The Delphi Technique: A Methodology to Support the Development of a National Set of Child Well-being Indicators

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- Dr. Maeve Henchion: Teagasc
The Delphi technique is 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. The first part of this report provides an overview of the Delphi technique as a research methodology. Key aspects of the Delphi technique including its origins, classifications, paradigmatic assumptions, purposes, advantages and disadvantages are explored. The second part of the report uses seven systematically identified studies, undertaken elsewhere, to rationalise options around key areas of contention. Specific areas for consideration here are: aims and objectives, sample selection, data collection, analysis and statistical interpretation, consensus, credibility, reliability and validity, and finally, ethical issues. Decisions taken in respect of the current study, which had as its aim, achieving consensus around the development of a national set of child well-being indicators, are highlighted throughout.

1.1 OVERVIEW OF DELPHI TECHNIQUE

Delphi as a research methodology has been variously presented as a survey (Wang et al., 2003), procedure (Rogers and Lopez, 2002), method (Linstone and Turoff, 1975; Crisp et al., 1997) and technique (Broomfield and Humphries, 2001; Sharkey and Sharples, 2001; Snyder-Halpern, 2002; Campbell et al., 2004; Iavicoli et al., 2005). Here we refer to Delphi as a technique because this appears to be the most commonly used terminology in the research literature. The Delphi technique is named after the ancient Greek oracle at Delphi who offered visions of the future to those who sought advice (Gupta and Clarke, 1996, p.185). There is general agreement that it was first used in technology forecasting studies initiated by the Research and Development (RAND) Corporation for the American military in 1944 (Gupta and Clarke, 1996). Since that time, it has become a popular way of harnessing opinion from people with expertise, although the technique itself and the purposes for which it has been used have been extensively modified by researchers over the years (Gupta and Clarke, 1996; Crisp et al., 1997).

Most authors draw on all (Wang et al., 2003) or some (Gupta and Clarke, 1996; Robertson and Mackinnon, 2002) of the definition set out by Linstone and Turoff (1975) who define the Delphi technique as:

a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem

(Linstone and Turoff, 1975, p.3).

This definition was used to provide methodological guidance for the development of a national set of child well-being indicators.
1.2 TYPES OF DELPHI

A number of different types of Delphi studies have been identified. Indeed, Gupta and Clarke (1996) note that practitioners are often willing, and sometimes even eager, to modify Delphi (Gupta and Clarke, 1996, p.189). They conclude that while some modifications are useful, others are random and undermine both the quality and credibility of the technique. Hasson et al. (2000) reports that Modified Delphi, Policy Delphi and Real-time Delphi have all been used, although the following categorisation, described by van Zolingen and Klaasen (2003), has broad appeal.

The Classical Delphi: This type of study is characterised by five features. They are: anonymity, iteration, controlled feedback, statistical group response and stability in responses among those with expertise on a specific issue. Participants in this type of Delphi have expertise and give opinions to arrive at stability in responses on specific issues.

The Policy Delphi: The aim in this situation is not to reach stability in responses among those with expertise but to generate policy alternatives by using a structured public dialogue. Here the Delphi is an instrument for policy development and promoting participation by obtaining as many divergent opinions as possible. It is characterised by selective anonymity, iteration, controlled feedback, polarised group response and structured conflict. Selective anonymity may mean that participants answer questions individually but may also come together in a group meeting.

The Decision Delphi: This type of Delphi is used for decision-making on social developments. Reality is created by a group of decision-makers rather than from the ad-hoc decision of only a small number of persons. Central to this type is the fact that decision-makers involved in the problem participate in the Delphi. They are selected according to their position in the hierarchy of decision-makers and the aim is to structure thinking so that consensus can be achieved. The characteristics are quasi-anonymity (where people with expertise are mentioned by name and known to everybody from the beginning although questionnaire responses are anonymous).

In this Study, the Delphi technique was used to structure thinking around key areas of child well-being so that consensus could be achieved with respect to a national set of child well-being indicators. This Study, therefore, adopted the approach of a Decision Delphi.

1.3 PARADIGMATIC ASSUMPTIONS

Some consideration is given here to the assumptions underpinning the Delphi technique. On first examination, it appears that the epistemological basis for the Delphi technique favours the positivist paradigm. Such a paradigm assumes the position of the researcher within the research to be that of an objective and uninvolved observer (Robson, 1993) and it could be argued that this is the case for the Delphi technique. The objectivist position in the Delphi technique is supported through the utilisation of a quantitative approach to data collection and the application of single statistical measures to the identification of consensus. The inclusion of experts assumes an ontological position of single reality (that experts agree on) and the reductionist approach to identification of the phenomenon under study could also be understood as adhering to positivistic principles (Blackburn, 1999; Monti and Tingen, 1999). Others, however, present the Delphi technique as subjective and qualitative in nature (Fitzsimmons and Fitzsimmons, 2001) and we present the case for this understanding below.

The aim of employing a Delphi technique is to achieve consensus through a process of iteration. The process itself is concerned with opinions, ideas and words (Stewart, 2001) and it is suggested here that the purpose of the methodology (to achieve consensus through group interaction) is in keeping with an interpretative paradigm. Group interaction in research is generally underpinned by an assumption that an individual’s attitudes and beliefs do not form
in a vacuum and that people need to take account of others' attitudes and understandings so that they can focus on their own (Marshall and Rossman, 1995; Reed and Roskell, 1997). Within an interpretative paradigm, there can be many differing paradigms including, for example, post-positivism, critical theory, constructivism and participatory/cooperative paradigm (Lincoln and Guba, 2000). Within this, constructivism, and particularly social constructivism, appears to most offer in terms of understanding the epistemological basis for the Delphi technique. Lincoln and Guba (1985), writing about constructivism as a research paradigm, for example, write that:

Researchers in a variety of disciplines in the social sciences have been and are grappling with social constructivist approaches wherein the contribution of each individual in the context to the creation of a reality is recognised (Lincoln and Guba, 1985, p.82).

A key advantage of the Delphi technique is the potential it holds to recognise and acknowledge the contribution of each participant, and this was central to the development of a national set of child well-being indicators. While Schwandt (2000) writes that we are all constructivists if we believe that the mind is active in the construction of knowledge, social constructivists generally subscribe to an exogenic tradition of knowledge. Here the focus is on the arrangement of environmental inputs necessary to build up the internal representation rather than on the person's intrinsic capacities for reason, logic or conceptual processing (Gergen, 1995, p.18). Within the Delphi technique, a process of individual feedback about group opinion with opportunities for respondents to change their position primarily on the basis of that feedback, provides a close fit with the assumptions set out above.

On the basis of the foregoing discussion, it is difficult to draw clear conclusions about paradigmatic assumptions underpinning all Delphi studies since it is reasonably clear that certain parts of the technique are more coherent with a constructivist paradigm and others more coherent with that of positivism. In this Study, we sought to achieve individual reconstructions that coalesced around consensus through providing opportunities for knowledgeable participants to interact with each other in a structured way. We were also committed to an ontological assumption of multiple realities.

Consequently, we believed that social constructivism had something to offer to our understanding of Delphi and we therefore, underpinned the Study with features closely associated with that paradigm.

1.4 PURPOSE OF DELPHI TECHNIQUE

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 (Broomfield and Humphries, 2001). The features of anonymity, iteration with controlled feedback, statistical group response and expert input can facilitate consensus where there is contradictory or insufficient information to make effective decisions (Linstone and Turoff, 1975; Goodman, 1987; Hasson et al., 2000; Snyder-Halpern, 2002). Other group approaches to reaching consensus were examined but were found to be less appropriate to the development of a set of national child well-being indicators. These included, for example, nominal groups (Carney et al., 1996), brainstorming (Hasson et al., 2000), focus groups (Morgan, 1997), analytic hierarchy process (AHP) technique (Lai et al., 2002) as well as the establishment of working groups. The main disadvantages with each of the above techniques was their risk of taking account only of the perceptions of the most outspoken or opinionated members of that group, or of only focusing on interesting or controversial elements (Fein et al., 1997).
The Delphi technique as a methodology has been in use for almost sixty 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 JUDGMENTS 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).

It was clear in developing a national set of child well-being indicators that understandings could be significantly influenced by the particular area of expertise, experience or occupational position of a participant. There were therefore significant benefits in being able to harness subjective judgments of participants. Delphi technique has been found to be an appropriate mechanism for ensuring that emergent differences between, and within, key stakeholder groups (that can arise from differences in focus, situation and context) can be accounted for in a systematic way. The number of relevant people with expertise appeared too large to interact in a meaningful way through face-to-face exchange despite the very strong case for representation of as high a number of views as possible. Indeed, it was difficult to envisage a more appropriate way in which direct communication between the multiplicity of stakeholders concerned with child well-being could be facilitated.

1.5 ADVANTAGES OF ADOPTING A DELPHI TECHNIQUE

An overarching aim of the Delphi technique is to achieve consensus and, while further discussion of its conceptual basis takes place later in this paper, we understood consensus here to mean a general agreement (Thompson, 1995) in constructing a hierarchy and making judgments (Lai et al., 2002, p.35). It has been reported that the capacity of a group to reach consensus is influenced by:

- A tendency of low status group members to go along with the opinion of group members with a higher status;
- A tendency of a group to exert pressure on its members to conform; and
- A tendency of a dominant group member to exert undue influence on the opinion of the group (Gupta and Clarke, 1996; Fein et al., 1997; van Zolingen and Klaassen, 2003).

Arising from these, the most obvious advantage of guaranteed anonymity in responding to questions is that it is likely to encourage opinions that are free of influences from others and are therefore more likely to be true (Goodman, 1987; Snyder-Halpern, 2002). It has been suggested that anonymity encourages people with expertise to make statements on the basis of their personal knowledge and experience rather than a more cautious institutional position (Gupta and Clarke, 1996, p.186). By adopting an iterative approach to data collection through questionnaires and feedback, however, the collective human intelligence capability found in groups of people with expertise can be harnessed (Linstone and Turoff, 1975).
Other advantages relate to the use of questionnaires that have the capacity to capture a wide range of interrelated variables and multi-dimensional features (Gupta and Clarke, 1996) and enable a geographically dispersed group of experts to provide their understandings (Rogers and Lopez, 2002). Participants can complete the questionnaire at their leisure and this both reduces time pressures and allows for more reflection and contemplation of response (Linstone and Turoff, 1975). This, in turn, may increase the number and quality of contributions and can decrease respondent burden by allowing input at the participants’ convenience. Snyder-Halpern (2002) summarises the primary advantages of the Delphi technique as:

- Its adaptability to diverse data collection strategies, decreased peer pressure secondary to anonymity and the ease of condensing opinions of many and varied experts into a few precise statements


1.6 DISADVANTAGES OF ADOPTING A DELPHI TECHNIQUE

Disadvantages of the Delphi technique have also been identified and authors have questioned the reliability, validity, and credibility of this research methodology. Sackman (1975), for example, has noted that anonymity may lead to a lack of accountability because response may not be traced back to the individual. In addition, it has been suggested that a consensus approach can lead to a diluted version of the best opinion and the result represents the lowest common denominator (Powell, 2003, p.378). It could be argued, however, that all approaches (for example, working groups, nominal groups) to gaining consensus run this risk. Others have argued that this approach is time-consuming, labour-intensive and, therefore, expensive (Fitzsimmons and Fitzsimmons, 2001) although there is not agreement about this (Powell, 2003). A number of methodological issues arising in respect of Delphi have the capacity to threaten the credibility of the Study and these include issues around panel expertise, number of rounds, questionnaire development, analysis and achievement of consensus. These issues are considered in detail in Part Two of this document and decisions taken in respect of each with regard to this Study are highlighted.

1.7 SUMMARY

To summarise, the Delphi technique is a research approach to gaining consensus through the utilisation of questionnaires and the provision of feedback to participants who have expertise in key areas. While there are many potential types of Delphi techniques, three broad categories are generally in use and these are classical, policy and decision. In this development, a decision Delphi approach was employed. Advantages and disadvantages of the Delphi technique can be complementary. The adoption of an anonymous approach to data collection, for example, can facilitate positional openness but it may, at the same time, lead to a lack of accountability. The potential to harness a wide variety of views about different variables and across geographical areas has greater appeal than other alternatives, which may involve face-to-face interaction but, in doing so, some nuances may be lost. In balance, we considered that the advantages of this approach outweighed the disadvantages for our particular situation.

Some consideration has been given to the epistemological basis of the Delphi technique and, while the literature around this area is conflicting, we are suggesting here that many of its assumptions in terms of purpose and process are in keeping with that of social constructivism. Consequently, we understand the decision Delphi technique to be primarily situated within an interpretative paradigm and this provided guidance for us in undertaking the Study.
Figure 1 provides a summary of the main elements of the Study undertaken in the development of a national set of child well-being indicators. Components included are panel composition and expertise, number of rounds and outcomes.

Figure 1: Key Elements of the Study

**STUDY DIRECTORS**

**ADVISORY GROUP**

- N=4
  - Academics
  - Policy makers/service providers
  - Non-governmental organisations
  - Parents
  - Children

**EXPERT PANEL**

- N=87
  - Round 1: Prioritise key areas for inclusion from a master list
  - Round 2a: Present results from Round 1 and opinions sought
  - Round 2b: Consult with key Government Departments/Agencies and experts on the selection of the optimum indicator(s)
  - Round 3: Indicators presented and feedback sought
  - Consensus on a national set of child well-being indicators

**Study**

**Pilot study findings**

**Research findings**
Key issues of contention relating to the use of a Delphi technique in the development of a national set of child well-being indicators are now considered using material from Delphi studies undertaken (n = 7) elsewhere on indicator development. These issues are situated within the context of the aims and objectives, conceptual framework and key methodological challenges arising in the development of a national set of child well-being indicators. Particular attention is paid to the identification of expertise, number of rounds, consensus, questionnaire development and data collection, analysis and mechanisms for ensuring credibility in the current Study. Conclusions reached and actions taken in respect of this Study are highlighted.

Seven studies are used throughout this section to rationalise options selected, particularly where contentious issues arise. These studies were chosen in a systematic way using the principles of mini-review set out by Griffiths et al. (2002). The papers were identified through database searches of Medline (1966-2003), Embase (1980 - 2003), Cinahl (1982-2003), Eric (1988-2003), Social Work Abstracts (1977-2003) and Econlit (1988-2003) using two key words, Delphi and indicator. Because of the large number of abstracts generated (more than 3,000 in one database alone), it was necessary to place limitations on the material and these are identified below. Criteria for inclusion were that the study:

1. FOCUSED ONLY ON INDICATOR DEVELOPMENT;
2. REPORTED ON THE RESEARCH ITSELF;
3. PUBLISHED IN ENGLISH; AND

A bibliographic review published in 1995 (Gupta and Clarke, 1996) reported that the three most popular areas for Delphi applications were health, education and business. Consequently, in identifying studies for illustrative purposes, we took random examples from health (Cambell et al., 2000; Wang et al., 2003; Schuster et al., 1997), education (Rogers and Lopez, 2002; van Zolingen and Klaassen, 2003) and business (Millar, 2001; Snyder-Halpern, 2002). This facilitated maximum variability across different disciplines, an important factor given the diverse backgrounds of the participants in this Study.

We accept that the criteria used for final inclusion of studies has limitations in respect of the material identified but we are, nevertheless, reasonably confident that the papers identified were sufficiently comprehensive to provide an overview of key issues. Table 1 sets out the main elements of each of the key studies.

Table 1: Overview of Key Studies

<table>
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<tr>
<th>AUTHOR</th>
<th>MAIN FOCUS</th>
<th>FOCUS</th>
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<tr>
<td>1 Campbell et al. (2000)</td>
<td>Prescribing indicators for general practice</td>
<td>Health</td>
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<tr>
<td>2 Rogers and Lopez (2002)</td>
<td>Cross-cultural school psychology competencies</td>
<td>Education</td>
</tr>
<tr>
<td>3 Schuster et al. (1997)</td>
<td>Quality of health care measures for children and adolescents</td>
<td>Health</td>
</tr>
<tr>
<td>4 Van Zolingen and Klaassen (2003)</td>
<td>Key qualifications in senior secondary vocational education</td>
<td>Education</td>
</tr>
<tr>
<td>5 Snyder-Halpern (2002)</td>
<td>Indicators of organisational readiness for clinical information technology innovation</td>
<td>Organisational development</td>
</tr>
<tr>
<td>6 Millar (2001)</td>
<td>Indicators for sustainable tourism</td>
<td>Organisational focus</td>
</tr>
<tr>
<td>7 Wang et al. (2003)</td>
<td>Reproductive health indicators for China's rural areas</td>
<td>Health</td>
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2.1 AIM AND OBJECTIVES

The National Children's Strategy (2000) identifies a set of actions emerging from Goal Two that children's lives will be better understood. The key action to which this Study relates is the development of a set of child well-being indicators as a basis for the production of a biennial report to be known as the State of the Nation's Children. The development of the national set of child well-being indicators is underpinned by the commitment within the Strategy to the whole child perspective. 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 are, 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.

2.2 CONCEPTUAL UNDERPINNING:
A WHOLE CHILD PERSPECTIVE

The whole child perspective, first set out in the National Children's Strategy (2000) was used to provide a conceptual underpinning for this Study. This perspective situates the child within a socio-ecological context and has, therefore, been informed by the work of Bronfenbrenner (1979, 1993, 1995) and others concerned with the context of children's lives (for example, Ford and Lerner, 1992). This commitment to the context of the child's life is explicitly reflected within the two domains of children's relationships and formal and informal supports. Ward's (1995, 1998) work on outcomes around which children's lives can be understood provides a mechanism for taking account of the innate capacity of the child and, within this, nine key dimensions are identified. The perspective is underpinned by the key principles of non-discrimination, best interests of the child, survival and development and respect for the voice of the child that emerge from the UN Convention on the Rights of the Child (1989). The whole child perspective sets out three broad domains and these are

1. CHILDREN'S OWN CAPACITY;
2. CHILDREN'S RELATIONSHIPS; AND
3. FORMAL AND INFORMAL SUPPORTS.

Children's own capacity: The National Children's Strategy (2000) identifies nine dimensions of childhood and these are named:

- Physical and mental well-being;
- Emotional and behavioural well-being;
- Intellectual capacity;
- Spiritual and moral well-being;
- Identity;
- Self-care;
- Family relationships;
- Social and peer relationships; and
- Social presentation.
The National Children’s Strategy (2000) notes that it is helpful to consider the outcomes children achieve at each stage of development as expressions, which develop over time and which eventually provide the capacity for coping with adulthood (National Children’s Strategy, 2000, p.25).

Any single dimension presented above could form a legitimate focus for indicator development on children. Here, however, our intention is to focus on Irish children in a holistic way and consequently, in addition to understanding individual dimensions we are also concerned with how dimensions interact with each other and how they may influence and, in turn, influence, the other two substantive domains (children’s relationships and formal and informal supports).

Children’s Relationships: This domain sets out the complex set of relationships which are recognised as essential for a satisfying and successful childhood. These relationships range from the family (the primary source of care) all the way up to the State, which acts as the ultimate guarantor of their rights.

Formal and informal supports: This domain is concerned with the essential services and supports that are provided for children through the primary social networks of family, extended family and community (informal supports), and through formal support services provided by the voluntary sector, commercial sector, the State and its agencies. These provide the conduit through which children draw the support and services they need and benefit from.

The holistic nature of the whole child perspective leads to a recognition that while each of the three domains set out above are important in their own right, it is only by taking account of the inter and intra-domain relationships that a full and comprehensive understanding of children’s lives can be achieved. A graphic representation of the whole child perspective is presented in Figure 2.

Figure 2: The Whole Child Perspective
The extent to which indicators about all three domains and their inter-relationships would be identified as part of the national set of child well-being indicators was not pre-determined in this Study. Members of the panel of expertise were, however, asked to keep the three broad domains of the whole child perspective in mind when making decisions about key areas for inclusion in the indicator set.

Work already undertaken in the Irish context highlights the difficulties in reaching a definition of child well-being (Carroll, 2002). For the purposes of guiding this Study, we adopted the definition set out by Andrews et al. (2002) as:

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).

Methodological Issues Emerging
This section of the document outlines the Study method and focuses, in particular, on issues relating to sampling, data collection, analysis and statistical interpretation, credibility, reliability and validity, and ethical issues arising in respect of the Study.

2.3 SAMPLING
Delphi’s claim to credibility lies in its ability to draw on expertise (Miller, 2001) and this is promoted by purposeful selection of experts for inclusion to the panel rather than relying on random sampling. The term expert is contested (Hasson et al., 2000), however, and it has been suggested that this title is misleading (McKenna, 1994). Cognisant of this debate, we used the terms panel of expertise and participants in this Study rather than experts.

There is some agreement that key features of the participants involved in Delphi studies included both willingness and ability to make a valid contribution to the subject under examination (Goodman, 1987). These two factors need to be balanced with the potential for bias. Rowe et al., cited in van Zolingen and Klaassen (2003), suggest that researchers may create a study bias if they only:

A. SELECT RESPONDENTS THAT ARE EASILY AVAILABLE;
B. SELECT RESPONDENTS WHOSE REPUTATIONS ARE KNOWN TO THE RESEARCHER;
C. SELECT RESPONDENTS THAT MEET A MINIMAL NUMBER OF CRITERIA OF FAMILIARITY WITH THE FIELD OF THE RESEARCH PROBLEM; AND
D. SELECT RESPONDENTS ON THE BASIS OF SELF-RATINGS OF THEIR EXPERTISE.

An additional problem has been noted by van Zolingen and Klaassen (2003), who suggest that participants willing to take part in the Delphi technique may be more favourable to the method. This, in turn, may mean they are more inclined to agree with other panel members than those having a less adaptable attitude. Consideration is now given to ways in which other research studies have determined eligibility for inclusion on panels of expertise and these are summarised in Table 2.
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<th>AUTHOR</th>
<th>PANEL SIZE</th>
<th>EXPERT ELIGIBILITY</th>
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<tbody>
<tr>
<td>1 Campbell et al. (2000)</td>
<td>N = 305</td>
<td>All pharmaceutical and medical advisors in the UK</td>
</tr>
<tr>
<td>2 Rogers and Lopez (2002)</td>
<td>N = 65 including practitioners, faculty and administrators</td>
<td>Two office criteria: 1. Authorship 2. Conference presentation 3. Member of chair of committee 4. Employed in practice or supervision with five years experience 5. Employed as faculty member with specific interest in area</td>
</tr>
<tr>
<td>3 Schuster et al. (1997)</td>
<td>N = 18</td>
<td>Two panels, 9 members on each</td>
</tr>
<tr>
<td>4 Van Zolingen and Klaassen (2003)</td>
<td>N = 53</td>
<td>4 stakeholder groups</td>
</tr>
<tr>
<td>5 Snyder-Halpern (2002)</td>
<td>N = 34</td>
<td>Volunteers identified through online membership directory of specific group Employed in US based healthcare organisation Held position that reflected direct involvement with clinical information systems</td>
</tr>
<tr>
<td>6 Miller (2001)</td>
<td>N = 74</td>
<td>Informed academics and consultants Had published in the area of sustainability in previous two years in one of 4 major journals</td>
</tr>
<tr>
<td>7 Wang et al. (2003)</td>
<td>N = 123</td>
<td>Two panels Chinese (N = 63) International experts (N = 60) No information on Chinese</td>
</tr>
</tbody>
</table>

The details presented in Table 2 illustrate the many diverse ways in which expert can be defined and mechanisms for identification of participants have ranged from volunteers to nominations to acknowledgement of experience and knowledge. Exact and explicit criteria are set for inclusion in the panel for some studies (Rogers and Lopez, 2002) while, for others, expertise is assumed on the basis of membership of a particular group (Campbell et al., 2000) or organisation (Snyder-Halpern, 2002). In the case of the study undertaken by Schuster et al. (1997), nominations were sought from various academies of paediatric and adolescent medicine (Panel 1), and family physicians and obstetricians (panel 2). Rogers and Lopez (2002) included practitioners, faculty and administrators (N = 65) in their study of developing indicators of cross-cultural school psychology competencies. They set out very explicit selection criteria for inclusion in their study as expert and these criteria are identified in the example below, which referred to school psychologists who had expertise in the provision of psychological services to racially, culturally and/or linguistically diverse populations. The expertise of the panel members was defined in terms of professional accomplishments in multiple domains of professional functioning relevant to psychological service delivery with diverse clients and two of the following five criteria had to be met:
Primary or secondary author of two or more school psychology publications concerning racially, ethnically, culturally and linguistically diverse clients;

Presented three or more presentations on relevant cross-cultural topics at national school psychology conferences;

Member or Chair of an APA division 16 (school psychology) or NASP committee about delivering services to racially, ethnically, culturally and linguistically diverse clients;

Employed as a practising or supervising school psychologist with at least five years experience working primarily with racially, ethnically, culturally and linguistically diverse clients; and

Employed as a school psychology faculty member at a school psychology program that emphasised multi-cultural or bilingual training.

In other studies less formal criteria were identified and a snowball type approach was adopted. Wang et al. (2003), for example, report the majority of the Chinese panel experts were identified by the study team, while most of the international experts were chosen with the help of the Ford Foundation reproductive health program officers (Wang et al., 2003, p.218).

2.3.1 Number of Participants and Panels

There is no precise mechanism for identifying the number of individuals or the number of panels for inclusion in any individual study (Williams and Webb, 1994). It has been suggested that the size of the panel may vary according to the topics covered, the nature of different viewpoints included, and the time and money available (van Zolingen and Klaassen, 2003). One or more panels can be formed. Van Zolingen and Klaassen (2003), for example, included four different stakeholder groups in one panel while Wang et al. (2003) included two panels differentiated by location (Chinese experts N = 63; international experts N = 60). Schuster et al. (1997) formed two panels (although each panel included only nine experts). In other studies single panels were formed, although there was substantial variation in the numbers of experts included. Campbell et al. (2000), for example, included more than three hundred experts in their study while Rogers and Lopez (2002) included sixty-five. There does not, therefore, appear to be an optimum number of panels or indeed, panel members.

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 panel of expertise. These were:

■ That a single panel of expertise, 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 in Table 3.
2.3.2 Panel of Expertise for the Study

Understanding children's lives in a holistic way was centrally important to the development of the national set of child well-being indicators. We were, therefore, committed to achieving 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 key areas for inclusion in the indicator set rather than being predetermined by the study organisers.

The potential for identifying members for inclusion on the panel of expertise through systematic sampling was given some consideration. We examined ways in which, for example, policy makers from the Statutory Departments with responsibility for children's lives could be identified. We found, however, that although there are six main Departments, there are many sub-divisions and agencies that could have something to contribute. Within the Department of Health and Children, for example, there are more than fifty separate organisations as well as the main Department. Although a full list of these was compiled, with a view to creating a sampling frame, it was clear that such an approach was unwieldy and unlikely to result in a panel of expertise.

Problems also arose in respect of the academic community because of the absence of a central database in the Republic of Ireland for academics or researchers with an interest in children's issues. Nevertheless, we did make efforts to identify those who had published in the

<table>
<thead>
<tr>
<th>ADVANTAGES SINGLE PANEL</th>
<th>DISADVANTAGES SINGLE PANEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>The identification of each indicator would be situated within the context of the overall whole-child perspective and this may have a synergistic quality</td>
<td>It may not be possible to include the same number in the panel so the subsequent level of buy-in may be lower</td>
</tr>
<tr>
<td>The study would be less complex than that of multiple panels</td>
<td>Panelists may respond to areas where they do not have expertise and this may invalidate the results</td>
</tr>
<tr>
<td>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</td>
<td>It may not be possible to reach consensus because the diversity of the panel experts may be too great</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADVANTAGES MULTIPLE PANEL</th>
<th>DISADVANTAGES MULTIPLE PANEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pool of expertise for any individual area would be larger</td>
<td>May be conceptually inappropriate because the unifying feature of the whole-child perspective is the underlying commitment to understanding children in a holistic way</td>
</tr>
<tr>
<td>A more inclusive approach to stakeholders could be adopted and this could be advantageous in terms of buy-in</td>
<td>The breadth of focus of any individual panel may be difficult to determine</td>
</tr>
<tr>
<td>Stakeholders would only be involved in identifying indicators that they have specific areas of expertise</td>
<td>The complexity of the study would increase exponentially</td>
</tr>
<tr>
<td></td>
<td>Anonymity may be difficult to maintain</td>
</tr>
<tr>
<td></td>
<td>The balance between selecting experts who would be relatively impartial yet have information that reflects current knowledge may be difficult to strike</td>
</tr>
<tr>
<td></td>
<td>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</td>
</tr>
</tbody>
</table>
area of children’s research through, for example, individual institutional databases that identify publications from researchers/lecturers working in their university and other on-line portals, for example, Expertise Ireland. Again, we concluded that the likelihood of achieving a comprehensive relevant sampling frame would be beyond the scope of this Study. Within the Non-Governmental Organisation sector there is an umbrella group for children’s rights (the Children’s Rights Alliance (CRA)), that brings together more than seventy organisations who work with, or on behalf of, children. This organisation was subsequently invited to nominate three people. In light of the difficulties highlighted above, and in view of some concerns about the ability to capture relevant expertise, it was decided that a systematic approach to sampling was not an option.

In 2003, the National Children’s Office established a Research Development Advisory Group (RDAG) and this group comprises eighteen researchers, policy makers and service providers which have a specialist expertise in areas of children’s lives. We were fortunate and grateful to be able to use this group as the basis for the panel of expertise along with nominees from the Children’s Rights Alliance. Using snowball sampling, each member of the group was asked to identify two further people known to have expertise. In order to ensure an appropriate mix of expertise, each group member was asked to nominate persons from a sector other than their own. This meant, for example, that a policy maker would nominate a researcher and service provider, while a researcher would nominate a policy maker and service provider. In addition to this group, parents were also included and these were also identified using a snowball approach where members of the Advisory Group were asked to identify parents from different backgrounds and from different geographic areas. National parents organisations such as the National Parents Council and the IPPA, the Early Childhood Organisation, were also contacted and given an opportunity to nominate people. The final panel of expertise comprised eighty-seven people and we are confident that the overall composition of the panel provided is a good reflection of the diversity of children’s lives.

In keeping with Goal One of the National Children Strategy (2000), children will have a voice in matters which affect them and their views will be given due weight in accordance with their age and maturity (National Children Strategy, 2000, p.30), we also considered ways in which children could be included in the process. We concluded, following discussion with personnel involved in the area of children’s participation, that the most appropriate way to ensure children’s views were represented was by commissioning a study on children’s understandings of well-being. This study was undertaken by Dr. Saoirse Nic Gabhainn and Jane Sixsmith and was similar to this Study, underpinned by a commitment to recognising the influence of social interaction in achieving consensus. The overall single panel of expertise is set out in Table 4 and a full list of participants is set out in Appendix 1.

Table 4: Composition of the Panel of Expertise

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>PERCENT</th>
<th>VALID PERCENT</th>
<th>CUMULATIVE PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>1</td>
<td>15.9</td>
<td>15.9</td>
</tr>
<tr>
<td>Policy makers</td>
<td>25</td>
<td>36.2</td>
<td>36.2</td>
</tr>
<tr>
<td>Researchers</td>
<td>21</td>
<td>30.4</td>
<td>30.4</td>
</tr>
<tr>
<td>Service Providers</td>
<td>12</td>
<td>17.4</td>
<td>17.4</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

2.4 DATA COLLECTION

Loss of participants from the study can be problematic in situations where data is collected at more than one point in time (Henekens and Buring 1987; Farrington 1990; Courtenay and Mekkelholt, 1997). The cumulative effects of repeated contacts with participants can lead to respondent burden and this in turn has the potential to create difficulties around bias.
A number of key mechanisms have been identified as helpful in decreasing attrition between rounds and these include:

- Ensuring participants are fully informed about the study (Hasson et al., 2000);
- Having short follow-up periods between study rounds (Taylor and Lynn, 1996); and
- Issuing reminders by e-mail, telephone and personal contact (van Zolingen and Klaassen, 2003).

While these mechanisms can also be used to increase low response rates for questionnaire surveys where there is only one questionnaire round (Robson, 1993; Cohen and Manion, 1994), it is important in a Delphi study that these efforts take place at each round of the Study.

Prior to the start of the data collection, each nominee was contacted and an opportunity was provided for them to clarify issues relating to the Study. In addition, a comprehensive review of literature about the Delphi technique was made available on the National Children’s Office website (www.nco.ie) so that participants could, if they wished, get a more in-depth understanding about how the Study would proceed. In addition, three reminders were sent to each participant. Issues of timing were also considered at each Study round so that questionnaires were not issued at an important holiday time or at a time where it was likely that participants were more busy than normal. These mechanisms assisted in ensuring good response rates for each round.

2.4.1 Response Rates

Response rates varied between seventy-two and eighty-four percent. The first questionnaire round had a response rate of eighty percent (N = 69). Only participants that had taken part in the first round were invited to take part in the second questionnaire round as the purpose here was to ensure that participants had an opportunity to change their initial response on the basis of feedback received. The response rate for the second round was eighty-four percent (N = 58) and this was considered satisfactory. The final questionnaire was concerned with overall levels of satisfaction with both the indicator set identified and with the Delphi process. Consequently, participants who had taken part at any stage in the process were invited to give their opinions and, as two participants had withdrawn, the valid response rate for this round was seventy-two percent (N = 48).

2.4.2 Questionnaire Development

Some authors using the Delphi technique have reported extensively on their questionnaire (Millar, 2001) while others have only indicated broad areas of inclusion. Miller (2001), for example, presents a clear outline of key questions asked about each specific indicator in their work on sustainable tourism and this is set out below in Figure 3.

Figure 3: Questionnaire Format for Indicators (Millar, 2001)
Others report using a smaller number of questions for each indicator. Campbell et al. (2000), for example, in a study of quality indicators, report three questions for each indicator. Respondents in that study were asked to rate each indicator against two continuous 1-9 integer scales:

- Is this indicator a useful measure of cost minimization?
- Is this indicator a useful measure of quality?

In developing each questionnaire, we adhered to good practices and were particularly mindful of issues raised about the length of the questionnaire, the importance of clearly formulated unambiguous questions and the implications of having a heterogeneous group of respondents (van Zoolingen and Klaassen, 2003). The heterogeneous nature of the panel of expertise in this study meant that respondents did not have expertise in each specific indicator area. One potential way of taking this into account was to use the information provided in the demographic/ expertise section to include or exclude respondents. This subjective approach may, however, have led to problems of interpretation. Munier and Rond (2001), for example, asked respondents to declare their knowledge on a given subject based on four clearly defined levels (very good, good, limited and null) using very precise definitions set out below:

- Very good knowledge implies that the expert currently devotes himself to research on this precise topic or closely related topic;
- Good knowledge suggests that the expert devoted himself in the past to this research and continues to follow very closely the work of his colleagues;
- Limited knowledge means the expert is satisfied with reading articles, newspapers and reviews or has contacts with specialists; and
- Null knowledge suggests that the expert is not informed in the field.

An analysis of responses by all fields (78,486) showed that only 3 percent reported having very good knowledge, 7 percent having good knowledge and almost two-thirds (63 percent) had null knowledge. Adopting this type of approach, therefore, have led to difficulties in ensuring there were adequate numbers of respondents for each indicator.

In this study, we took the view that all participants on the panel of expertise, by virtue of their involvement in children’s lives, would have some knowledge of the key areas for inclusion and this would allow for the holistic nature of children’s lives to be captured. More specific detail was required when identifying the actual indicators themselves, and at that point, only those with specific knowledge in that particular area would be involved. This accommodated the difference in levels of expertise when identifying specific details of each individual indicator. In the final round, study participants were asked to rate their level of satisfaction with the overall set rather than with individual indicators within the set.

2.4.3 Pilot Study

The situation around piloting in respect of the Delphi technique is unclear. Powell (2003), for example, argues that piloting is optional although it may be useful to identify ambiguities and improve the feasibility of administration (Powell, 2003, p. 378). In view of the importance of this study to future policy-making and developments around children’s lives, we undertook substantial pre-testing and a two-round pilot study with people (N = 10) who did not take part in the main study. We believe it was worthwhile doing this and a number of changes were made as a result including, for example:

1. Changes to the layout of the questionnaire;
2. Changes to the content of the questionnaire, particularly in the provision of information about child well-being and indicator sets;
3. Question wording was changed to incorporate an event list for the indicator areas, which greatly assisted clarity;
4. De-grouping of indicators, whereas initially indicators were grouped according to broad thematic areas, such as,
EDUCATION AND ECONOMICS, RESULTS FROM THE PILOT STUDY SUGGESTED THIS WAS NOT HELPFUL. THE SEQUENCING OF THE INDICATOR AREAS WAS SUBSEQUENTLY CHANGED TO AN ALPHABETICAL FORMAT;

5. FORMAT OF RESPONSE TO THE QUESTIONNAIRE AS A RESULT OF THE PILOT STUDY, AND DISCUSSION WITH THE ADVISORY GROUP, A RATING SCALE (FROM 0–10, WHERE 0 IS LEAST IMPORTANT AND 10 IS MOST IMPORTANT) WAS USED. THIS WAS BECAUSE THERE WERE TOO MANY KEY AREAS INITIALLY TO RANK (APPROXIMATELY 60). IN ADDITION, THE ADOPTION OF A RATING APPROACH ALLOWED FOR THE USE OF MEASURES OF DISPERSION (E.G. STANDARD DEVIATION) WHICH WERE CENTRAL TO THE IDENTIFICATION OF STABILITY BETWEEN ROUNDS.

The pilot study also facilitated a link with the study on children's understanding of well-being and both research teams met on completion of their respective pilot studies.

2.4 Round One

In the classical Delphi technique, the first round adopts an inductive approach where participants are invited to generate ideas and are given complete freedom in their responses (Hasson et al., 2000). This allows panel members to identify an infinite range of possibilities and although this has many advantages in terms of comprehensiveness, it can be problematic where the respondents are heterogeneous in knowledge, expertise and experience. In addition, this inductive-type approach has been criticised on the basis of its inability to produce the level of information that a thorough literature review would (Millar, 2001).

In this Study, we considered the appropriateness of an open-ended approach to the first round but believed that, on balance, it was more efficient to adopt a semi-structured approach for the following reasons:

1) A key objective of this Study was to identify indicators that would facilitate comparisons between the Irish and international context regarding child well-being. We considered it necessary, therefore, to examine indicators used elsewhere so that such comparability would be achievable;

2) The complexity of indicators used to describe well-being means that many different definitions can be used to describe the same phenomenon. We were anxious, therefore, to set out clear definitions around each indicator so that ambiguity was decreased and specific data sources could, if available, be identified.

Two sequential processes preceded the development of the first questionnaire.

First, a systematic search of 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 of 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 the work already completed, a semi-structured approach was adopted and some fifty-six key 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 first questionnaire (Appendix 2) was divided into three parts. Part One asked respondents to identify their demographic and expertise characteristics, while Part Two presented an event list with fifty-six key areas. These areas were identified on the basis of the work already completed and with the assistance of the Advisory Group. Part Three of the questionnaire allowed respondents to make comments and identify any areas they felt were not covered.

2.4.5 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 (Appendix 3). The Round Two questionnaire provided a prioritised list of key 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 key areas identified by participants was also included in the second round. Participants were given an opportunity to provide feedback on the prioritised areas and were also asked to identify three areas not prioritised in the first round that they felt should be included in the final set.

2.4.6 Consultation Regarding Key Indicators

On completion of Round Two, key 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. These are shown in Table 5 below.

<table>
<thead>
<tr>
<th>Selection Criteria for Indicators of Child Well-Being</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Comprehensive coverage: Indicators should assess well-being across a broad array of outcomes, behaviour and processes.</td>
</tr>
<tr>
<td>2. Children of all ages: Age-appropriate indicators are needed at every age from birth through adolescence and covering transition into adulthood.</td>
</tr>
<tr>
<td>3. Clear and comprehensible: Indicators should be easily and readily understood by the public.</td>
</tr>
<tr>
<td>4. Positive outcomes: Indicators should assess positive as well as negative aspects of well-being.</td>
</tr>
<tr>
<td>5. Forward-looking: Indicators should be collected now that anticipate the future and provide baseline data for subsequent trends.</td>
</tr>
<tr>
<td>6. Rigorous methods: Coverage of the population or event being monitored should be complete or very high and data collection measures should be rigorous and consistent over time.</td>
</tr>
<tr>
<td>7. Geographically detailed: Indicators should be developed not only at the national level, but also at the state and local level.</td>
</tr>
<tr>
<td>8. Cost-efficient: Although investments in data about US children have been insufficient, strategies to expand and improve the data system need to be thoughtful, well-planned and economically efficient.</td>
</tr>
<tr>
<td>9. Reflective of social goals: Some indicators should allow us to track progress in meeting national, state and local goals for child well-being.</td>
</tr>
</tbody>
</table>

In addition to these criteria, three other key concerns guided the selection of the indicators. These were that the indicators chosen would:

- Be capable of drawing international comparisons, where possible;
- Comprise a balanced collection of objective and subjective measures; and
- Assess both well-being and well-becoming.

A thorough examination of the inventory of indicators (Appendix 4) was then undertaken using the selection criteria as a framework for analysis. Specific indicators were then identified for each key 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 child well-being in Ireland. The National Advisory Council on Drugs, for example, was consulted about the most appropriate indicator to adopt for use of alcohol, and the National Nutrition Surveillance Centre was consulted about 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 area had to be limited, where possible, to only one specific indicator. A full list of these Government Departments and Agencies is given in Appendix 5.

The selection of indicators, particularly for the more subjective areas such as self-esteem and relationship 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.

2.4.7 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 (Appendix 6). 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.

2.4.8 Integration of Data from the Study on Children’s Understandings of Well-Being

The importance of giving children a voice in the development of the national set of child well-being indicators was operationalised at every stage. 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 key areas in the literature and findings emerging from the Study of children’s understandings of well-being. At the pilot study stage, however, there were two clear exceptions to this and these were:

A. THE IMPORTANCE CHILDREN ASSIGNED TO PETS/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/animals in the extant literature on child well-being. In response to these findings, two key areas were included in the first round of the Delphi study and these were pets/animals and hours of sleep. Interestingly, however, the area pets/animals achieved the lowest mean average rating (4.71) of all key areas presented to the panel of expertise and was therefore deemed to be the lowest priority area. Hours of sleep as a key area was prioritised as forty-eight (fourth lowest) with a mean average score of 6.55.

At the time of development of the second round 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 hours of 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 the key areas things to do and environment/places to go. A number of different themes had also emerged in the area pets/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 key area was warranted as an 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/places and things to do. Again there were multiple understandings underpinning each. In respect of environment/places, for example, these included aspects of the natural, built, home and overseas 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/animals has never been used as a key area of child 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.

2.4.9 Method of Data Collection

A number of issues arose in respect of the mechanisms through which the questionnaires should be distributed to the panel of expertise. Snyder-Halpern et al. (2003), for example, compared mailed vs. internet applications of the Delphi technique and found that while there were both advantages and disadvantages to using e-mail, there was a very good case to be made for this type of approach to data collection. A summary of advantages and disadvantages as well as key issues emerging in respect of this method of data collection, identified by Snyder-Halpern et al. (2003) are set out in Table 6.

Table 6: Advantages and Disadvantages of E-mail Use

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment was cheaper and quicker</td>
<td>Disadvantages mainly technological and include:</td>
</tr>
<tr>
<td>Cost savings were substantial</td>
<td>Unexpected changes of e-mail application</td>
</tr>
<tr>
<td>Legibility of responses</td>
<td>Unreliability of panelist e-mail capabilities, resulting in some panelists being unable to participate in some rounds</td>
</tr>
<tr>
<td>Ease of data entry, resulting in decreased data entry time and errors</td>
<td>Some respondents were unable to retrieve e-mail attachments in their original format</td>
</tr>
<tr>
<td>Decrease in response turnaround time</td>
<td>Some respondents had incompatibility with Excel or MS Word applications.</td>
</tr>
<tr>
<td>Ability to track transmission status (for example, for incorrect addresses)</td>
<td>Problems with mime encryption</td>
</tr>
</tbody>
</table>

The ease, convenience and comprehensiveness of an on-line mechanism made this type of approach a very attractive option in this Study and we were influenced in this by the high levels of internet access available to most participants (Central Statistics Office, 2004). Nevertheless, we also ensured that people who did not have ready access to the Internet would be facilitated and a hard copy of the questionnaire was sent to anybody who wanted it.
The main approach used for 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.

In keeping with good practices in this area, participants of the Study were sent an e-mail providing explicit instructions for completion of the questionnaire, contact details should they have any difficulties, and a direct link to the host service were provided (Snyder-Halpern et al., 2003).

2.5 ANALYSIS, ITERATION AND CONSENSUS

2.5.1 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. There does not, however, appear to be agreement about the best method of mathematical aggregation (Murphy et al., 1998). In Rowe and Wright’s (1999) systematic review of literature on Delphi technique, a number of different descriptive statistics were used. These included median, mode, percentage for each event, ranks, upper and lower quartile ranges, regression weights or induced (if-then) rules, and statistical average of points for each factor. Qualitative material was also examined and in a number of studies reasons were analysed and given to respondents as feedback.

Data from other studies in respect of analysis and consensus is set out in Table 7.

Table 7: Analysis and Identification of Consensus in Key Studies

<table>
<thead>
<tr>
<th>AUTHOR</th>
<th>MAIN FOCUS</th>
<th>STATISTICS</th>
<th>CONSENSUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Campbell et al. (2000)</td>
<td>Prescribing indicators for general practice</td>
<td>Percentages for each indicator</td>
<td>Disagreement defined as 30% or more scores in both the bottom (1-3) and top (6-9) tertile</td>
</tr>
<tr>
<td>2 Rogers and Lopez (2002)</td>
<td>Cross-cultural school psychology competencies</td>
<td>Item means and standard deviations, Median, Range</td>
<td>The percentage of panellist ratings that fell within the established range of consensus +/- 1.64SD on round 2 (p. 27)</td>
</tr>
<tr>
<td>3 Schuster et al. (1997)</td>
<td>Quality of health care measures for children and adolescents</td>
<td>Number of votes in each category (1-9) for each indicator</td>
<td>Consensus not required because each panellist has a vote for each indicator (p106). Disagreement defined as at least 3 votes in the 1-3 range and at least 3 votes in the 7-9 range.</td>
</tr>
<tr>
<td>4 Van Zolingen and Klaassen (2003)</td>
<td>Key qualifications in senior secondary vocational education</td>
<td>Information file - an additional information</td>
<td>Qualitative understanding: opinions did not differ in many cases (p. 337)</td>
</tr>
<tr>
<td>5 Snyder-Halpern (2002)</td>
<td>Indicators of organisational readiness for clinical information technology innovation</td>
<td>Seven member coding team in thematic analysis of responses</td>
<td>Inter-rater agreement = 43% or greater</td>
</tr>
<tr>
<td>6 Miller (2001)</td>
<td>Indicators for sustainable tourism</td>
<td>Percentage agree/disagree, mean standard deviation</td>
<td>Qualitative: using words like general agreement, disharmony, spread of opinion, disagreement, divisive</td>
</tr>
<tr>
<td>7 Wang et al. (2003)</td>
<td>Reproductive health indicators for China’s rural areas</td>
<td>Not explicit</td>
<td></td>
</tr>
</tbody>
</table>
Table 7 identifies the main statistics reported on in a small number of studies. In general, statistics presented included:

- percentages;
- standard deviations;
- means;
- medians; and
- ranges.

While cautioning that these statistics assume an interval scale, Greatorex and Dexter (2000) concluded that the mean, a measure of central tendency, can be understood to represent group opinion. The standard deviation (a measure of spread), they suggest, can then be understood as a representation of the amount of disagreement within the panel. If the standard deviation is low, then the panel is in agreement, and the converse is also true. If the standard deviation is high, the panel is in disagreement. In a systematic examination of consensus development methods and their use in clinical guideline development, however, Murphy et al. (1998) argue that the median and the inter-quartile range are more robust than the mean and standard deviation.

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 key areas for inclusion in the indicator set. The cut-off level was determined by relative rating and the twenty-five key 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 ninety percent level of agreement was considered the optimum level of agreement in these instances (Zeitlin et al., 2003).

2.5.2 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 debiasing 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 Rond, 2001). Others have suggested that feedback be provided in the form of a median or inter-quartile range, and that experts who continue to give extreme views are asked to provide a rationale (van Zolingen and Klaassen, 2003). 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.
2.5.3 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, 1987) defines consensus as a general agreement; the opinion of most people in a group (Longman Dictionary of Contemporary English, 1987, p. 216). 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), reported that respondents with more extreme views were more likely to drop out of the study than participants with more moderate views. The conclusion drawn was that the decrease in variance can be a consequence of attrition rather than consensus.

Munier and Rond (2001), among others, suggest that the possibility that participants may simply alter their estimates in order to conform to the group (conformance), without actually changing their opinions (consensus), must be considered. Their own work in testing the influence of expert knowledge on consensus suggests, however, that consensus is the more likely explanation for decreased variance. Their conclusion that it can be theoretically demonstrated that the median response of the entire group should move towards the true value supports a move towards consensus rather than conformance (Munier and Rond, 2001, p. 1548). Some authors have undertaken post-group consensus, which concerns the extent to which individuals on completion of the Delphi technique agreed with the final group aggregate, their own final round estimates, or the estimates of other participants (Rowe and Wright, 1999).

Studies focusing 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). The number of rounds in the modified technique may be decreased to as few as two, if panellists have been provided with an event list, and if early group consensus is achieved (Snyder-Halpern, 2002). Other authors have focussed on participant burden as a problem and suggest that when the number of rounds exceeds four, the response rates can be very low. Table 7 sets out definitions of consensus used in studies elsewhere.

2.6 PARTICIPANTS’ VIEWS OF THE DELPHI TECHNIQUE

The third round questionnaire asked participants for their views about the Delphi technique itself. Participants focused in particular on the process of the study as well as the advantages and disadvantages. More than ninety-six percent of participants indicated they were either satisfied or very satisfied with the approach and these very high levels of satisfaction with the process used to develop the indicators are presented in Table 8.

Table 8: Overall satisfaction with the process of development

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very dissatisfied</td>
<td>0</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
</tr>
<tr>
<td>Satisfied</td>
<td>24</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>22</td>
</tr>
</tbody>
</table>

2.6.1 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.

Inclusiveness and Consultative
Participants noted that this type of approach gathers a wide range of responses and enables 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 in the outcomes of what is really happening for children.

Comprehensive
The importance of getting a comprehensive overview of children’s lives was critical to the conceptual underpinning of this development. Participants indicated that this had been possible and was achieved using the Delphi technique. Ninety-five percent 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:

(getting a balance that will suit all is very difficult. Therefore your approach is probably the most practical.

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 key areas 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 the 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 or education) over another.
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 focused 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.

2.6.2 Disadvantages
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 OF THE RATIONALE OF OTHERS;
2. LACK OF GROUP EFFECTS; AND
3. DIFFERING UNDERSTANDINGS OF KEY STAKEHOLDERS.

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 for justifying its inclusion were not available. Others noted that they did not have a clear statement or understanding of the rationale of the well-being project and that made it difficult at times to rank the dimensions and indicators. As one participant noted:

The disadvantage is that we just get a glimpse and do not know what decision-making processes lie behind it.

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 questionnaires in isolation did not allow for the 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:
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.

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.

2.6.3 Conclusion
There was overwhelming support for the use of the Delphi technique in developing the national set of child well-being indicators with ninety-six percent of participants either satisfied or very satisfied with the approach taken. The main advantages associated with using this approach related to its ability to be inclusive of a very broad number of views and stakeholders. This, in turn, led to a comprehensive and broader representation of children’s lives. The approach itself was felt to be rigorous and systematic where, at each round, there was transparency and openness in how areas were identified for inclusion. It was also felt to be an efficient method for harnessing group opinions and there were significant time-savings for many participants.

2.7 CREDIBILITY OF THE STUDY
Since Sackman’s (1975) initial critique of the Delphi technique and Linstone and Turoff’s (1975) claim that this method is more art than science, a substantial literature has developed about the credibility of Delphi as a research method. Criticisms of the Delphi technique eloquently summed up by Gupta and Clarke (1996) include:

Conceptual and methodological inadequacies, potential for sloppy execution, crudely designed questionnaires, poor choice of experts, unreliable result analysis, limited value of feedback and consensus, and instability of responses among consecutive Delphi rounds (Gupta and Clarke, 1996, p. 87).

In essence, there is potential for compromising credibility at all stages of a Delphi study. Some authors have argued that the Delphi technique is an interpretative research approach and should be judged accordingly (Keeney et al., 2001). This, however, is problematic because, although there is some agreement that the terminology and criteria used to judge qualitative enquiry should differ from that of quantitative studies, there is little agreement around the precise criteria that should be used (Emden and Sandelowski, 1999; Lincoln and Guba, 2000; Cutcliffe and McKenna, 2002). According to Powell (2003), a decision trail...
should be set in a way that provides sufficient evidence to defend the appropriateness of the method to address the problem selected, choice of expert panel, data collection procedures, identification of justifiable consensus levels, and means of dissemination and implementation.

Some of these areas have also been identified by others, operating from a more positivist paradigm (e.g. van Zolingen and Klaassen, 2003). They have suggested that compromises to the validity and reliability of a Delphi study arise from the value-led nature of feedback and consensus and the instability of responses. These areas, in turn, influenced by the number of experts, their average expertise and the average inter-correlation of their judgements. These authors argue for setting specific guidelines around each of these areas so that the reliability of a Delphi study (or whether a replication of a Delphi study would give the same results with a different panel) can be judged.

Others have suggested that the credibility of a Delphi study rests on whether it is effective in aiding decision-making. The extent to which this is the case has been subject to some examination. One systematic review of empirical studies (N = 25) comparing Delphi study with standard interacting groups concluded, with some caution, that Delphi groups outperform groups in decision-making and forecasting (Rowe and Wright, 1999).

Throughout this document, we have identified areas of potential compromise in the carrying out of this study and have presented a literature on areas around which methodological decisions subsequently taken were based. We view this as the conception of a decision trail and suggest that responses and decisions taken on the basis of questions raised provide a mechanism for making judgements about the credibility of the study.

In addition, we engaged with a small group of advisors, each with a different area of expertise and these advisors were critical to the on-going oversight and methodological rigour of the study. These advisors were:
- Dr. Ed. Carroll, Independent researcher
- Ms. Deirdre Cullen, Central Statistics Office
- Ms. Eithne Fitzgerald, National Disability Authority
- Dr. Maeve Henchion, Teagasc

This Group, each of whom had a particular expertise in an area relevant to the study, provided guidance and support for us while, at the same time, providing a monitoring mechanism to ensure transparency in the conduct of the study. We believe this further supports the credibility of the study.

2.8 Ethical Issues

Ethical issues saturate all stages of the research process and start with the researcher's choice of topic and method (Punch, 1998, p. 281). We believe it was ethical to adopt a Delphi technique to identify the national set of child well-being indicators. First, this technique facilitates the engagement of more expertise than any other group method. In addition, this type of study facilitated fair representation of the views of each participant because each participant had an equal opportunity to have their views taken into account. Alternative mechanisms for reaching consensus would not have provided as transparent a decision trail for each indicator, and the capacity of the Delphi technique to achieve this meant that the rationale for inclusion and exclusion of indicators could be clearly stated. This is likely to lead to greater acceptance of the findings than other methods.

The potential for harm in this Study was relatively low, because participants were mature adults and, as each were chosen on the basis of their expertise, they were not considered vulnerable. Nevertheless, other ethical issues revolving around consent, privacy and confidentiality of data were also considered and informed consent was achieved at each stage.
of the Study. Participants were informed about the purpose of the Study, the procedures to be followed, the anticipated time commitment, and contact details for the Principal Investigators if they wished to ask any questions about the Study. They were of course free to withdraw from the Study at any time.

In the research context, the right to privacy can be violated during the course of an investigation or after a study has been completed. In this case, every effort was made to protect the privacy of the participants. Two ways of protecting privacy are through confidentiality and anonymity. The essence of anonymity is that information provided by participants should in no way reveal their identity (Cohen et al., 2000), and such anonymity is a central feature of the Delphi technique. Individual names or positions were not directly linked to individual responses in the questionnaire feedback. Requirements under data protection legislation were also complied with.

In summary, this Study actively subscribed to principles of mutual respect, non-coercion and non-manipulation, the support of democratic values, and the belief that every research act implies moral and ethical decisions (Denzin and Lincoln, 1994). These principles were used to guide each part of the Study and at all stages, issues relating to consent, privacy, and confidentiality were key features.

2.9 CONCLUSION

To conclude, this report has presented an overview of the methodological issues arising in the course of the development of a national set of child well-being indicators. Part One of the report provides an overview of the Delphi technique itself and considers issues relating to categorisations, advantages, disadvantages, purpose, processes, and epistemological underpinnings of the Delphi technique. In the current development, the adoption of the Delphi technique enabled the collation of a large number of varying viewpoints across a diverse panel of expertise and a nationally geographical area. In addition, it provided a mechanism through which each person had an equal opportunity to contribute. This would not have been possible with such large numbers in a face-to-face interaction.

Part Two of the report uses seven systematically identified studies, undertaken elsewhere, to provide guidance about key areas of contention in respect of the Delphi technique including methodological concerns such as sampling, panel expertise, questionnaire development for each round, data collection, analysis and consensus. Consideration was given to each of these areas and decisions taken in respect of this Study clearly identified throughout the report. Issues relating to study credibility have been made explicit and this report in itself contributes to the audit trail.

The final set comprises forty-two child well-being indicators across thirty-five areas (Appendix 7) and data from the final questionnaire round shows that ninety percent of participants (N=43), were either satisfied or very satisfied with that outcome. There were also high levels of agreement that the indicator set met various selection criteria with responses suggesting agreement entrenched between eighty-three percent (for enough measures of children of all ages) and ninety-seven percent (the overall set is comprehensiveness). Finally, ninety-six percent of participants reported they were satisfied (fifty percent) or very satisfied (forty-six percent) with the process of development. We are concluding therefore, that the Delphi technique is an appropriate and acceptable mechanism to achieve consensus when developing sets of indicators.


## APPENDIX 1

**PEOPLE INVITED TO TAKE PART IN THE PANEL OF EXPERTISE**

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Margaret Rogers</td>
<td>Barnardos</td>
</tr>
<tr>
<td>Ms. Liz Leonard</td>
<td>Barnardos</td>
</tr>
<tr>
<td>Mr. Heino Schonfeld</td>
<td>Centre for Early Childhood Development and Education</td>
</tr>
<tr>
<td>Dr. Saoirse NicGabhainn</td>
<td>Centre for Health Promotion Studies, National University of Ireland, Galway</td>
</tr>
<tr>
<td>Dr. Norn Hayes</td>
<td>Centre for Social and Educational Research, Dublin Institute of Technology</td>
</tr>
<tr>
<td>Prof. Patricia Noonan-Walsh</td>
<td>Centre for the Study of Developmental Disabilities, University College Dublin</td>
</tr>
<tr>
<td>Ms. Mary Hargaden</td>
<td>Childcare Policy Unit, Department of Health and Children</td>
</tr>
<tr>
<td>Ms. Mary O'Connor</td>
<td>Children in Hospital, Ireland</td>
</tr>
<tr>
<td>Mr. Ray Dooley</td>
<td>Children's Rights Alliance</td>
</tr>
<tr>
<td>Prof. Robbie Gilligan</td>
<td>Children's Research Centre, University of Dublin, Trinity College</td>
</tr>
<tr>
<td>Dr. Jean Whyte</td>
<td>Children's Research Centre, University of Dublin, Trinity College</td>
</tr>
<tr>
<td>Dr. Jim Walsh</td>
<td>Combat Poverty Agency</td>
</tr>
<tr>
<td>Ms. Catriona Dwan</td>
<td>Community Worker</td>
</tr>
<tr>
<td>Dr. Niall Byrne</td>
<td>Department of Child and Family Psychiatry, Mater Misericordiae Hospital, Dublin</td>
</tr>
<tr>
<td>Ms. Breda Naughton</td>
<td>Department of Education and Science</td>
</tr>
<tr>
<td>Mr. Gerry Hayes</td>
<td>Department of Justice, Equality and Law Reform</td>
</tr>
<tr>
<td>Ms. Sylva Langford</td>
<td>Department of Justice, Equality and Law Reform</td>
</tr>
<tr>
<td>Ms. Eimar Fisher</td>
<td>Department of Justice, Equality and Law Reform</td>
</tr>
<tr>
<td>Mr. Frank Martin</td>
<td>Department of Law, National University of Ireland, Cork</td>
</tr>
<tr>
<td>Dr. Ursula Kilkelly</td>
<td>Department of Law, National University of Ireland, Cork</td>
</tr>
<tr>
<td>Dr. Anthony Staines</td>
<td>Department of Public Health and Epidemiology, University College Dublin</td>
</tr>
<tr>
<td>Mr. Heber McMahon</td>
<td>Department of Social and Family Affairs</td>
</tr>
<tr>
<td>Mr. Michael Rush</td>
<td>Department of Social Policy and Social Work, University College Dublin</td>
</tr>
<tr>
<td>Dr. Valerie Richardson</td>
<td>Department of Social Policy and Social Work, University College Dublin</td>
</tr>
<tr>
<td>Ms. Valerie O’Brien</td>
<td>Department of Social Policy and Social Work, University College Dublin</td>
</tr>
<tr>
<td>Dr. Helen Buckley</td>
<td>Department of Social Studies, University of Dublin, Trinity College</td>
</tr>
<tr>
<td>Dr. Colette McAuley</td>
<td>Department of Social Work, Queens University, Belfast</td>
</tr>
<tr>
<td>Dr. Rebecca King-O’Riain</td>
<td>Department of Sociology, National University of Ireland, Maynooth</td>
</tr>
<tr>
<td>Name</td>
<td>Organization/Group</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Ms. Elaine Kelly</td>
<td>Department of the Taoiseach</td>
</tr>
<tr>
<td>Ms. Yvonne O Neill</td>
<td>Eastern Regional Health Authority</td>
</tr>
<tr>
<td>Prof. Brian Nolan</td>
<td>Economic and Social Research Institute</td>
</tr>
<tr>
<td>Dr. Jean Banafi</td>
<td>Education Department, National University of Ireland, Cork</td>
</tr>
<tr>
<td>Dr. Peter Archer</td>
<td>Education Research Centre, St. Patrick's College, Drumcondra</td>
</tr>
<tr>
<td>Ms. Liz Kerrins</td>
<td>End Child Poverty Coalition</td>
</tr>
<tr>
<td>Mr. Pat Bennett</td>
<td>Family Support Agency</td>
</tr>
<tr>
<td>Mr. Niall O Baill</td>
<td>Fatima Groups United</td>
</tr>
<tr>
<td>Ms. Olive McGovern</td>
<td>Health Promotion Unit, Department of Health and Children</td>
</tr>
<tr>
<td>Ms. Breda Cleary</td>
<td>Institute of Community Health Nursing</td>
</tr>
<tr>
<td>Mr. Owen Metcalfe</td>
<td>Institute of Public Health in Ireland</td>
</tr>
<tr>
<td>Ms. Frances Fletcher</td>
<td>Intellectual Disability Services, Department of Health and Children</td>
</tr>
<tr>
<td>Ms. Irene Gunning</td>
<td>IPPA, the Early Childhood Organisation</td>
</tr>
<tr>
<td>Ms. Catherine Carthy</td>
<td>Irish Association of Young People in Care</td>
</tr>
<tr>
<td>Dr. Ailis N Roim</td>
<td>Irish College of General Practitioners</td>
</tr>
<tr>
<td>Mr. Sean Cotrell</td>
<td>Irish Primary Principals Network</td>
</tr>
<tr>
<td>Ms. Michele Clarke</td>
<td>Irish Social Services Inspectorate</td>
</tr>
<tr>
<td>Mr. Paul Gilligan</td>
<td>Irish Society for the Prevention of Quality to Children</td>
</tr>
<tr>
<td>Mr. Liam O'Dwyer</td>
<td>Irish Youth Foundation</td>
</tr>
<tr>
<td>Ms. Margaret Burns</td>
<td>Jesuit Centre for Faith and Justice</td>
</tr>
<tr>
<td>Dr. Barney O'Reilly</td>
<td>Kerry Education Service</td>
</tr>
<tr>
<td>Ms. Liz O'Sullivan</td>
<td>Kildare Youth Service</td>
</tr>
<tr>
<td>Dr. Anne Good</td>
<td>National Disability Authority</td>
</tr>
<tr>
<td>Ms. Sarah Craig</td>
<td>National Economic and Social Forum</td>
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<tr>
<td>Mr. Feargal O'Neill</td>
<td>National Educational Psychological Service</td>
</tr>
<tr>
<td>Ms. Anne Colgan</td>
<td>National Parents Council</td>
</tr>
<tr>
<td>Ms. Christine McMaster</td>
<td>North Western Health Board</td>
</tr>
<tr>
<td>Mr. Seamus McLoughlin</td>
<td>Department of Education and Science</td>
</tr>
<tr>
<td>Ms. Geraldine Brereton</td>
<td>One Family, The National Association of Single Parent Families</td>
</tr>
<tr>
<td>Ms. Maeve Crosbie</td>
<td>Parent</td>
</tr>
<tr>
<td>Ms. Ria Williams</td>
<td>Parent</td>
</tr>
<tr>
<td>Mr. Jim Symons</td>
<td>Parent</td>
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<tr>
<td>Ms. Breda Sammon</td>
<td>Parent</td>
</tr>
<tr>
<td>Ms. Carol Purcell</td>
<td>Parent</td>
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<tr>
<td>Ms. Janey Troy</td>
<td>Parent</td>
</tr>
<tr>
<td>Dr. Paula Byrne</td>
<td>Parent</td>
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<tr>
<td>Mr. David Brooks</td>
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<tr>
<td>Ms. Sandra Chhill</td>
<td>Parent</td>
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<tr>
<td>Ms. Susan Kenna</td>
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<tr>
<td>Ms. Ó Mearáidh Lynch</td>
<td>Parent</td>
</tr>
<tr>
<td>Mr. Maire Ryan</td>
<td>Parent</td>
</tr>
<tr>
<td>Name</td>
<td>Position/Title</td>
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<tr>
<td>Ms. Catriona de Bourca</td>
<td>Parent</td>
</tr>
<tr>
<td>Ms. Anna-May Harkin</td>
<td>Planning and Evaluation Unit, Department of Health and Children</td>
</tr>
<tr>
<td>Mr. Pat Dolan</td>
<td>Political Science and Sociology, National University of Ireland, Galway</td>
</tr>
<tr>
<td>Dr. Sean Denyer</td>
<td>Programme of Action for Children</td>
</tr>
<tr>
<td>Ms. Celia Keenaghan</td>
<td>Programme of Action for Children</td>
</tr>
<tr>
<td>Dr. Eilish Hennessy</td>
<td>Psychology Department, University College Dublin</td>
</tr>
<tr>
<td>Dr. Diane Hogan</td>
<td>Psychology Department, University of Dublin, Trinity College</td>
</tr>
<tr>
<td>Ms. Margaret Casey</td>
<td>Queen of Angels National School</td>
</tr>
<tr>
<td>Ms. Rosemary Horgan</td>
<td>Ronan Daly Jermyn Solicitors</td>
</tr>
<tr>
<td>Mr. Kieran McKeown</td>
<td>Social and Economic Research Consultant</td>
</tr>
<tr>
<td>Dr. John Pinkerton</td>
<td>Social Work Department, Queens University, Belfast</td>
</tr>
<tr>
<td>Dr. Deirdre Murray</td>
<td>South Eastern Health Board</td>
</tr>
<tr>
<td>Ms. Ann Godfrey</td>
<td>Southern Health and Social Services Board, Northern Ireland</td>
</tr>
<tr>
<td>Ms. Elizabeth Burke</td>
<td>Southern Health Board</td>
</tr>
<tr>
<td>Ms. Anne Halliday</td>
<td>St. John of God Kildare Services</td>
</tr>
<tr>
<td>Ms. Hilary Kenny</td>
<td>Trainer/Consultant</td>
</tr>
<tr>
<td>Sr. Frances Murphy</td>
<td>Warrenmount Presentation Secondary School</td>
</tr>
<tr>
<td>Mr. Dermot Stokes</td>
<td>Youthreach</td>
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</table>
ROUND ONE QUESTIONNAIRE

THE DEVELOPMENT OF A NATIONAL SET OF CHILD WELL-BEING INDICATORS USING THE DELPHI TECHNIQUE

Research Division, NCO

Thank you for agreeing to participate in this Study, which is concerned with getting agreement on the key areas of children's lives that the national set of child well-being indicators should measure.

This questionnaire is divided into two sections. Section 1 presents a series of background questions, which will provide a context for analysing your responses. Section 2 presents 56 potential areas for inclusion in the national set of child well-being indicators. You are asked to rate the relative importance of each of these areas out of 10, where 0 = low priority for inclusion and 10 = high priority for inclusion in the final indicator set (half points are permitted). For example, if you think an indicator relating to abuse and maltreatment is high priority, you could rate it 9 out of 10. Alternatively, if you think it is a low priority indicator, you could rate it 3.5 out of 10.

A child well-being indicator is a measure that assesses well-being at a point in time, over time and across geographic areas and population groups (Moore, 1999). For the purpose of this Study, please consider the following broad definition of well-being:

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. (Andrew et al., 2002, p.103)

Please also note that, to conform with the spirit and principles of the United Nations Convention on the Rights of the Child (1989) and the National Children's Strategy (2000), the following definition of a child has been adopted by the National Children's Office—every human being below the age of eighteen years.

Therefore, it is hoped that age appropriate indicators are identified, which assess well-being in its broadest sense (as outlined above) at every age from birth through adolescence and, where possible, across time, geographic areas and population groups.

Please return your completed questionnaire by Friday, 9th April 2004. Your response will remain confidential and will not, at any time, be disclosed to other participants in this Study. You will receive the results from this questionnaire at Round Two of the Study.

Thank you for your time and assistance.

Sinad Hanafin, PhD, Head of Research, National Children’s Office
Anne-Marie Brooks, Research Officer, National Children’s Office
SECTION 1: BACKGROUND INFORMATION

A) Name: ____________________________________________________________

B) In what capacity are you responding to this questionnaire?
   - Policy maker
   - Researcher/Academic
   - Practitioner/Service Provider
   - Parent
   - Other

If your work relates to children, please answer questions c-i:

C) Which organisation, if any, do you represent? ____________________________

D) Which of the following describes the main focus of your work?
   - Child health
   - Child education
   - Childcare
   - Child protection
   - Children participation
   - Juvenile justice
   - Other

E) Does your work relate to all children of all ages?
   - Yes
   - No

F) If no, please specify your target group: ________________________________

G) How many years have you been working in this area? ____________________

H) Aside from relevant experience, do you hold any qualification you consider relevant to child well-being?
   - Yes
   - No

I) If yes, please specify ________________________________________________

FOR PARENTS ONLY:

J) How many children do you have
   - Under 18 years __________
   - Over 18 years __________
## SECTION 2: Indicators of Child Well-Being Relating to

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>Abuse and maltreatment (e.g. neglect, physical abuse, sexual abuse, emotional abuse)</td>
</tr>
<tr>
<td>2</td>
<td>Academic attainment (e.g. reading, mathematics, science skills, results of State Examinations)</td>
</tr>
<tr>
<td>3</td>
<td>Academic commitment (e.g. homework habits, attitude towards learning and school)</td>
</tr>
<tr>
<td>4</td>
<td>Attendance at school (e.g. absenteeism, truancy, disciplinary absences)</td>
</tr>
<tr>
<td>5</td>
<td>Availability, accessibility, affordability and quality of housing for families with children</td>
</tr>
<tr>
<td>6</td>
<td>Availability, accessibility, affordability, quality of, and participation in, arts, cultural and play facilities (inc. natural environment) by children and young people</td>
</tr>
<tr>
<td>7</td>
<td>Availability, accessibility, affordability, quality and utilisation of basic health services for children and young people</td>
</tr>
<tr>
<td>8</td>
<td>Availability, accessibility, affordability, quality and utilisation of child care services (informal and formal)</td>
</tr>
<tr>
<td>9</td>
<td>Availability, accessibility, affordability, quality of, and enrolment in, early childhood education programmes (e.g. pre-school, kindergarten, nursery school)</td>
</tr>
<tr>
<td>10</td>
<td>Availability, accessibility, affordability, quality and utilisation of educational resources (e.g. computer, library, books)</td>
</tr>
<tr>
<td>11</td>
<td>Breastfeeding</td>
</tr>
<tr>
<td>12</td>
<td>Children and young people dependent on supplementary welfare and/or charitable donations (e.g. back to school clothing and footwear allowance)</td>
</tr>
<tr>
<td>13</td>
<td>Children and young people in care (e.g. foster care, residential care, pre-adoptive care)</td>
</tr>
<tr>
<td>14</td>
<td>Children and young people with additional needs (e.g. homeless children, asylum seeking children, children with disabilities, children involved in divorce)</td>
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<tr>
<td>15</td>
<td>Chronic health conditions (e.g. cystic fibrosis, diabetes, asthma, cancer)</td>
</tr>
<tr>
<td>16</td>
<td>Community characteristics (e.g. community crime, community poverty level, community facilities such as church, community centres, police station)</td>
</tr>
<tr>
<td>17</td>
<td>Completion of school (e.g. early school leavers)</td>
</tr>
<tr>
<td>18</td>
<td>Crimes committed by children and young people</td>
</tr>
<tr>
<td>19</td>
<td>Crimes committed on children and young people</td>
</tr>
</tbody>
</table>

*continued on next page*
20. Dental health

21. Economic security (e.g. children in poverty, secure parental employment, food insecurity)

22. Enrolment in education (e.g. enrolment in pre-primary, primary, secondary and tertiary education)

23. Health of the infant at birth (e.g. birth weight, birth defects, prematurity)

24. Helping others and volunteering (e.g. helping family, helping friends, helping out in the community)

25. Hospitalisation

26. Hours of sleep

27. Immunisation (e.g. vaccinations against measles, mumps, rubella, polio)

28. Injuries (e.g. burns, poisonings, fractures, road traffic accidents)

29. Mental health (e.g. attempted suicide, referrals to mental health services, ability to cope)

30. Nutrition (e.g. healthy diet, eating disorders)

31. Parental or family characteristics (e.g. parental education level, use of tobacco, alcohol or drugs)

32. Parental time with children (e.g. reading to children, involvement in activities with children)

33. Participation in decision-making (e.g. involvement in student councils, ability to influence decisions in matters which affect them)

34. Participation in out-of-school activities (e.g. scouting groups, community sports programmes)

35. Participation in school activities (e.g. school athletics, school music, debating)

36. Pastimes (e.g. reading, television viewing, physical activities, computer games)

37. Permanency and stability in the lives of children and young people (e.g. moving house, moving school)

38. Pets

39. Pre-natal behaviour (e.g. attendance for pre-natal care, use of tobacco, alcohol or drugs during pregnancy, folic acid intake)

40. Public expenditure on services for children and young people (e.g. expenditure on education, health, child care, child protection)
<p>| | |</p>
<table>
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<tbody>
<tr>
<td>41.</td>
<td>Relationships with parents and family (e.g. parental attachment, parental style, parental rules and guidance)</td>
</tr>
<tr>
<td>42.</td>
<td>Relationships with peers (e.g. friends in school and the community, bullying, dating)</td>
</tr>
<tr>
<td>43.</td>
<td>Relationships with significant others (i.e. other adults excluding parents or relatives such as teachers and youth leaders)</td>
</tr>
<tr>
<td>44.</td>
<td>Safe mobility and transport of children and young people (e.g. seat belt use, helmet use, exposure to drunk driving)</td>
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<tr>
<td>45.</td>
<td>School characteristics (e.g. teacher-pupil ratio, school services)</td>
</tr>
<tr>
<td>46.</td>
<td>School readiness (i.e. readiness of child to enter school at age 4/5)</td>
</tr>
<tr>
<td>47.</td>
<td>Screening for growth and development (e.g. hearing, vision, gross motor development, fine motor development)</td>
</tr>
<tr>
<td>48.</td>
<td>Self-esteem (e.g. confidence, belief in one's ability)</td>
</tr>
<tr>
<td>49.</td>
<td>Self-reported happiness</td>
</tr>
<tr>
<td>50.</td>
<td>Self-reported health status</td>
</tr>
<tr>
<td>51.</td>
<td>Sexual health and behaviour (e.g. sexually transmitted diseases, number of sexual partners, contraceptive use, unprotected intercourse)</td>
</tr>
<tr>
<td>52.</td>
<td>Spirituality and religion (e.g. religious service attendance)</td>
</tr>
<tr>
<td>53.</td>
<td>Use of tobacco, alcohol or drugs (age at first use, current use, frequent use, binge-drinking)</td>
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<tr>
<td>54.</td>
<td>Values and respect (e.g. respecting others, non-discrimination)</td>
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<td>55.</td>
<td>Youth employment</td>
</tr>
<tr>
<td>56.</td>
<td>Weight and height (e.g. birth weight, moderately or severely underweight for age, obesity)</td>
</tr>
<tr>
<td>57.</td>
<td>Please comment on your responses.</td>
</tr>
</tbody>
</table>

58. Are there any additional areas that you feel should be included in the national set of child well-being indicators? □ Yes □ No

59. If yes, please identify those areas now, indicating why you feel they should be included.

THANK YOU FOR YOUR TIME AND ASSISTANCE.
Thank you for returning your completed questionnaire for this Study on child well-being indicators. You will recall that the purpose of this questionnaire was to generate agreement on the most important areas (approximately thirty) of children’s lives that should be examined by the national set of child well-being indicators and we are delighted to report that there was a high level of agreement among the panel in this regard.

The results from this questionnaire have now been incorporated into a second questionnaire, which we now ask you to complete. The purpose of the second questionnaire is to establish if you are in agreement with the panel on the key areas that have been prioritised and also to seek some clarification and further feedback from you on several issues.

If agreement can be reached on the most important areas at this point, we will work with various agencies to identify and select the specific indicators to be used for each. Please note that we also intend to incorporate a number of general demographic indicators and policy indicators into the national set of child well-being indicators for context. It is anticipated that this work will be completed by Autumn 2004, at which time the results and final indicator set will be presented to you.

In completing this questionnaire, we draw your attention once again to the definition of well-being, which has been adopted for the purpose of this Study:

**Healthy and successful individual functioning, positive social relationships and a social ecology that provides safety, human and civil rights, social justice and participation in civil society.**  
(Andrew et al., 2002, p.103)

When you have completed this questionnaire, click on the submit button and your response will be forwarded to the National Children’s Office. You will be unable to submit incomplete responses or more than one questionnaire. Completed questionnaires must be submitted by Monday, 21st June 2004. Please note that your response will continue to remain confidential and will not, at any time, be disclosed to other participants in this Study.

If you experience any difficulties completing this questionnaire, please do not hesitate to contact Ms. Anne-Marie Brooks at (01) 242 0007. In the event that you experience difficulties completing this questionnaire on-line, a copy has also been sent to you in the post.

Thank you once again for your time and assistance and I look forward to receiving your response.

Sinad Hanafin, PhD, Head of Research, National Children’s Office
Anne-Marie Brooks, Research Officer, National Children’s Office
1. The following 26 areas have been prioritised by the panel as areas that should be examined in the indicator set. Please indicate if you are in agreement with the panel opinion by ticking the appropriate box.

<table>
<thead>
<tr>
<th>Area</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>a. Abuse and maltreatment</td>
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<td>b. Availability, accessibility, affordability, quality and utilisation of basic health services for children and young people</td>
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<td>c. Economic security</td>
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<td>d. Mental health</td>
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<td>e. Relationships with parents and family</td>
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<td>f. Availability, accessibility, affordability and quality of housing for families with children</td>
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<td>g. Public expenditure on services for children and young people</td>
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<td></td>
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<td>h. Self-esteem</td>
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<tr>
<td>i. Crimes committed on children and young people</td>
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<td>j. Children and young people with additional needs</td>
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<td>k. Nutrition</td>
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<td>l. Relationships with peers</td>
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<td>m. Screening for growth and development</td>
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<td>n. Completion of school</td>
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<td>o. Enrolment in education</td>
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<td>p. Children and young people in care</td>
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<td>q. Sexual health and behaviour</td>
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<td>r. Health of the infant at birth</td>
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<td>s. Self-reported happiness</td>
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<td>t. Chronic health conditions</td>
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<td>u. Parental time with children</td>
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<td>v. Immunisation</td>
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<td></td>
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<tr>
<td>w. Use of tobacco, alcohol or drugs</td>
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<tr>
<td>x. Attendance at school</td>
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<tr>
<td>y. Availability, accessibility, affordability, quality and utilisation of child care services (informal/formal)</td>
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<td>z. Values and respect</td>
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2. If you agree that the following key areas should be examined, we would now like you to identify one specific dimension from each. For example, if you think the indicator set should examine the affordability of basic health services as opposed to the quality of basic health services, we ask you to tick this preference.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>a. Basic health services</th>
<th>b. Child care services</th>
<th>c. Housing</th>
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</thead>
<tbody>
<tr>
<td>Availability</td>
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<tr>
<td>Accessibility</td>
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<td>Affordability</td>
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<tr>
<td>Quality</td>
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<tr>
<td>Utilisation</td>
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</table>
3. The areas that were not prioritised in the first round of this Study are listed below. If you feel strongly that any of these key areas should be examined in the indicator set, please identify the area and the reason you would like to see it included. You should select no more than three.

- Academic attainment
- Academic commitment
- Availability, accessibility, affordability, quality of, and enrolment in early childhood education
- Availability, accessibility, affordability, quality and utilisation of educational resources
- Breastfeeding
- Children and young people dependent on supplementary welfare and/or charitable donations
- Community characteristics
- Crimes committed by children and young people
- Dental health
- Helping others and volunteering
- Hospitalisation
- Hours of sleep
- Injuries
- Parental and/or family characteristics
- Participation in decision-making
- Participation in out-of-school activities
- Participation in school activities
- Permanency and stability in the lives of children and young people
- Pre-natal behaviour
- Relationships with significant others
- Safe mobility and transport of children and young people
- School characteristics
- School readiness
- Self-reported health status
- Spirituality and religion
- Youth employment
- Weight and height

a. 1st choice: 

b. 2nd choice: 

c. 3rd choice: 

4. In developing this national set of child well-being indicators, the National Children's Office have also commissioned a study of children's understandings of well-being. The findings from this Study have shown that the areas prioritised by the children who participated in the Study are broadly similar to those prioritised by this panel. However, the children have prioritised three additional areas as follows:

- Pets/animals: children described pets/animals as important contributors to their well-being in terms of, for example, giving and receiving love, having a companion and responsibility.
- Things to do: children described things to do as important contributors to their well-being in terms of, for example, having fun, learning, enhancing health and making friends.
- Environment/places: children described environment/places as important contributors to their well-being in terms of, for example, belonging and providing a context for activities.

Consequently, in keeping with Goal 1 of the National Children's Strategy that 'children will have a voice in matters which affect them and their views will be given due weight in accordance with their age and maturity', the National Children's Office intend also to examine these areas in the final indicator set.
Are there any comments that you would like to make on these additional areas identified by the children?

___________________________________________________________________________________________________________________________________________________

___________________________________________________________________________________________________________________________________________________

___________________________________________________________________________________________________________________________________________________

___________________________________________________________________________________________________________________________________________________

5a. Do you have any general comments to make on the key areas that have been prioritised for inclusion in the national set of child well-being indicators?

___________________________________________________________________________________________________________________________________________________

___________________________________________________________________________________________________________________________________________________

___________________________________________________________________________________________________________________________________________________

___________________________________________________________________________________________________________________________________________________

5b. Name: _________________________________________________________________________________________

THANK YOU FOR YOUR TIME AND ASSISTANCE.
LIST OF REPORTS IN THE INVENTORY


LIST OF GOVERNMENT DEPARTMENTS, AGENCIES AND STAKEHOLDERS

Government Departments
- Department of Education and Science
- Department of Health and Children
- Department of Justice, Equality and Law Reform
- Department of Social and Family Affairs
- Department of Community, Rural and Gaeltacht Affairs
- Department of the Environment, Heritage and Local Government

Agencies and Stakeholders
- An Garda Síochána
- Centre for Early Childhood Development and Education
- Central Statistics Office
- Combat Poverty Agency
- Economic and Social Research Institute
- Irish Social Services Inspectorate
- Mental Health Commission
- National Advisory Council on Drugs
- National Alcohol Advisor
- National Breastfeeding Co-ordinator
- National Disability Authority
- National Disease Surveillance Centre
- National Education Welfare Board
- National Juvenile Office
- National Nutrition Surveillance Centre
- National Treatment Purchase Fund
- Programme of Action for Children
Thank you for participating in the Delphi Study, which was set up to assist with the development of the national set of child well-being indicators. We are delighted to report that, as a result of this Study, the following key areas have been prioritised for inclusion in this indicator set:

- Abuse and maltreatment
- Crimes committed on children and young people
- Accessibility of basic health services
- Economic security
- Mental health
- Relationships with parents and family
- Availability of housing for families with children
- Public expenditure on services
- Self-esteem
- Nutrition
- Relationships with peers
- Screening for growth and development
- Enrolment in education
- Completion of school
- Children and young people in care
- Sexual health and behaviour
- Health of the infant at birth
- Self-reported happiness
- Chronic health conditions
- Parental time with children
- Immunisation
- Use of tobacco, alcohol or drugs
- Attendance at school
- Quality of early childhood care and education
- Values and respect
- Pets and animals
- Things to do
- Environment and places
- Crimes committed by children and young people
- Community characteristics
- Participation in decision-making
- Children and young people with additional needs

Since our last contact, we have been in touch with several Government Departments and Agencies in an attempt to select the best indicator(s) for each key area prioritised by you. We have now identified 41 indicators of child well-being, which will form the national set of child well-being indicators together with a select number of demographic indicators, which are also presented to you overleaf.

We would appreciate it if you could now look at the overall set of child well-being indicators and complete the questionnaire that follows. This questionnaire invites your feedback on how the indicator set was developed and also on how satisfied you are with the indicator set itself. Pages 2 to 5 of the questionnaire presents the indicators selected, and pages 6 and 7 present a series of questions for completion. To move between pages on the questionnaire simply click on the back (<) or forward (>) buttons.

When you have completed this questionnaire, click on forward button (>) and this will bring you to a new page, which will invite you to submit your response. To do this simply click on the submit button and your response will be forwarded to the National Children’s Office. You will be unable to submit incomplete responses or more than one questionnaire. Completed questionnaires must be submitted by Monday, 18th October 2004. Please note that your response will continue to remain confidential and will not, at any time, be disclosed to other participants in this Study.

If you experience any difficulties completing this questionnaire, please do not hesitate to contact Ms. Anne-Marie Brooks at (01) 242 0007. In the event that you experience difficulties completing this questionnaire online, a copy has also been sent to you in the post.

We would like also to take this opportunity to thank you for your time and continued assistance with developing this indicator set. We look forward to receiving your feedback.

Sinad Hanafin, PhD, Head of Research, National Children’s Office
Anne-Marie Brooks, Research Officer, National Children’s Office
<table>
<thead>
<tr>
<th>Areas</th>
<th>Well-Being Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abuse and maltreatment/crimes committed on children and young people</td>
<td>The number of children referred to the Child Protection Notification System, expressed as a proportion of all children. This can be sub-divided by most serious type of harm: a) physical; b) emotional; c) sexual; and d) neglect. The number of children subject to substantiated notification, expressed as a proportion of all children. This can be sub-divided by most serious type of harm: a) physical; b) emotional; c) sexual; and d) neglect.</td>
</tr>
<tr>
<td>Accessibility of basic health services for children and young people</td>
<td>The number of children on hospital waiting lists for in-patient admission, expressed as a proportion of all children.</td>
</tr>
<tr>
<td>Economic security</td>
<td>Relative poverty: The number of children living in households with a household income below the national 60% median, equivalised using the modified OECD equivalence scale, expressed as a proportion of all children. Consistent poverty: The number of children living in households with a household income below the national 70% median, equivalised using the modified OECD equivalence scale, and experiencing basic deprivation, expressed as a proportion of all children.</td>
</tr>
<tr>
<td>Mental health</td>
<td>The number of children referred to child and adolescent mental health services, expressed as a proportion of all children. The number of suicides among children in age categories 10–14, 15–17 and in total, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Relationship with parents and family</td>
<td>The number of children aged 11, 13 and 15 who report that they find it easy or very easy to talk with their a) mother; and b) father when something is really bothering them, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Availability of housing for families with children</td>
<td>The number of children in families on a local-authority housing waiting list, expressed as a proportion of all children.</td>
</tr>
<tr>
<td>Public expenditure on services for children and young people</td>
<td>Public expenditure on education as a percentage of GDP (to be developed further)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>The number of children in age categories 8–11 and 12–17 who report feeling happy with the way they are, expressed as a proportion of all children.</td>
</tr>
<tr>
<td>Attendance at school</td>
<td>The number of children who are absent from school for 20 days or more in the school year, expressed as a proportion of all children.</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Eating Habits: The number of children aged 11, 13 and 15 who report to eat breakfast five or more days per week, expressed as a proportion of all children in the same age groups. Feeding practice: The number of newborn babies who are a) exclusively breastfed; and b) partially breastfed throughout the first 48 hours of age, expressed as a proportion of all newborn babies. Nutritional Outcomes: To be developed.</td>
</tr>
<tr>
<td>Relationships with peers</td>
<td>The number of children aged 11, 13 and 15 who report to have been bullied in their lifetime, expressed as a proportion of all children in the same age groups. The number of children aged 11, 13 and 15 who report to have three or more close friends of the same gender, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Topic</td>
<td>Description</td>
</tr>
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<td>----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Screening for growth development</td>
<td>The percentage uptake of developmental screening at seven to nine months.</td>
</tr>
<tr>
<td>Enrolment in education/completion of school</td>
<td>The number of children who leave school (voluntarily or by exclusion) before the statutory school-leaving age, expressed as a proportion of all children.</td>
</tr>
<tr>
<td>Children and young people in care</td>
<td>The number of children who are in the care of the Health Services Executive (HSE), expressed as a proportion of all children. This can be sub-divided by type of care arrangement: a) foster care - general; b) foster care - special; c) foster care - relatives; d) pre-adoptive placement; e) residential - general; f) residential - special; g) at home under care order; and h) other.</td>
</tr>
<tr>
<td>Sexual health and behaviour</td>
<td>The number of births to children in age categories 10—14, 15—17 and in total, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Health of the infant at birth</td>
<td>The number of births within each 500g weight interval, expressed as a proportion of all registered live and still births. This can be sub-divided into a) healthy birth weight (between 2,500 and 4,000 grams); b) low birth weight (less than 2,500 grams); and c) high birth weight (more than 4,000 grams). The distribution of timing of first antenatal visit by trimester of pregnancy for all women delivering live or stillborn babies. Trimesters are as follows: a) 1st trimester = &lt; 15 weeks; b) 2nd trimester = 15—27 weeks; and c) 3rd trimester = 28 weeks or more.</td>
</tr>
<tr>
<td>Self-reported happiness</td>
<td>The number of children aged 11, 13 and 15 who report being happy with their life at present, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Chronic health conditions/morbidity</td>
<td>The ten most frequent conditions resulting in hospitalisation among children.</td>
</tr>
<tr>
<td>Parental time with children</td>
<td>The number of children aged 15 who report that their parents a) discuss how well they are doing at school; b) eat a main meal with them around a table; and c) spend time just talking to them more than once a week, expressed as a proportion of all children in the same age group.</td>
</tr>
<tr>
<td>Immunisation</td>
<td>The percentage uptake of D3/P3/T3/Hib3/Polio3 and Meningococcal C3 vaccinations at a) 12 months; and b) 24 months of age.</td>
</tr>
<tr>
<td>Use of alcohol, tobacco and drugs</td>
<td>The percentage uptake of MMR1 vaccinations at 24 months of age.</td>
</tr>
<tr>
<td>Use of alcohol, tobacco and drugs</td>
<td>The number of children aged 11, 13 and 15 who report to smoke cigarettes a) every day; and b) every week, expressed as a proportion of all children in the same age groups. The number of children aged 15 who report to have had fire or more alcoholic beverages in a row at least once in the last 30 days, expressed as a proportion of all children in the same age group. The number of children aged 15 who report to have used any illicit drugs in their lifetime, expressed as a proportion of all children in the same age group. This can be sub-divided by type of drug used.</td>
</tr>
<tr>
<td>Enrolment in early childhood care and education</td>
<td>The number of children under 13 in various childcare/education arrangements, expressed as a proportion of all children in the same age group. This can be sub-divided into a) pre-school; b) compulsory school; c) centre-based service outside school hours; d) crèche or day care; e) professional child minder; and f) family relative.</td>
</tr>
<tr>
<td>Quality of early childhood care and education</td>
<td>To be developed</td>
</tr>
<tr>
<td>Values and respect</td>
<td>To be developed</td>
</tr>
<tr>
<td>Pets and animals</td>
<td>To be developed</td>
</tr>
<tr>
<td>Things to do</td>
<td>The number of children aged 11, 13 and 15 who report to be physically active for: a) at least two hours; and b) more than four hours per week, expressed as a proportion of all children in the same age groups. The number of children aged 15 who report that reading is one of their favourite hobbies, expressed as a proportion of all children in the same age group.</td>
</tr>
<tr>
<td>Environment and places</td>
<td>The number of children aged 11, 13 and 15 who report that there are good places in their area to spend their free time, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Community characteristics</td>
<td>The number of children aged 11, 13 and 15 who report to feel safe in the area where they live, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Participation in decision-making</td>
<td>The number of children aged 11, 13 and 15 who report that students at their school participate in making the school rules, expressed as a proportion of all children in the same age groups.</td>
</tr>
<tr>
<td>Crimes committed by children and young people</td>
<td>The number of children referred to the Garda Juvenile Diversion Programme, expressed as a proportion of all children.</td>
</tr>
</tbody>
</table>

### Areas

#### Child population

The number of children under 18, expressed as a proportion of the total population.

#### Family structure

The number of children under 18, who live in family household units with only one parent or primary care-giver resident, expressed as a proportion of all children.

#### Parental education level attained

The number of children under 18, whose parents have attained: a) primary; b) lower secondary; c) upper secondary; and d) third level education, expressed as a proportion of all children.

#### Child mortality

The number of deaths among children under 18, expressed as a proportion of all children. This may be sub-divided by principal cause of death.

#### Children and young people with additional needs

The number of children under 18, registered as having an intellectual disability, expressed as a proportion of all children. This can be sub-divided by grade of disability: a) mild; b) moderate; c) severe; and d) profound. The number of children under 18, recorded as having a physical or sensory disability, expressed as a proportion of all children. The number of children seeking asylum, alone or as part of a family; b) non-national children; c) homeless children; and d) traveller children, expressed as a proportion of all children.

All indicators may also be sub-divided by:

a) Male, female, where appropriate
b) Age categories 0-4, 5-9, 10-14 and 15-17, where appropriate
c) Socio-economic group, where appropriate
d) Geographic location, where appropriate
**THE NATIONAL SET OF CHILD WELL-BEING INDICATORS**

1. The following statements are concerned with the selection criteria, which were adopted to guide the development and selection of this indicator set. Please state the extent to which you agree or disagree that the selection criteria was adhered to by ticking the relevant box.

<table>
<thead>
<tr>
<th>COMPREHENSIVE</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>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, emotional and behavioural well-being.</td>
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<thead>
<tr>
<th>CHILDREN OF ALL AGES</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 and participation in decision-making, which relates to older children.</td>
<td></td>
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<thead>
<tr>
<th>CLEAR</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
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</thead>
<tbody>
<tr>
<td>This indicator set includes measures that are easily and readily understood.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>POSITIVE AND NEGATIVE</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
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<thead>
<tr>
<th>REFLECTIVE OF SOCIAL GOALS</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>This indicator set allows 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 vaccinations.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>OBJECTIVE AND SUBJECTIVE</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 children’s personal assessments of their circumstances such as self-reported happiness.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>WELL-BEING AND WELL-BECOMING</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
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</tr>
</tbody>
</table>

2. Please provide some feedback on your responses.

3. Overall, how satisfied are you with the National Set of Child Well-Being Indicators?

- [ ] Very satisfied
- [ ] Satisfied
- [ ] Dissatisfied
- [ ] Very dissatisfied
THE DELPHI STUDY

It would be helpful for us to have some general feedback about this Study. Your comments would be greatly appreciated.

2a. Overall, how satisfied were you with the approach taken to develop this indicator set?

☐ Very satisfied  ☐ Satisfied  ☐ Dissatisfied  ☐ Very dissatisfied

2b. What do you see as the main advantages in taking this type of approach?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2c. What do you see as the main disadvantages in taking this type of approach?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2d. Did you have any difficulties completing the questionnaires?

☐ Yes  ☐ No

2e. If yes, please tell us a little about the difficulties you experienced.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2f. Are there any further comments that you would like to make?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2g. Name: ________________________________________________________________

THANK YOU FOR YOUR TIME AND ASSISTANCE.
CHILD WELL-BEING INDICATORS

Abuse and Maltreatment

Definition: The number of children referred to the Child Protection Notification System, expressed as a proportion of all children. This can be sub-divided by most serious type of harm: a) physical; b) emotional; c) sexual; and d) neglect

Source: Child Care Interim Data Set, Department of Health and Children

Definition: The number of children subject to substantiated notification, expressed as a proportion of all children. This can be sub-divided by most serious type of harm: a) physical; b) emotional; c) sexual; and d) neglect

Source: Child Care Interim Data Set, Department of Health and Children

Accessibility of Basic Health Services for Children and Young People

Definition: The number of children on hospital waiting lists for in-patient admission, expressed as a proportion of all children

Source: Health Services National Performance Indicators, Department of Health and Children

Attendance at School

Definition: The number of children who are absent from school for 20 days or more in the school year, expressed as a proportion of all children

Source: Education Welfare Board Database, National Education Welfare Board

Availability of Housing for Families with Children

Definition: The number of children in families on a local-authority housing waiting list, expressed as a proportion of all children

Source: Housing Needs Assessments published in the Quarterly Bulletin on Housing Statistics, Department of the Environment, Heritage and Local Government

Children and Young People in Care

Definition: The number of children who are in the care of the Health Services Executive (HSE), expressed as a proportion of all children. This can be sub-divided by type of care arrangement: a) foster care—general; b) foster care—special; c) foster care—relatives; d) pre-adoptive placement; e) residential—general; f) residential—special; g) at home under care order; and h) other

Source: Child Care Interim Data Set, Department of Health and Children

Chronic Health Conditions and Hospitalisation

Definition: The ten most frequent conditions resulting in hospitalisation among children

Source: Hospital In-Patient Enquiry Statistics, Economic and Social Research Institute

Community Characteristics

Definition: The number of children aged 11, 13 and 15 who report to feel safe in the area where they live, expressed as a proportion of children in the same age groups

Source: Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway
**Crimes Committed by Children and Young People**

*Definition:* The number of children referred to the Garda Juvenile Liaison Programme, expressed as a proportion of all children

*Source:* Annual Report, An Garda Síochána

**Economic Security**

**Relative Poverty**

*Definition:* The number of children living in households with a household income below the national 60% median, equivalised using the modified OECD equivalence scale, expressed as a proportion of all children

*Source:* European Union Survey on Income and Living Conditions, Central Statistics Office

**Consistent Poverty**

*Definition:* The number of children living in households with a household income below the national 70% median, equivalised using the modified OECD equivalence scale and experiencing basic deprivation, expressed as a proportion of all children

*Source:* European Union Survey on Income and Living Conditions, Central Statistics Office

**Enrolment in Childhood Care and Education**

*Definition:* The number of children under 13 in various early childhood care and education arrangements expressed as a proportion of all children in the same group. This can be sub-divided into: a) pre-school; b) compulsory school; c) centre-based care outside school hours; d) crèche or day-care; e) professional childminder; and f) family relative

*Source:* European Union Survey on Income and Living Conditions, Central Statistics Office

**Enrolment in Education/Completion of School**

*Definition:* The number of children who leave school (voluntarily or by exclusion) before the statutory school leaving age, expressed as a proportion of all children

*Source:* Post-Primary Pupil Database, Department of Education and Science

**Environment and Places**

*Definition:* The number of children aged 11, 13 and 15 who report that there are good places in their area to spend their free time, expressed as a proportion of children in the same age groups

*Source:* Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

**Health of the Infant at Birth**

*Definition:* The number of births within each 500g-weight interval, expressed as a proportion of all registered live and stillbirths. This can be sub-divided into: a) healthy birth weight (between 2,500 and 4,000 grams); b) low birth weight (less than 2,500 grams); and c) high birth weight (more than 4,000 grams)

*Source:* National Perinatal Reporting System, Economic and Social Research Institute

*Definition:* The distribution of timing of first antenatal visit by trimester of pregnancy for all women delivering live or stillborn babies. Trimesters are as follows: a) 1st trimester =< 15 weeks; b) 2nd trimester = 15 – 27 weeks; and c) 3rd trimester = 28 weeks or more

*Source:* National Perinatal Reporting System, Economic and Social Research Institute

**Immunisation**

*Definition:* The percentage uptake of D3/P3/T3/Hib3/Polio3 and Meningococcal C3 vaccinations at a) 12 months; b) 24 months of age

*Source:* Immunisation Uptake Statistics for Ireland, National Disease Surveillance Centre

*Definition:* The percentage uptake of MMR1 vaccinations at 24 months of age

*Source:* Immunisation Uptake Statistics for Ireland, National Disease Surveillance Centre
Mental Health

Definition: The number of children referred to child and adolescent mental health services, expressed as a proportion of all children.

Source: Health Service Executive Statistics, Health Services Executive

Definition: The number of suicides among children in age categories 10-14, 15-17 and in total, expressed as a proportion of all children in the same age groups.

Source: Vital Statistics, Central Statistics Office

Nutrition

Eating habits
Definition: The number of children aged 11, 13 and 15 who report eating breakfast five or more days per week, expressed as a proportion of all children in the same age groups.

Source: Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

Feeding practice
Definition: The number of newborn babies who are a) exclusively breastfed and; b) partially breastfed throughout the first 48 hours of age, expressed as a proportion of all newborn babies (to be developed further).

Source: National Perinatal Reporting System, Economic and Social Research Institute

Nutritional outcomes
Definition: To be developed

Source: To be developed

Parental Time with Children

Definition: The number of children aged 15 who report that their parents a) discuss how well they are doing at school; b) eat a main meal with them around a table; and c) spend time just talking with them more than once a week, expressed as a proportion of children in the same age group.

Source: Programme for International Student Assessment Survey, Education Research Centre, Drumcondra

Participation in Decision-making

Definition: The number of children aged 11, 13 and 15 who report that students at their school participate in making the school rules, expressed as a proportion of children in the same age groups.

Source: Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

Pets and Animals

Definition: To be developed

Source: To be developed

Public Expenditure on Services for Children and Young People

Definition: Public expenditure on education as a percentage of GDP (to be developed further).

Source: Tuarascíl Stáitíúil, Department of Education and Science

Quality of Childhood Care and Education

Definition: To be developed

Source: To be developed
Relationship with Parents and Family

**Definition:** The number of children aged 11, 13 and 15 who report that they find it easy or very easy to talk with their: a) mother; and b) father when something is really bothering them, expressed as a proportion of all children in the same age groups.

**Source:** Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

Relationships with Peers

**Definition:** The number of children aged 11, 13 and 15 who report to have been bullied at school, expressed as a proportion of children in the same age groups.

**Source:** Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

**Definition:** The number of children aged 11, 13 and 15 who report to have three or more friends of the same gender, expressed as a proportion of children in the same age groups.

**Source:** Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

Screening for Growth and Development

**Definition:** The percentage of mothers of new born children contacted by a Public Health Nurse (PHN) within 48 hours of hospital discharge.

**Source:** Health Services National Performance Indicators, Department of Health and Children

**Definition:** The percentage uptake of developmental screening at seven to nine months.

**Source:** Health Services National Performance Indicators, Department of Health and Children

Self-esteem

**Definition:** The number of children in age categories 8-11 and 12-17 who report feeling happy with the way they are, expressed as a proportion of all children in the same age groups.

**Source:** KIDSSCREEN, Programme of Action for Children

Self-reported Happiness

**Definition:** The number of children aged 11, 13 and 15 who report being happy with their life at present, expressed as a proportion of children in the same age groups.

**Source:** Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

Sexual Health and Behaviour

**Definition:** The number of births to females in age categories 10-14 and 15-17 and in total, expressed as a proportion of all children in the same age groups.

**Source:** Vital Statistics, Central Statistics Office

Things To Do

**Definition:** The number of children aged 11, 13 and 15 who report to be physically active for: a) at least two hours; and b) more than four hours per week, expressed as a proportion of children in the same age groups.

**Source:** Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway

**Definition:** The number of children aged 15 who report that reading is one of their favourite hobbies, expressed as a proportion of children in the same age group.

**Source:** Programme for International Student Assessment Survey, Education Research Centre, Drumcondra

Use of Tobacco, Alcohol and Drugs

**Definition:** The number of children aged 11, 13 and 15 who report to smoke cigarettes a) every day; and b) every week, expressed as a proportion of children in the same age groups.

**Source:** Health Behaviour of School-Aged Children Survey, National University of Ireland, Galway
**Definition:** The number of children aged 15 who report to have had five or more alcoholic drinks in a row at least once in the last 30 days, expressed as a proportion of children in the same age group.

*Source:* European Schools Project on Alcohol and Drugs Survey, St. Patrick’s College, Drumcondra.

**Definition:** The number of children aged 15 who report to have used any illicit drugs in their lifetime, expressed as a proportion of children in the same age group. This can be subdivided by type of drug used.

*Source:* European Schools Project on Alcohol and Drugs Survey, St. Patrick’s College, Drumcondra.

**Values and Respect**

*Definition:* To be developed.

*Source:* To be developed.

**SOCIO-DEMOGRAPHIC INDICATORS**

**Child Population**

*Definition:* The number of children under 18, expressed as a proportion of the total population.


**Family Structure**

*Definition:* The number of children under 18 who live in family household units with only one parent or primary caregiver resident, expressed as a proportion of all children.


**Parental Education Level Attained**

*Definition:* The number of children under 18 whose parents have attained: a) primary; b) lower secondary; c) upper secondary; and d) third level education, expressed as a proportion of all children.


**Child Mortality**

*Definition:* The number of deaths among children under 18, expressed as a proportion of all children. This may be sub-divided by principal cause of death.


**Children and Young People with Additional Needs**

*Definition:* The number of children under 18 registered as having an intellectual disability, expressed as a proportion of all children. This can be sub-divided by grade of disability: a) mild; b) moderate; c) severe; and d) profound.


*Definition:* The number of children under 18 recorded as having a physical or sensory disability, expressed as a proportion of all children.


*Definition:* The number of a) children seeking asylum, alone or as part of a family; b) non-national children; c) homeless children; and d) traveller children, expressed as a proportion of all children.

*Source:* Census of the Population, Central Statistics Office and Child Care Interim Data Set, Department and Children.
## Overview of Main Data Sources

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census of the Population</td>
<td>Population statistics including housing, employment, education and family structure.</td>
<td>Every five years</td>
</tr>
<tr>
<td>Childcare Interim Data Set</td>
<td>Statistics on children in care or at risk.</td>
<td>Annual</td>
</tr>
<tr>
<td>Education Welfare Board Database</td>
<td>Statistics on children absent from school twenty or more days.</td>
<td>Annual</td>
</tr>
<tr>
<td>European Schools Project on Alcohol and Drugs (ESPAD) Survey</td>
<td>European survey of the behaviours, knowledge and beliefs concerning cigarettes, alcohol, solvents and illegal drugs among 15-year-old children.</td>
<td>Every four years</td>
</tr>
<tr>
<td>European Union Survey on Income and Living Conditions (EU-SILC)</td>
<td>European survey on income, living conditions and basic deprivation.</td>
<td>Annual</td>
</tr>
<tr>
<td>Garda Annual Report</td>
<td>Crime statistics including arrests and diversions to the Garda Juvenile Liaison Programme.</td>
<td>Annual</td>
</tr>
<tr>
<td>Health Behaviour of School-Aged Children (HBSC) Survey</td>
<td>International survey of the health behaviours of 11-, 13- and 15-year-old children covering areas such as general health, food and nutrition, exercise and alcohol consumption and children's perceptions of happiness.</td>
<td>Every four years</td>
</tr>
<tr>
<td>Health Services National Performance Indicators</td>
<td>Statistics on health and healthcare services including mental health, child and adolescent health and child care.</td>
<td>Annual</td>
</tr>
<tr>
<td>Title</td>
<td>Source</td>
<td>Description</td>
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<tr>
<td>Hospital In-Patient Enquiry (HIPE)</td>
<td>Economic and Social Research Institute (<a href="http://www.esri.ie">www.esri.ie</a>)</td>
<td>Statistics on hospital stays including date of birth, gender, marital status, medical card status, diagnosis, procedure and length of stay.</td>
</tr>
<tr>
<td>National Intellectual Disability Database</td>
<td>Health Research Board (<a href="http://www.hrb.ie">www.hrb.ie</a>)</td>
<td>Statistics on those with an intellectual disability (mild, moderate, severe and profound) in receipt of, or on a waiting list for, specialist services.</td>
</tr>
<tr>
<td>KIDSCREEN</td>
<td>Programme of Action for Children (<a href="http://www.hse.ie">www.hse.ie</a>)</td>
<td>European survey of the Health-Related Quality of life of 8-11-year-old and 12-17-year-old children.</td>
</tr>
<tr>
<td>National Disease Surveillance Statistics</td>
<td>National Disease Surveillance Centre (<a href="http://www.ndsc.ie">www.ndsc.ie</a>)</td>
<td>Statistics on infectious diseases and vaccinations.</td>
</tr>
<tr>
<td>National Perinatal Reporting System</td>
<td>Economic and Social Research Institute (<a href="http://www.esri.ie">www.esri.ie</a>)</td>
<td>Demographic statistics including stillbirths, perinatal and maternal deaths, mother and father date of birth, nationality, occupation and marital status and basic clinical information including birth weight, period of gestation, type of feeding and congenital anomalies for every birth.</td>
</tr>
<tr>
<td>Post-Primary Pupil Database</td>
<td>Department of Education and Science (<a href="http://www.education.ie">www.education.ie</a>)</td>
<td>Statistics on pupil participation and retention rates.</td>
</tr>
<tr>
<td>Programme for International Student Assessment (PISA) Survey</td>
<td>Education Research Centre, St. Patrick’s College Drumcondra (<a href="http://www.erc.ie">www.erc.ie</a>)</td>
<td>International survey of reading, mathematics and science achievement of 15-year-old children.</td>
</tr>
<tr>
<td>Tuarascil Staitistiil</td>
<td>Department of Education and Science (<a href="http://www.education.ie">www.education.ie</a>)</td>
<td>Statistics on schools and examinations.</td>
</tr>
</tbody>
</table>