the Delphi study and those carrying out the study on children's understanding of well-being. It was clear from these discussions that there was much common ground and agreement between already identified indicator areas in the literature and findings emerging from the study of 'children's understandings of well-being'. Even at the pilot study stage, however, there were two clear exceptions to this and these were:

(a) the importance children assigned to 'pets and animals' in the context of their own well-being; and
(b) the importance attached to 'bedrooms and sleep'.

Although there were indicators available about hours of sleep, no indicator had previously been documented about pets and animals in the extant literature about children's well-being. In response to these findings, two areas were included in the first round of the Delphi study and these were 'pets and animals' and 'hours of sleep'. Interestingly, however, the area 'pets and animals' achieved the lowest mean average rating (4.71) of all indicator areas presented to the panel of expertise and was therefore deemed to be the lowest priority area. 'Hours of sleep' as an indicator area was prioritised as 48th (fourth lowest) with a mean average score of 6.55.

At the time of development of the second questionnaire for the Delphi technique, the study with children had been completed and it was possible, therefore to get further elaboration about the 'meanings' children assigned to 'pets/animals' and 'bedrooms and sleep' as well as other areas that had emerged. 'Bedrooms and sleep' as a category was excluded from the second round because it was clear from the main study with children that the meaning intended was not around sleep but rather the bedroom as a 'place to go'. This meaning could also be accommodated under 'things to do' and 'environment and places'. A number of different themes had also emerged in the area 'pets and animals' and these were:

- Giving love;
- Receiving love;
- Companionship;
- Emotional coping;
- Activities;

- Responsibility;
- Pride; and
- Exercise.

Given the breadth of difference among these themes, it was decided that this area warranted an indicator area in its own right and consequently, the area was again included in the second round despite not having been prioritised in the first.

Two further areas were also included in the second questionnaire round and these were 'environment and places' and 'things to do'. Again there were multiple understandings underpinning each. In respect of 'environment and places', for example, these included aspects of the natural, built, home and oversees environment that were underpinned by 'belonging' , 'aesthetics', 'serenity', 'contexts for activities', 'life-giving' and 'work' . 'Things to do' as an indicator area was underpinned by themes such as 'fun', 'learning', 'belonging', 'coping', 'health enhancing', 'pride', 'sharing' and 'connecting with the world' .

Since the category 'pets and animals' has never been used as an indicator area of children's well-being prior to this, it was not possible to select an indicator that would meet the criteria set out for inclusion. It is planned, however, to develop an indicator in this area. It was possible to include indicators for 'things to do' and the 'environment and places'.

4.3. *Round Three*

Analysis of material from round two, the consultative process with various agencies, organisations and Government Departments regarding the specific indicators within the set, the selection criteria, and discussions with the Advisory Board all contributed to the development of the third round questionnaire. This questionnaire presented the specific indicators and a number of key selection criteria. Participants were asked to indicate their level of overall satisfaction with the indicator set using the key selection criteria as well as their satisfaction generally with the indicator set. Comments were also invited in respect of the Delphi technique itself and any other emergent issues.

Overall, 91.6% (43/48) of the panel reported they were either satisfied or very satisfied with the national set of child well-being indicators proposed. This high level of agreement, which is summed up by one panel member's comments below, exceeded the threshold of 90%, which was identified as the optimum level of agreement (Zeitlin et al., 2003a, b) to be reached:

'The well-being indicators are broad ranging but include the critical aspects of children's lives. The inclusion of children's perceptions of well-being is to be welcomed. The need to cover certain categories of children is understood but it is important that the 'average child' is not lost in the process. The structure of the indicators seems to deal with this. The methodology for the development of the well-being indicators was well thought out and I look forward to seeing the results if this valuable work in policy development in Ireland in the coming years'.

When the panel were asked to consider the indicator set in light of the indicator selection criteria, the findings were also very positive. Nine out of 10 of the panel agreed that the indicator set was comprehensive, clear, and reflective of social goals as well as including a sufficient number of positive and negative and objective and subjective measures. This is highlighted in one panel member's comments who wrote:

'I think the indicator suite provides a good mix of indicators that will enable us to monitor child well-being over time. Many if not most of the indicators relate to issues, which are amenable to influence by public policy measures so they will provide feedback to policy makers on the effectiveness of their intervention as well as flagging areas needing additional attention. Many of the indicators should also be amenable to international comparisons'.

As anticipated, concerns were raised that the indicator set did not included enough measures for children of every age from birth through to adolescence, and likewise, enough measures to look both at the current well-being of children and the factors that are likely to affect well-being in adult life (well-becoming). The level of agreement for these items was 83.3 and 85.4% respectively. These concerns are explained by one panel member who wrote:

'... The majority of the indicators, particularly subjective/self report indicate children of 11 years or older. Will they also be applied to other age groups? If not, there is not enough emphasis on early years and virtually none on middle childhood ... I'm ticking 'dissatisfied' pending clarification of the above, particularly age variables. If these are included I would be very satisfied'.

Finally, several suggestions for improvement to the indicator set were made. For example, recommendations to measure breastfeeding rates beyond initiation, as originally planned, were made. This indicator will be developed further.

Further, a recommendation to include an indicator of the Public Health Nurse first visit was also made. This, it was argued, would address the lack of data on primary healthcare and what was considered a disproportionate focus on acute health care (Table V).

TABLE V

Round three results

	Number	Percent
Comprehensive: This indicator set includes measures that assess well-being across a broad range of issues such as physical well-being, peer and social relationships, family relationships and emotional and behavioural well-being.		
Strongly Agree	17	35.4
Agree	29	60.4
Disagree	2	4.2
Strongly Disagree	0	0.0
Children of all ages: This indicator set includes enough measures for children of every age from birth through to adolescence. For example, it includes measures such as breastfeeding and birth weight, which relates to infants. It also includes measures such as early school leaving, which relates to older children.		
Strongly agree	12	25.0
Agree	28	58.3
Disagree	7	14.6
Strongly disagree	1	2.1
Clear: This indicator set includes measures that are easily and readily understood.		
Strongly agree	14	29.8
Agree	31	66.0
Disagree	2	4.3
Strongly disagree	0	0.0
Positive and negative: This indicator set includes enough negative measures and enough positive measures of well-being. For example, it includes measures on problem behaviour and negative circumstances such as binge drinking and child abuse. It also includes measures on pro-social behaviour and positive circumstances such as participation in decision-making and positive family functioning.		
Strongly agree	19	39.6
Agree	26	54.2
Disagree	3	6.3
Strongly disagree	0	0.0
Reflective of social goals: This indicator set includes measures that will allow us to track our progress in meeting national goals for child well-being such as for example, goals to reduce the number of early school leavers and goals to increase the incidence of breastfeeding and childhood immunisations.		
Strongly agree	10	21.3
Agree	32	68.2
Disagree	4	8.4
Strongly disagree	1	2.1

TABLE V
Continued

	Number	Percent
Objective and subjective: This indicator set includes enough objective measures and enough subjective measures of well-being. For example, it includes objective measures of well-being such as poverty and chronic health conditions. It also includes subjective measures based on the children's personal assessments of their circumstances such as self-reported happiness.		
Strongly agree	8	17.1
Agree	34	72.4
Disagree	4	8.4
Strongly disagree	1	2.1
Well-being and well-becoming: This indicator set includes enough measures that look at the current well-being of children and also includes enough measures that look at factors that are likely to affect well-being in adult life. For example, it includes a measure on early school leaving, which is one of the most significant determinants of poverty in adulthood,		
Strongly agree	10	20.8
Agree	31	64.6
Disagree	6	12.5
Strongly disagree	1	2.1

5. PARTICIPANTS VIEWS OF THE APPROACH USED TO DEVELOP THE NATIONAL SET OF CHILD WELL-BEING INDICATORS

Part two of the third round questionnaire asked participants for their views about the Delphi technique itself and responses show a focus in particular on the process of the study as well as the advantages and disadvantages. More than 96% of participants indicated they were either 'satisfied' or 'very satisfied' with the approach used to develop the indicators and these findings are presented in Table VI.

TABLE VI
Overall satisfaction with the process of development

	Frequency	Percent
Very satisfied	22	45.8
Satisfied	24	50
Dissatisfied	1	2.1
Very dissatisfied	0	2.1

5.1. *Advantages of Adopting a Delphi Technique*

Four main advantages were associated with the high level of satisfaction identified and these were categorised as:

1. Inclusive and Consultative;
2. Comprehensive;
3. Rigorous and systematic; and
4. Efficient.

5.1.1. *Inclusiveness and Consultative*. Participants noted that this type of approach gathers a wide range of responses and enabled the inclusion of 'many interests', 'multiple stakeholders', 'partners', 'professionals', and 'diverse backgrounds'. The large numbers involved in the panel of expertise facilitated the 'accommodation of a wide number of views', which would not have been possible in a face-to-face interaction. The sense of 'inclusiveness' and 'ownership' of the final set of indicators for those involved was also identified as important as participants had been able to have an input at each stage of the process. As one respondent noted, the main advantage was that it allowed:

'Consultation with what was a broad spectrum of people involved in one way or another with children, including children themselves, and in research grounded the outcomes in what is really happening for children'.

5.1.2. *Comprehensive*. The importance of getting a comprehensive overview of children's lives was critical to the conceptual underpinning of the development. Participants indicated that this had been possible and was achieved using the Delphi technique. Ninety-five percentage of participants indicated they were 'satisfied' or 'very satisfied' with the comprehensiveness of the overall set. While the breadth of the indicators was representative of the participants, there was general agreement that the Delphi technique had ensured that a more 'rounded response which reflects the wide range of influences on children and their lives' was achieved. The difficulties for each sector in seeing beyond their own areas were noted and one participant wrote that:

'(G)etting a balance that will suit all is very difficult. Therefore your approach is probably the most practical'.

5.1.3. *Rigorous and Systematic*. Participants reported that the Delphi technique allows for a more systematic approach that was 'open and transparent' and 'scientific and rigorous'. It was felt that this would enhance

the status of the findings and would be very important when the statistics for each area of children's lives were being collected and presented to a wider audience. The ways in which the Delphi technique allowed for prioritisation of the process was considered particularly useful although such prioritisation remained difficult. One participant wrote:

'The necessity for weighting of some indicators against others in the tiered process was very useful to the finalisation of the indicators. It was easy to see the justification for the inclusion/exclusion of certain indicators at the later parts of the process'.

Others noted that it was a less biased way of getting people's views than working groups or other types of meetings and that approach used ensured 'dominance by one ideology or set of values' was avoided. Not all participants agreed with this point. It was noted that within the panel of expertise it was still possible for bias to occur if there were more participants from one area of children's lives (for example, health, education) over another.

5.1.4. *Efficiency*. The final aspect of the Delphi technique identified as being advantageous was the efficiency of the approach. Participants felt the shorter time required (compared with other approaches), the ease of participation and general user friendliness of the approach was important. The approach was reported to be 'very focussed' and 'took less time than meetings'. In addition, it got over the problem of 'endless debates' about what should or should not be included and 'avoided tortuous discussions'. As one participant wrote:

'On-line collaboration and development of questionnaires permits input from a wider field of contributors who themselves are not burdened by trying to attend meetings to progress their contributions'.

5.2. *Disadvantages of Adopting a Delphi Technique*

Participants were also asked to identify disadvantages associated with this method and while some of those identified could also be attributed to other approaches to consensus (for example, the 'watering down of indicators', 'bias because of only taking account of the views of those who decide to take part'), specific issues were raised in respect of the lack of face to face interaction between participants. Three issues emerged in this regard and these were:

1. Incomplete understanding the rationale of others;
2. Lack of group effects; and
3. Differing understandings of key stakeholders.

5.2.1. *Understanding Rationales*. A small number of participants noted that it was difficult sometimes to understand why other participants on the panel of expertise did, or did not, prioritise particular indicator areas. This, coupled with the wide variety of stakeholders meant that a strong 'argument for the inclusion of an indicator may be lost in the process' and opportunities justifying its inclusion were not available. Others noted that they did not have a clear statement or understanding of the rational of the well-being project and that made it difficult at times to rank the dimensions and indicators. As one participant noted:

'(t)he disadvantage is that we just get a glimpse and do not know what decision making process lies behind it'.

5.2.2. *Group interaction*. A number of participants noted that there were disadvantages to not getting the effect of 'group interaction'. Some participants wrote they would have welcomed the possibility for 'dialogue and discussion', and 'anecdotal discussion and interaction' about 'grey areas and value-laden areas'. This, it was felt would have led to 'healthy debate and discussion'. Another participant noted that:

'One would miss the buzz that comes from brainstorming although obviously someone was there to pull together all the ideas and sort them efficiently'.

It was suggested that the process of individuals completing survey in isolation did not allow for development of ideas / discussion of issues such as happens in face-to-face group approaches. This was felt to be a drawback particularly because some respondents had greater expertise in some areas compared with others. As one participant wrote:

'Completion of some areas difficult because of lack of knowledge, experience etc. ....e.g., my opinions about infant measures are limited but I have commented on these as much as on areas where my views more developed, such as education'.

The lack of opportunity to discuss the selection and advantages, as well as 'deficiencies of individual indicators' with anyone else in the group was felt by one participant to be a significant disadvantage.

5.2.3. *Different perspectives*. The final area identified as problematic by participants was mediating different stakeholder understandings. Given the wide range of participants and their varying backgrounds it was noted that 'different participants understand key terms and concepts differently'. The lack of face-to-face interaction between participants meant that it was not possible to identify whether this was the case and, if it were, to come to a general agreement about a particular area. Two participants felt it would

have been useful to have had a seminar 'to discuss the theoretical and policy context and hear the views of other stakeholders' which might have led to 'a deeper understanding about the 'whole child perspective'.

6. CONCLUSION

To conclude, this study focused on the development of the national set of child well-being indicators and this will, in turn, form the basis for the production of the State of the Nation's Children report. The developed indicator set is an initial step towards the presentation of a comprehensive picture of children's lives in Ireland and provides a basis for future development. A multi-stage consensual approach was taken to the development and the Delphi technique was used as an overarching methodology for integrating each part. The phases included (a) a background review of indicators sets in use elsewhere and the compilation of key indicators, domains and selection criteria (Brooks and Hanafin, 2005); (b) a feasibility study of the availability of national statistics to construct the indicators identified in the inventory (Fitzgerald, 2004) (c) a study on children's understandings of well-being (Nic Gabhainn and Sixsmith, 2005); and (d) the Delphi Study itself.

The multistage approach coupled with the use of the Delphi technique as an overarching mechanism to integrate findings from each stage provided a comprehensive, transparent, systematic and novel approach to the development of this indicator set. A commitment to giving children a voice in matters that affect them is a clearly stated goal of the National Children's Strategy (2000) and this in turn reflects a right set out in the United Nations Convention on the Rights of the Child (1989). This commitment is central to the way in which the National Children's Office carries out its work and it is not surprising, therefore, that serious consideration of children's understandings were central to the development.

In summary, there was overwhelming satisfaction (96%) for the use of this technique in developing a national set of child well-being indicators. Disadvantages associated with this approach were predominantly concerned with the lack of debate or discussion, which could enhance understanding of the child. The main advantages associated with the approach were the capacity to bring together many different stakeholders perspectives and, therefore, to ensure that the final set of indicators were broadly representative of children's lives. Being able to arrive at the final set in a systematic, open and transparent way was central to this approach.

The agreed indicator set comprises 42 child well-being indicators and 7 demographic indicators, which will help contextualise children's lives in Ireland. More than 90% of participants in the study indicated they were satisfied with the overall set. Selection criteria had been applied to the included indicators and participants were also asked to indicate whether they agreed that these selection criteria had been met. These criteria were comprehensiveness, children of all ages, clear, positive and negative, reflective of social goals, objective and subjective and well-being and well-becoming. There was agreement by more than 80% of participants that the indicator set met all the selection criteria and this level of agreement was above 90% for all but two criteria. These criteria were 'children of all ages' and 'well-being and well-becoming'. In respect of the selection criteria 'children of all ages', 15% ($n = 8$) of participants in the third round questionnaire felt there were insufficient measures of the middle childhood period. While this is a problem that besets indicator sets in many other countries, we are committed to further development in this area, which will address this difficulty. Issues raised in respect of 'well-being and well-becoming' primarily related to the areas around which indicators remain to be developed. These are: 'pets and animals', 'the quality of early childhood care and education', 'values and respect' and 'nutritional outcomes'. Work is already underway in this regard.

Other indicators in the indicator set require further development including, for example, the measure of 'public expenditure on services for children and young people', which currently takes account of expenditure on education only and the measure of 'breastfeeding', which currently takes account of breastfeeding initiation rates only. We recognise therefore, that despite the comprehensiveness of this approach, the systematic nature of the development and the integration of children's understandings of well-being, that the developed indicator set are but the first step in the process of ensuring that the lives of children living in Ireland are measured in a comprehensive and multi-dimensional way.

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