

Reliability of a Method for Assessing the Quality of Care for Children in Foster Families

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Abstract

This study presents the third phase of research aimed at developing a reliable methodology for evaluating the quality of care provided to children in foster families in Bulgaria. Previous phases involved defining and categorizing key criteria for assessing care quality, resulting in a structured questionnaire completed by a sample of 96 children and 96 foster parents. This study applies to Cronbach's Alpha to measure the internal reliability of the data collected, providing a solid statistical basis for assessing the questionnaire's effectiveness. Additionally, an independent samples t-test was conducted to explore differences in responses between children and foster parents, offering insights into the potential variability in their perceptions of care quality. Results indicate a high reliability coefficient for the children's responses and a comparatively lower one for foster parents, underscoring differences in perceived needs satisfaction across both groups. The findings align with established theories suggesting that quality is largely defined by the care recipient, with the caregiver's role focused on creating conditions that meet the child's expectations. This study highlights the importance of evaluating both perceived quality and satisfaction from the care recipient's perspective to enhance the foster care experience.

Keywords: *Foster care, quality of care, Cronbach's Alpha, t-test, social services, child welfare, Bulgaria, questionnaire reliability*

Introduction

The social context and influence of public attitudes are essential for understanding the effectiveness of foster care, especially regarding children's development within these settings. Society plays a key role in shaping perceptions of foster care and directly affects the satisfaction and well-being of children under foster care [1]. Since 2010, foster care in Bulgaria has grown significantly as one of the primary social welfare services for children deprived of parental care. Numerous studies indicate that a family environment is generally beneficial for children, yet critical questions remain regarding the suitability of individual foster families for a child and the most effective means for evaluating the care they provide. These considerations underscored the need for research aimed at establishing a reliable methodology to assess care quality in foster family settings.

This article presents the third stage of a research project designed to develop such a methodology. In earlier stages, key criteria for assessing care quality were developed, categorized, and subsequently tested with a sample of 96 children and 96 foster parents. While survey research is a foundational method in social science, it is essential to validate the gathered data to ensure that theoretical claims are supported. This study utilizes Cronbach's Alpha to measure the internal reliability of data gathered through the questionnaire, providing a statistical foundation for assessing care quality.

Cronbach's Alpha, α (or coefficient alpha), introduced by Lee Cronbach in 1951, measure's reliability or internal consistency and reflects how well an instrument measures the intended constructs. When designing methodologies to assess care quality, it is also crucial to consider the

impact of contemporary media and digital environments on the perspectives and attitudes of foster families and the broader public toward children in foster care [2].

Statement of the Problem

Since 2010, foster care has emerged as one of the most prevalent social welfare services in Bulgaria, primarily benefiting children who cannot remain with their biological families. Although raising children in a family environment is widely supported by scientific evidence, there is still a need to address questions such as whether specific foster families are truly optimal for each child and how we might reliably measure the quality of care they provide. These considerations guided a multi-phase research process to develop an instrument capable of assessing the quality of foster care accurately.

Objective of the Study

The main objective of this study is to determine the reliability of the newly created questionnaire designed to evaluate the quality of care provided to children in foster families.

Methodology: Sample and Procedure

In the first phase of the study, a stratified representative sample was created. It included children in specialized institutions, children in Residential Child Care Facilities, parents of children in such institutions, parents of children in Residential Child Care Facilities (both for healthy children and for children with disabilities), foster parents, adoptive parents, and various social service professionals. This sample formed the basis for developing and evaluating guidelines for assessing care quality in foster settings. A total of 134 participants took part in the study, including children without parental care, foster parents, providers of foster care services, community-based social service professionals, and experts.

For the third research phase, which focused on testing the reliability of the newly developed questionnaire, a national representative sample was created. This sample included 185 guidelines for evaluating social service quality for children, grouped into five main categories: organization of the work process, worker competencies, and the ability of services to meet client needs.

Following the second research phase, nearly all criteria received high scores for importance (rated on a scale from 1 to 6), and criteria with high scores were integrated into a "Childcare Assessment Questionnaire for Children in Foster Families." Throughout the research, participants consistently connected fulfilling clients' needs with the perceived quality of care, underscoring the importance of understanding how social services meet user expectations.

The criteria were organized into five categories:

1. Basic Needs or Physiological Needs.
2. Safety Needs: Security, Order, and Stability.
3. Love and Belongingness.
4. Esteem Needs.
5. Self-Actualization Needs.

To ensure the reliability of the two questionnaires and conduct a quality assessment of foster care, data from the National Association of Foster Parents on the number and distribution of children in foster families across regions were used. Because the Association does not provide data on age or disability status, data from the Social Assistance Agency were used to address this. According to this data, children under seven represent approximately 48% of the population in foster families, while children over seven represent 42%. This approach helps ensure a comprehensive representation of the foster care population. [3]

Each criterion was assessed through carefully formulated questions reflecting the language used by participants during the research. The children's and foster parents' questionnaires

contained identical questions, ensuring consistency in phrasing. By administering the questionnaires separately but simultaneously, we could gain insights into both foster parents' and children's perspectives to the extent to which needs are met. This method also allows for identifying agreements and disagreements, which can facilitate better mutual understanding and support within foster families.

Methods

The data analysis began by assessing the reliability of the questionnaire using Cronbach's Alpha in the Statistical Package for the Social Sciences (SPSS) version 19. This initial step evaluates the internal consistency of each scale within the children's and foster parents' questionnaires, providing a foundational reliability measure across distinct care dimensions. Following the reliability assessment, an independent samples t-test was conducted to compare mean scores between children and foster parents, exploring potential differences in responses across the evaluated scales. This two-part analysis offers comprehensive insights into both the reliability and comparative trends within the dataset, supporting a deeper understanding of care quality indicators in foster family settings.

Results

Following the development of the two questionnaires, a reliability analysis was conducted to evaluate internal consistency. The study included 192 participants, comprising both children and foster parents, drawn from a nationally representative sample. To assess reliability, Cronbach's Alpha coefficient was applied to each scale, providing an internal consistency measure for the items within the questionnaires [4]. The internal consistency assessment through Cronbach's Alpha yielded the following results:

Estimate of the Reliability of a Psychometric Test

The analysis of the "Physiological Needs" scale, as presented in Table 4, demonstrates that the reliability of the questionnaire for both children and foster parents shows varied consistency. For the children's questionnaire, Cronbach's Alpha yielded a value of 0.285, with an adjusted Alpha based on standardized items of 0.436 across ten items, suggesting moderate internal consistency. In comparison, the foster parent questionnaire presented a Cronbach's Alpha of 0.273 and a standardized items Alpha of 0.189, also across ten items. These results indicate that while the scale captures distinct physiological needs elements, further refinement may enhance reliability across respondent groups. Nonetheless, these initial findings provide valuable insights into refining the assessment method to better capture quality-of-care metrics in foster family settings.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,285	,436	10
Foster Parents	,273	,189	10

Table 1 Cronbach's Alpha value for Part A: Basic needs or Physiological needs" of a human being: food, water, sleep, homeostasis, and excretion

The reliability coefficient for the "Safety Needs: Security, Order, and Stability" scale in the children's questionnaire was 0.906, with a slightly higher value of 0.912 when standardized items were used across 20 items. For the foster parents' questionnaire, Cronbach's Alpha was 0.673, with an increase to 0.733 based on standardized items, also across 20 items. These high reliability coefficients for the children's responses indicate strong internal consistency, suggesting that the items effectively capture the intended safety-related needs. The moderate reliability for foster

parents reflects consistent responses but also signals potential areas for refinement to enhance alignment with the children's scale outcomes.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,906	,912	20
Foster Parents	,673	,733	20

Table 2 Cronbach's Alpha value for Part B: Safety Needs: Security, Order, and Stability

The reliability coefficient for the "Receiving and Giving Affection and Love" scale in the children's questionnaire reached 0.948, with a slightly higher standardized item value of 0.952 across 22 items. For the foster parents' questionnaire, Cronbach's Alpha was recorded at 0.781, increasing to 0.806 with standardized items, also across 22 items. These high reliability values, particularly in the children's responses, indicate a strong internal consistency, reflecting the effectiveness of the scale in assessing the affection and love dimension. The foster parents' moderate but reliable coefficients suggest consistent responses, highlighting a solid basis for capturing this essential area of care, with potential refinement for increased alignment across respondent groups.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,948	,952	22
Foster Parents	,781	,806	22

Table 3 Cronbach's Alpha value Part C: Receiving and giving affection and love

The reliability coefficient for the "Integration – Being Part of a Group Acceptance" scale in the children's questionnaire was 0.764, with a slight increase to 0.776 for standardized items, across 7 items. In the foster parents' questionnaire, Cronbach's Alpha was lower, at 0.418, with a minor increase to 0.432 when standardized items were used, also across 7 items. The moderate reliability values in the children's responses suggest a reasonable internal consistency, indicating that the scale items capture the concept of group acceptance effectively. However, the lower coefficients for foster parents suggest variability in their responses, indicating that adjustments may be needed to improve the scale's applicability across respondent groups.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,764	,776	7
Foster Parents	,418	,432	7

Table 4 Cronbach's Alpha value Part C: Integration – being part of a group acceptance

The reliability coefficient for the "Affiliating, Being Part of a Birth Family" scale in the children's questionnaire was 0.960, with a comparable standardized item value of 0.959 across 14 items. In the foster parents' questionnaire, Cronbach's Alpha reached 0.901, with a slight increase to 0.903 for standardized items, also across 14 items. These high reliability coefficients for both groups indicate strong internal consistency, suggesting that the scale items effectively capture the affiliation and connection with the birth family. This robust alignment across responses highlights the scale's strength in assessing this crucial aspect of family belonging in foster care contexts.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,960	,959	14
Foster Parents	,901	,903	14

Table 5 Cronbach's Alpha value Part C: Affiliating, being part of a birth family

The reliability coefficient for the "Esteem Needs – Esteem for Oneself (Dignity, Achievement, Mastery, Independence) and the Desire for Reputation or Respect from Others" scale in the children's questionnaire was 0.915, with a slightly higher standardized item value of 0.918 across 6 items. In contrast, the foster parents' questionnaire showed a lower Cronbach's Alpha of 0.375, increasing to 0.468 with standardized items, also across 6 items. The high reliability values for the children's responses indicate strong internal consistency, suggesting that the scale effectively measures esteem needs in this group. However, the lower coefficients for foster parents point to variability, indicating that adjustments may be needed to improve the consistency and applicability of the scale across respondent groups.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,915	,918	6
Foster Parents	,375	,468	6

Table 6 Cronbach's Alpha value Part D: Esteem needs - esteem for oneself (dignity, achievement, mastery, independence) and the desire for reputation or respect from others (e.g., status, prestige)

The reliability coefficient for the "Self-Actualization Needs – Developing Skills" scale in the children's questionnaire was 0.833, with a slightly higher value of 0.844 when standardized items were used, across 7 items. In the foster parents' questionnaire, Cronbach's Alpha was lower, at 0.467, increasing to 0.515 with standardized items, also across 7 items. The high reliability values for the children's responses suggest strong internal consistency, indicating that the scale effectively captures self-actualization needs related to skill development. The moderate reliability for foster parents, however, suggests some variation in responses, pointing to a potential need for refinement to enhance consistency across respondent groups.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,833	,844	7
Foster Parents	,467	,515	7

Table 7 Cronbach's Alpha value Part E: Self-actualization needs - Developing skills

The reliability coefficient for the "Self-Actualization Needs – Thinking, Studying, Talents" scale in the children's questionnaire was 0.817, with a slightly higher standardized item value of 0.825 across 9 items. In the foster parents' questionnaire, Cronbach's Alpha was 0.576, with a minor decrease to 0.546 for standardized items, also across 9 items. The high reliability values in the children's responses indicate a strong internal consistency, suggesting that the scale effectively measures cognitive and talent development needs. The moderate reliability for foster parents reflects some variability in responses, signaling areas where scale adjustments could strengthen alignment and consistency across groups.

Group	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	Number of Items
Children	,817	,825	9
Foster Parents	,576	,546	9

Table 8 Cronbach's Alpha value Part E: Self-actualization needs - Thinking, studying, talents

The reliability analysis of the scales across the children's and foster parents' questionnaires reveals varying degrees of internal consistency. The scales assessing core needs—ranging from physiological and safety needs to self-actualization—demonstrate strong reliability in the children’s responses, with consistently high Cronbach's Alpha values. While reliability values for foster parents show moderate to lower levels, these findings highlight areas for potential refinement to enhance alignment and response consistency. This initial evaluation provides a foundational understanding of the scales' effectiveness in capturing diverse aspects of care quality, establishing a basis for further exploration. The analysis now proceeds to examine correlations between these scales and other relevant factors, offering deeper insights into the quality of foster care provision.

Significance of Differences Between Compared Groups: T-Test for Independent Samples

The second part of the analysis examines the significance of differences between the groups of children and foster parents using an independent samples t-test. This approach compares mean scores across the scales to identify any statistically significant differences in responses between the two groups. By analyzing these variations, the t-test provides insight into how children and foster parents may differ in their perceptions or experiences of care quality, further informing the interpretation of the scales within the foster care context.

Scale	Group	N	Mean	Std. Deviation	t	p
Basic Needs or Physiological Needs	Child	96	62.21	6.18	2.92	.004
	Parent	96	59.97	4.18		
Safety Needs: Security, Order, Stability	Child	96	113.28	27.52	-2.85	.005
	Parent	96	121.96	11.49		
Receiving and Giving Affection and Love	Child	96	120.72	37.01	-2.68	.008
	Parent	96	131.87	16.98		
Integration – Being Part of a Group; Acceptance	Child	96	31.69	11.55	4.2	.000
	Parent	96	37.6	7.50		
Affiliating, Being Part of a Birth Family	Child	96	40.52	32.89	-0.63	.52

	Parent	96	43.16	23.69		
Developing Skills	Child	96	39.01	12.02	-3.97	.000
	Parent	96	44.27	4.91		
Thinking, Studying, Talents	Child	96	46.92	14.34	1.02	.3
	Parent	96	48.71	9.24		

Table 9 T-Test Results for Differences Between Children and Foster Parents¹

The independent samples t-test provided a detailed look into the specific dimensions of care quality as perceived by children and foster parents, revealing notable discrepancies that illuminate underlying dynamics within the foster care experience.

For the "Basic Needs or Physiological Needs" scale, a statistically significant difference emerged, with children reporting a higher mean score (M = 62.21, SD = 6.18) compared to foster parents (M = 59.97, SD = 4.18), $t(190) = 2.92, p = .004$. This difference suggests that children feel their basic needs are relatively well met, whereas foster parents may have a more reserved or critical perspective on the extent to which these needs are being addressed.

In the "Safety Needs: Security, Order, and Stability" scale, foster parents reported significantly higher levels (M = 121.96, SD = 11.49) than children (M = 113.28, SD = 27.52), $t(190) = -2.85, p = .005$. This disparity highlights a potential gap in perceived security and stability, suggesting that while foster parents may feel they provide a safe and structured environment, children may still experience these elements as less consistent or may interpret safety and order differently than foster parents do.

The "Receiving and Giving Affection and Love" scale similarly revealed a significant difference, with foster parents scoring higher (M = 131.87, SD = 16.98) than children (M = 120.72, SD = 37.01), $t(190) = -2.68, p = .008$. This difference could indicate that foster parents perceive themselves as more affectionate and caring than what is directly experienced by children, perhaps reflecting differences in emotional expectations or needs.

For the "Integration – Being Part of a Group; Acceptance" scale, the analysis showed that foster parents scored significantly higher (M = 37.6, SD = 7.50) than children (M = 31.69, SD = 11.55), $t(190) = 4.2, p < .001$. This may reflect a divergence in feelings of social inclusion, suggesting that foster parents believe they offer strong group acceptance, while children may still feel somewhat on the periphery within the family or peer context.

On the "Affiliating, Being Part of a Birth Family" scale, no significant difference was observed between children (M = 40.52, SD = 32.89) and foster parents (M = 43.16, SD = 23.69), $t(190) = -0.63, p = .52$. The alignment in scores suggests a shared perception of birth family affiliation, indicating this dimension may hold similar importance and interpretation across both groups.

A significant difference was observed on the "Developing Skills" scale, where foster parents scored higher (M = 44.27, SD = 4.91) than children (M = 39.01, SD = 12.02), $t(190) = -3.97, p < .001$. This suggests that while foster parents may feel they are adequately supporting skill development, children may not perceive the same level of support, indicating an area for potential improvement in fostering skill-related opportunities.

Lastly, the "Thinking, Studying, Talents" scale showed no significant difference between children (M = 46.92, SD = 14.34) and foster parents (M = 48.71, SD = 9.24), $t(190) = 1.02, p = .3$.

¹ The table presents t-test results comparing children and foster parents across measured scales, highlighting significant differences in mean scores for selected dimensions.

This consistency implies that both groups may have a similar view of the intellectual or talent-based support provided, suggesting alignment in this aspect of the foster care experience.

These findings highlight key areas where perceptions diverge between children and foster parents, offering valuable insight into the complexities of meeting diverse needs within foster family settings. Identifying and addressing these differences can help refine care practices and improve the quality of support provided across both foundational and developmental dimensions.

Conclusions

The evaluation of the reliability of the developed methodology for assessing childcare quality reveals strong reliability in the Questionnaire for Children and comparatively lower reliability in the Questionnaire for Foster Parents. This finding aligns with the conclusions of Feigenbaum (1951) [5] and is further supported by Stefanov, Radev, Burov, Stancheva, and Vodenicharov (2004) [6], which suggest that quality is largely determined by the care recipient, while the caregiver's role is to create conditions that meet the quality expectations of the recipient. Considering Levesque and McDougall's theory [7], which posits that the quality of social services and satisfaction are distinct yet causally linked constructs—where service quality influences satisfaction—these findings highlight the critical need to evaluate both perceived quality and satisfaction from the care recipient's perspective. Assessing these perspectives provides crucial insights into the overall quality and effectiveness of care provided in foster settings, offering a robust framework for continuous improvement in addressing the needs and expectations of children in foster care.

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