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Perceived Living Conditions of Young People in Secure Residential Care: Psychometric Properties of the Best Interest of the Child − Self-Report Questionnaire (BIC-S)

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Abstract The Best Interest of the Child − Self-report questionnaire (BIC-S) is designed as a tool to ensure young people in secure residential care have a voice about their living environment. The primary aim of this study was to determine the psychometric properties of the BIC-S. Second, we wanted to map the experiences of young people with their current residential living environment. Therefore, both quantitative and qualitative methods were used to assess the experiences of young people with the BIC-S instrument in this cross-sectional study. Based on a sample of 74 young people staying in secure residential care in the Netherlands (2015), we explored the construct validity and reliability of the BIC-S through a Mokken Scale Analysis. The sample consisted of 38 boys and 36 girls (mean age 15.5). After evaluating the psychometric properties of the instrument, we focused on the experiences of young people with their current residential living environment. The results show that eleven out of the fourteen BIC-S conditions form a moderate scale to measure how young people perceive the quality of their living environment (H = .40; Rho = .86). With regard to the residential environment, the participants often raise issues which relate to personal safety, to activities within the institute, or to the relationship they have with care professionals. The results indicate that the BIC-S has the potential to serve as an instrument for young people to voice opinions on their living environment while in residential care.

Keywords Construct validity · Self-report questionnaire · Best interest of the child · Secure residential youth care · Mokken scale analysis

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1 Introduction

> Sometimes we need to show a little more trust in one another. I think the staff members are too careful and that makes it impossible for the child to gain trust, because they [staff] are too afraid the child will make a mistake, like a relapse in using drugs, while making mistakes is part of the learning process.
>
> (Joey [fictitious name], 17 years old, this study)

Since the Netherlands ratified the United Nations Convention on the Rights of the Child (CRC) in 1995, the Dutch government has been obliged to take children's rights as stated in the CRC into account. This means that every young person living (for however long) in a care facility supported by the government is entitled to protection, provision and participation rights. Therefore, when ensuring young people's best interests in secure residential care, one must respect their rights to express their views freely, and 'due weight (should be) given to said views in all matters affecting' them (UN Committee on the Rights of the Child 2013, p. 11).

Listening to young people's views helps to include them in 'social processes of their community and society' (Committee on the Rights of the Child 2009, p. 8). Listening to young people in care and giving due weight to their views may also be related to better decisions and more tailored services thereby supporting their psychosocial development (Vis et al. 2011).

Well-made decisions and tailored services are especially important within the field of secure residential care, considering, for instance, that the young people in these facilities often have emotional and/or behavioural problems and have to deal with a history of various aversive experiences (e.g., child abuse, previous care interventions and justice involvement) prior to their current placement in care (Harder 2011; Vermaes et al. 2014). The services offered in Dutch secure residential facilities are aimed at the development and rehabilitation of young people in the light of the children's rights as formulated by the CRC.

Despite this focus on doing what is in the best interest of the child, it remains challenging to achieve and retain positive outcomes during and after the stay of children and young people in secure residential care (Harder 2011; Lambie and Randell 2013; Lipsey 2009). Therefore, it is important better to understand current practices, and subsequently to implement 'what works for whom' principles in residential care facilities (Lipsey 2009; Van der Helm et al. 2009).

1.1 Residential Care Living Environment

In the Netherlands, young people between the age of 0 to 18[1] receive help provided by the Dutch child and youth care system, including social care, child protection services, mental health care, and care for young people with mild mental challenges. It is estimated that over 350.000 young people receive help provided by these services (Knorth et al. 2016), of which 11 to 14% stay in residential youth care (Knorth 2005).

[1] In some cases young people up to 23 years old are able to use these services.

Recent research has increasingly focused on the 'ingredients' of effective care and treatment which help better treatment outcomes (De Swart et al. 2012; Evenboer 2015; Harder 2011). One of the ingredients considered as important is the living environment of the young people in residential care (Harder and Knorth 2015). Accordingly, when young people are in a supportive and safe living environment which embodies therapeutic principles (Lipsey 2009), this could essentially contribute to better treatment outcomes (Heynen 2015; Schubert et al. 2012; Van der Helm et al. 2011).

There are several instruments available to monitor the quality of the living environment (Lange 2009; Scholte 2000). Some of these have been specifically developed for secure residential care facilities (Van der Helm 2011), and assess a young person's perspective on his/her living environment, i.e. the characteristics of the perceived social climate in the group (cf. Leipoldt et al. 2016; Van der Helm 2011). For instance, in a study by Van der Helm (2011), the Prison Group Climate Inventory (PGCI) was developed to measure the living group climate quality for adolescents staying in Dutch juvenile justice facilities. This instrument (now called: GCI) has been used in several studies on the effectiveness of secure residential care (Van der Helm 2011; Heynen 2015, Strijbosch et al. 2014). Another example of an instrument to monitor the perceived social climate in residential care facilities is the revised version of the Community Oriented Programs Evironment Scale (COPES) (Leipoldt et al. 2016).

Although pivotal the living environment encompasses more aspects than the social climate of the residential group. In addition, it has been underlined to include the young person's subjective perspectives of the living conditions when assessing his/her wellbeing while being in care (for instance, Barendregt et al. 2015; Bradshaw et al. 2013; Clery et al. 2014; Main and Bradshaw 2012). The use of subjective perspectives as (part of) a monitoring system enables young people having a say in articulating those elements that matter to their own well-being (UNICEF Office of Research 2013).

1.2 Best Interest of the Child − Self-Report Questionnaire (BIC-S)

Participation of young people in decision-making procedures that affect their living situation is a complex task, particularly when these decisions impact current or future living circumstances. Central to this is the question whether, and how, young people can be involved in these decisions. Co-responsibility in such decisions is regarded to increase chances of success (Vis et al. 2011).

Against this background, we constructed the Best Interest of the Child − Self-report questionnaire (BIC-S) (Ten Brummelaar et al. 2014). In close cooperation with young people staying in secure residential care and care professionals, we designed a tool which could serve as a suitable vehicle for assessment and shared decision-making in the field of youth care (Ten Brummelaar et al. 2014). The BIC-S was derived from the Best Interest of the Child − Questionnaire (BIC-Q) (Kalverboer and Zijlstra 2006). Whereas the BIC-Q was designed for professionals in a legal and/or care context to assess the perceived quality of the current and potentially alternative care environment of young people they are professionally involved with (Kalverboer and Zijlstra 2006; Zijlstra 2012), the BIC-S has been designed as a tool to ensure young people a voice regarding decisions in legal and care areas. The instrument was developed from the view that, in addition to care professionals, young people

themselves should be able to give their opinion about their current and future living conditions. The aim of the questionnaire is to support complex professional assessments in decision-making procedures, whereby the systematized view of the young person can be taken into account. Next to this, the BIC-S is designed to get a clear picture for both professionals and young people of where the risk and protective factors within a rearing environment lay. Moreover, the questionnaire can help to bring insight in where the differences in vision between the professional and young person lay, an how to address these differences.

1.3 Aim of this Study

Because the BIC-S has not yet been examined for its psychometric properties, the instrument is currently not applicable to everyday clinical practice. The aim of this paper is twofold. First, we examine the construct validity and reliability of the BIC-S using a Mokken Scale Analysis (MSA). Second, we will show how young people experience their current institutional living environment. By doing so, we will enlarge our insight into whether, and to what extent, the BIC-S is suitable as an instrument for young people to express their views freely about their current living environment (cf. Vis et al. 2011), and what implications this might have for research and practice.

2 Method

In 2014 we reported on the participatory development process of the Best Interest of the Child – Self-report questionnaire (BIC-S) (Ten Brummelaar et al. 2014). One of our recommendations back then, was to investigate the psychometric properties of the BIC-S questionnaire and, if assessed as adequate, to examine the experiences of young people with their residential living environment. Therefore, through this cross-sectional study we explored the construct validity and reliability of the BIC-S by performing a Mokken Scale Analysis (MSA) on a sample of 74 young people staying in secure residential care. In addition, we analysed the written comments in the open spaces of the BIC-S.

2.1 Setting

The study was performed at a secure residential care facility, located in the northern Netherlands. The University of Groningen has a long-term partnership with this facility, among other things because of the population of juveniles to whom it offers treatment and the openness for research and co-operation. The facility offers coercive treatment for both boys and girls up to age 23. Young people can only be placed in a secure residential care facility based on a court order. The type of treatment offered in such facilities is regarded as the most intensive type of residential child and youth care. Most young people have to be supervised when moving around within the facility and when leaving the facility (Harder 2011).

The facility has two main sites: one juvenile justice facility (JJF) and one secure residential treatment centre (RTC). The young people are admitted to the facility

following either a civil or criminal sanction. Our study was conducted at the secure residential treatment centre.

The RTC has room for 108 young people between 12 to 23 years of age. The main reason for admission to the centre is because their development might be seriously disrupted, either by their own behaviour and/or the environment they live in. Within the facility the focus is on treatment and education. The facility operates according to the principles of the social competency model (Durrant 1993; Slot and Spanjaard 2009). It has three different units, ranging from open to closed care. Each residential group houses eight to twelve young people.

2.2 Participants

A total of 74 young people participated in the study (see Table 1). We used a convenience sample based on the young person's willingness to participate. The sample, representing 69% of the inhabitants at the time of the data collection, consisted of 38 boys and 36 girls. The young people were aged between 11 and 22 (mean age 15.5; *SD* = 2.04).

2.3 BIC-S Instrument

The BIC-S is derived from the Best Interest of the Child-Questionnaire (abbreviated as: BIC-Q) (Kalverboer et al. 2012; Kalverboer and Zijlstra 2006; Zijlstra 2012). The BIC-S is designed as the self-report version of the BIC-Q. Both BIC-S and BIC-Q are derived from the BIC model, which encompasses fourteen childrearing conditions for the optimal development of children and young people, related to the key principles of the United Nations CRC (Kalverboer and Zijlstra 2006; Zijlstra 2012). The theoretical model focuses on protective factors in the childcare and social environments that are of influence on the young person's development (for further information about the BIC-model, we refer to Zijlstra 2012). The psychometric properties of the BIC-Q were tested in previous studies in different study populations and were found to be adequate (Kalverboer et al. 2012; Zevulun et al. 2015; Zijlstra et al. 2013).

Identical to the BIC-Q, the BIC-S instrument consists of fourteen living and care conditions applicable within and outside the young inhabitants' residential group. Table 2 presents the fourteen BIC-Q and BIC-S conditions for the childcare and living environment, respectively.

In total, the BIC-S consists of 41 questions: 27 sub-questions related to a specific living condition, and fourteen main questions regarding living and care conditions in general. The scoring categories for the sub-questions are: 'Yes', 'No', 'I don't know', and 'Something else, namely…'. The scoring categories for the main questions are: Unsatisfactory (0), Moderate (1), Satisfactory (2), and Good (3). In addition, the questionnaire consists of open-ended questions enabling the young people to specify their views.

Because the Instrumentation Service of the University of Groningen has developed a stand-alone version of the BIC-S, it is possible to complete the BIC-S on a computer (without using the internet). This feature is especially desirable in the secure residential

Table 1 Characteristics of participating young people ($N = 74$)

Characteristic	Value variable
Gender (males)	38 (51.4%)
Age in years	
11–15 years	37
16–22 years	37
Mean length of stay[a]	
< 3 months	38
≥ 3 months	35
Contact with parents	
With both parents	51 (68.9%)
Only with father	4 (5.4%)
Only with mother	14 (18.9%)
No contact with parents	5 (6.8%)
Education	
Practice Education	12 (16.3%)
Vocational Education	31 (41.9%)
Higher General Secondary Education	8 (10.8%)
Intermediate Vocational Education	2 (2.7%)
Other	21 (28.4%)
Expected future living environment	
At home with one or both parents	37 (49.3%)
Living in a foster family	1 (1.4%)
Living in a residential setting	19 (25.7%)
Living independently	17 (23.0%)

The length of stay in the facility was missing for one young person

[a] $n = 73$

care domain, given that young people are often banned from using the internet in these settings. During the study, we used this stand-alone version of the BIC-S. A screenshot of this version is displayed in Fig. 1.

2.4 Procedure

Data Collection The study was conducted during the period January 2015 to August 2015. Once the research proposal was approved by the RTC board, we met with the managing director of the facility's internal school to make practical arrangements for data collection. We then informed the teachers at the school during a team meeting about the research project and discussed final research choices, such as ways to recruit young people from their classrooms. During the summer, our contact continued with the managing director of the facility's residential groups. Practical arrangements for data collection were made with the residential group staff.

Table 2 BIC-Q and BIC-S conditions

Childcare conditions (BIC-Q)	Living environment conditions (BIC-S)
Family: current situation	Upbringing and care
(1) Adequate physical care	(1) Care: food, drink, clothing, possessions
(2) Safe direct physical environment	(2) Safety: in and around the living group
(3) Affective atmosphere	(3) Contact with your caregiver
(4) Supportive, flexible childrearing structure	(4) Structure and rules
(5) Adequate role modelling by parents	(5) Role modelling by caregivers
(6) Interest	(6) Interest in who you are
Family: future and past	
(7) Continuity in upbringing conditions	(7) Upbringing and care: history and future
Society: current situation	Surroundings: neighbourhood and society
(8) Safe wider physical environment	(8) Safe surroundings
(9) Respect	(9) Respect
(10) Social network	(10) Support within your network
(11) Education	(11) School and spare time
(12) Contact with peers	(12) Friends
(13) Adequate role models in society	(13) Role modelling by others
Society: future and past	
(14) Stability in life circumstances	(14) Stability in life course

Data was collected in two stages. Because the first data collection led to a total of 47 completed questionnaires, we chose to collect more data a second time. The first data were collected in April 2015, the second in July/August 2015. In April 2015, the researchers (MtB, PA, MK, MS[2]) visited the classrooms and explained the study to the young people. In July/August, the vacation period had already begun, so instead of visiting the young people in their classes at school, the researchers approached them in the residential groups.

The researchers explained to the young people that participation in the research was voluntary, and that the data would not be traceable to individual participants. The young people could also end their participation at any time if they chose to. The researchers took the participating young people to a separate room near the school classes/or residential groups to be interviewed.

Research Protocol Before the young people began completing the BIC-S questionnaire, the researchers took the time to explain the research to ensure informed consent. The young people completed the questions on background characteristics along with the researchers. They were then allowed to complete the questionnaire alone. If a young person seemed to have trouble with reading or writing, they completed the questionnaire along with the researchers. The researchers noted how long it took to complete the questionnaire fully. Young people (n = 68) took on average 13.5 min to complete the BIC-S questionnaire (range 5 to 30 min). The researchers also observed how the young

[2] MS was part of the research team, but is not an author of this paper

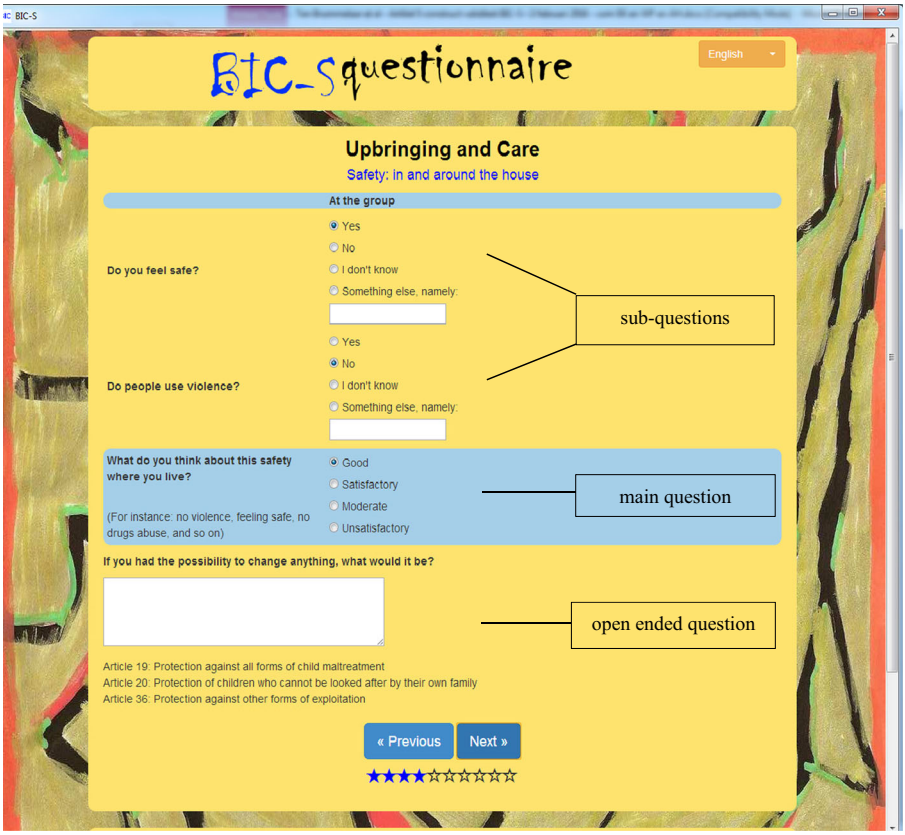

Fig. 1 Example of the 'Safety: in and around the house' living and care condition

person completed the questionnaire. The researchers observed that over 80% of the young people completed the questionnaire without any difficulty. Some participants did seem to have difficulties due to language or their level of ability. Also, four young people did not seem motivated prior to the research.

The researchers and the a young person then talked about their experience of completing the questionnaire. The following topics were discussed: 1) whether they understood the questions; 2) if the questionnaire's output reflected their experience of the living environment at the facility; 3) if they could suggest changes to the current questionnaire, and 4) if the questionnaire was experienced as 'helpful' for voicing their opinions of their current living environment on a scale from zero to ten.

The young people (n = 67) rated the questionnaire on helpfulness for voicing their opinions on their current living environment on a scale of one to ten, resulting in a mean rating of M = 7.74 (SD = 1.58). Ten reported that they found the questionnaire 'too general' or 'boring', while 28 others found the questionnaire to be 'clear and complete'. Eight young people also reported that they had enjoyed expressing their views. One young person expressed that he or she would have enjoyed a more 'one-to-one' conversation rather than completing a questionnaire. Over one-third (n = 27) of the young people suggested changes to the current BIC-S questionnaire, such as more in-

depth questions and differentiation based on the individual's level of ability or the specific living situation to be evaluated.

2.5 Data Analysis

Construct Validity and Reliability MSA is based on the principles of Item Response Theory (IRT). Generally, IRT is used for instruments measuring people's mental abilities, personality traits or attitudes (Sijtsma and Molenaar 2002; Van Schuur 2003). MSA produces a scale where 'items' and 'persons' are ordered together. In the context of the BIC-S the 'items' are the fourteen living conditions. The living conditions can each be scored from 0 to 3. The 'persons' are the young people who participated in the study. The order of the mean items scores (living conditions) is used to estimate the order of the items. The sum scores for each young person on the items are used to estimate the ordering of the young person's position on the scale.

Because the scoring categories for the living conditions range from 0 to 3, an MSA for polytomous items was applied. We used the package MSP 5.0. The Mokken model is based on the following assumptions:

- The presence of an unidimensional latent trait: in our case, the existence of the 'quality of living environment' construct.
- Stochastic independence. A young person's responses to each of the fourteen conditions are independent and not influenced by their scores on the other conditions, given their position on the latent trait.
- Monotone non-decreasing item response functions. The responses on the living conditions are a non-decreasing function of the latent trait. For the BIC-S, consider two different young people, Joey, who has a high quality living environment, and Samantha, who has a low quality one. The probability that Joey will provide a positive response to a living condition, for example 'respect', is greater than the probability that Samantha will.
- Non-intersection of response functions for all items. In our case this means that if a certain living condition (for example 'respect') is more difficult to achieve than another one (for example, 'structure and rules'), the probability of a positive response to 'structure and rules' is greater than the probability of a positive response to 'respect' for all young people on the latent trait.

We started with the default search procedure in MSP in order to find which conditions form a reliable scale. Since MSP does not permit missing values, four cases with missing values on 'school and spare time' were excluded from this analysis. Since the conditions 'school and spare time', 'friends' and 'role modelling by others' were excluded by the search procedure from the final scale, we performed MSA using the selected conditions and including all 74 participants. We used Scalability Coefficient H to assess the strength of the final scale. A value of $H < 0.3$ indicates a poor scale; a value of $0.30 \leq H < 0.40$ is regarded as a weak scale; a value of $0.40 \leq H < 0.50$ indicates a moderate scale; and a value of $0.50 \leq H < 1.00$ is regarded as a strong scale.

In addition, we used criteria values available in MSP known as 'crit value' to determine in greater detail which conditions were questionable under monotonous

and non-intersectional item response function assumptions. Conditions with crit values below 40 are satisfactory; a crit value between 40 and 80 is questionable; a value ≥80 indicates a violation of assumptions (Sijtsma and Molenaar 2002). Once a satisfactory scale was obtained, i.e. all the items met the requirements, we used the reliability coefficient (Rho) to estimate the reliability of the final scale.

We then performed subgroup analyses for the final scale with regard to age, gender and length of stay, in order to explore whether the Mokken scale assumptions hold for all subgroups, and whether the same ordering of items holds for all subgroups.

Experiences of Current Living Environment To evaluate how young people experience their current living environment within the residential centre in our sample, we estimated the positions of the young adults on the scale, and compared different subgroups based on age, gender and length of stay using independent sample t-tests (quantitative data). With the qualitative data we analysed the comments young people wrote down at the open spaces of the BIC-S questionnaire. In order to analyse the open-ended BIC-S questions, we used Atlas ti, version 7. First we applied open coding to the written information (inductive coding). Hereafter, we grouped the codes under the 14 environmental conditions of the BIC-model.

3 Results

3.1 Construct Validity and Reliability

Final Scale Through a default search procedure in MSP three conditions were excluded from the final scale, namely the conditions 'school and spare time', 'friends', and 'role modelling by others'. These three conditions were excluded by the search procedure from the final scale, because they did not meet the assumption of the Mokken model. The final scale included eleven conditions regarding the living environment of young people in the residential facility (see Table 3). These eleven living conditions form a moderate scale ($H = .40$) to measure how young people perceive the quality of their living environment. A crit value of 80 for monotonicity was found for the 'safe surroundings' condition, indicating that the monotonicity for this item might be violated. All other items had crit values less than 80.

Focusing on the ranking of the BIC-S childcare conditions, we see that the 'stability in life course' living condition has the lowest mean score. At the other end, the 'safe surroundings' condition has the highest mean score. This means that a high score on the 'safe surroundings' condition is easier to achieve than for the 'stability in life course' condition.

Subgroup Analysis We used the final scale (eleven conditions) regarding the living environment of young people in the residential facility to perform subgroup analyses. We were able to use all 74 cases for the subgroup analyses on age and gender. A total of 73 cases remained available for further analysis for the subgroup analysis on length of stay, due to missing values for one young person.

Table 3 Ranking of the BIC-S conditions in the living environment ($N = 74$)

Conditions in the living environment	Mean score	H-coefficient
Stability in life course (14)[a]	1.55	.34
Respect (9)	1.74	.45
Contact with your caregiver (3)	1.82	.49
Interest in who you are (6)	1.88	.37
Safety: in and around the house (2)	1.92	.41
Structure and rules (4)	2.01	.33
Adequate role modelling by your caregivers (5)	2.09	.43
Care: food, drinks, clothing, possessions (1)	2.18	.39
Support within your network (10)	2.19	.43
Upbringing and care: history and future (7)	2.20	.47
Safe surroundings (8)	2.22	.31

Final scale: H = 0.40; Rho = 0.86

[a] Numbers in brackets refer to the position of the conditions in the original BIC-S (see Table 2)

When we consider the different subgroups, Table 4 shows a weak to moderate scale for separate subgroups (age, gender and length of stay) with H-coefficients ranging from .35 to .45. With regard to the age subgroup (age group '16 to 22 years') and the gender subgroup (female), respective crit values of 117 and 187 found violations of monotonicity for the 'safe surroundings' condition.

If we consider the subgroup analyses on age, gender and length of stay, there are no reasons to assume that the scales of the subgroups differ from one another.

3.2 Experiences of Current Living Environment

Quantitative Data The perceived quality of the current care and living environment in the facility ranges from 1 to 33, with a mean score of 21.81 ($SD = 6.37$). We found no significant differences in the quality of the current care and living environment as experienced by the young people staying at the facility for the age, gender and length of

Table 4 Subgroup analyses of BIC-S conditions in the living environment ($N = 74$)

	H-coefficient
Age	
11–15 years ($n = 37$)	.40
16–22 years ($n = 37$)	.39
Gender	
Male ($n = 38$)	.45
Female ($n = 36$)	.35
Length of stay	
< 3 months ($n = 38$)	.37
≥ 3 months ($n = 35$)	.44

stay subgroups. In addition, we found 95% Confidence Intervals (CI) for the differences ranging from −4.48 to +4.68, indicating that the largest difference is smaller than 5 points (on a scale from 0 to 33). Table 5 presents the young people's perceived quality of the current care and living environment at the facility. We present the T-tests for subgroup differences and 95% confidence intervals for the differences in means between subgroups.

Qualitative Data A total of 62 young people (84%) provided written data in response to the questions about their experienced living conditions. Of these comments, most comments related to additional specifications (e.g. some/sometimes) in response to the questions. For example, to the question 'Do you have a good relationship with your caregivers?' multiple young people responded with 'with a few/ depends on who/with some'.

When we consider the first seven conditions which relate to *upbringing and care*, most comments made by young people referred to safety issues at the institute ('they should pay more attention to aggressive people').

> I do feel safe, but it does feel different because I barely know the young people that stay on my residential group or the group care workers, so sometimes I find this difficult.
>
> (young person, 16 years old)

Other comments referred to the contact the young people had with their group care workers. The young people explained that there were significant differences between group care workers. Some preferred a more coordinated approach. Young people explained that they would value more understanding of their situation and that professionals should listen to them more: 'That the 'caregivers' should stand in our shoes and that they understand us.' They mentioned that they would like the professionals to treat

Table 5 Subgroup differences in perceived quality of the living environment at the facility

	M	SD	T	95% Confidence interval (CI)
Age			t(72) = −1.171, (n.s.)	(−1.22; 4.68)
11–15 years (n = 37)	22.68	6.54		
16–22 years (n = 37)	20.95	6.16		
Gender			t(72) = −1.029, (n.s.)	(−4.48; 1.43)
Male (n = 38)	22.55	6.36		
Female (n = 36)	21.03	6.38		
Length of stay			t(71) = −.753, (n.s)	(−4.15; 1.88)
< 3 months (n = 38)	21.21	5.96		
≥ 3 months (n = 35)	22.34	6.87		

n.s. non-significant

them with greater respect and that they would like professionals to take their opinions more seriously. As one young person put it:

> I think group care workers should listen more to what young people want, because group care workers often think they know what's best for them [young people]. But that's not true […].
>
> (young person, 16 years old)

Furthermore, almost a quarter of the interviewees stated that they would like to have greater responsibility and/or freedom of movement during their stay in care. One of them said:

> More responsibility, for instance, with cooking and cleaning and the amount a young person eats. Of course, if something is up, the group care workers can interfere, but if we do not get the chance to be independent, that's also a pity.
>
> (young person, 14 years old)

Focusing on the seven conditions that relate to *surroundings: neighbourhood and society*, most comments were related to privacy/non-discrimination. Half of them stated that they wanted to be treated with greater respect by either their group care workers, or other young people staying at the institute. As one young person commented: 'if you come out of the closet, they will harass you for it'. Young people also wrote additional information about the issue of discrimination, such as a girl who stated:

> Sometimes, not always with me, but for others, for instance with age, some are given more leeway than others. Or if there is a boy with a darker skin colour carrying a bag, then it's a 'bag of drugs', but with white kids, it's just a bag.
>
> (young person, 16 years old)

Also, comments were made related to young people's activities and provisions. They asked for more and more varied activities, such as sport facilities or computer access: 'More extracurricular activities.'

4 Discussion

Including the young person's views in decision-making that affects their current and future living situation is a necessary, but complex task. A recent review study on self-report measures used with children in (mental) health care shows that despite an increased focus on obtaining information directly from child clients, "…more research

is needed on clinical approaches that directly capture and address the unique experiences of children with mental illness." (Greco et al. 2016, p. 240). The use of such subjective perspectives enables young people to express those elements that matter to their own life and well-being (UNICEF Office of Research 2013), and with this, improves our societies (Casas 2016).

With this study we aimed to explore the validity and reliability of the BIC-S by performing a Mokken Scale Analysis. We explored its construct validity and reliability on a group of 74 young people in secure residential care in the northern Netherlands. In addition, we wanted to present how young people experience their current living environment within a secure residential youth care facility.

To be able to measure the young people's views on the quality of their residential living environment, the psychometric properties of the BIC-S questionnaire need to be sound. Although the sample size was not large, we found that a total of eleven childcare conditions formed a moderate scale (H = .40) for measuring the overall quality of a young person's living environment while in secure residential care. A crit value of 80 suggested that the assumption of monotonicity was violated for 'safe surroundings'. Nevertheless, we decided to include this item in the scale because it has a sufficiently high H-coefficient. The 'school and spare time', 'friends' and 'role modelling by others' conditions were excluded from the final scale. These three conditions all concern aspects of the 'broader' living environment. There were no indications that the ordering of the items was different for subgroups, indicating that we can use the instrument to compare the subgroups with respect to the BIC-S scores. There were no significant differences found between subgroups.

Some young people seemed to experience difficulties with answering questions which relate to conditions at the institute, as well as to conditions back home (or at an alternative care environment). For many young people in secure residential care, especially for those with the 'privilege' to go on care leave, the 'inside world' within the facility and the 'outside world' are often intertwined. Some youths therefore indicated that they found it complicated to answer questions related to their surroundings: did we mean the environment at home, in the neighbourhood where the facility is located, within the walls of the facility, or at the group level? These questions make us think that we should adapt the questionnaire further to the living environment that specifically applies to the young person at the time of questioning.

When we consider the qualitative data participants provided in response to the questions about their experienced living environment, many offered one or more clarifications. This is in line with our previous study (Ten Brummelaar et al. 2014) in which we found that young people preferred extra space for participants to tell their own personal story. If we consider the material closely, many comments included the specification 'some/sometimes/a couple' to explain why they made particular choices in their answers. Young people seemed to prefer the opportunity to express degrees or 'hierarchy' about how something occurred or was experienced in their living environment, rather than a simple 'yes' or 'no' (cf. Charles and Haines 2014).

Looking at the content of the written material, most comments related either to issues of personal safety and respect for an individual's integrity, more varied activities and the quality of the services and facilities within the institute, or the relationship with care professionals, targeting collaboration and understanding of the young person's

perspective. These domains are broadly in line with the three key principles (the three P's) of the Convention on the Rights of the Child, namely provision (of maintenance, housing, health and education), protection (from abuse, exploitation and harm) and participation (the right to be heard, express views freely, et cetera) (Cousins and Milner 2006).

If we focus on the experiences of young people with completing the questionnaire, there were differences. Some struggled to complete the questionnaire, while for others it seemed effortless. The differences were also displayed in the time it took for young people to complete the questionnaire (5 to 30 min) and the helpfulness score they awarded to the questionnaire (1 to 10). In addition to a mean helpfulness rating of 7.74 and over one-third of the young people stating that they found the questionnaire to be clear and complete, some young people indicated that they found the questionnaire to be too easy/simple and therefore boring. The opposite was also noticed: when young people struggled too much with the questionnaire, they mostly judged the questionnaire to be 'boring'. These results could imply that the questionnaire could benefit from some further differentiation in the formulation of or instructions regarding specific questions (cf. Casas et al. 2012; Charles and Haines 2014).

4.1 Strengths and Limitations

The BIC-S was originally designed to give a voice to young people about their current and future living environment, to support assessment and decision-making in legal and care areas. Our current study used both qualitative and quantitative methods to assess the experiences of young people with the BIC-S instrument. We focused in this study on the current situation within the residential facility. We did so for two reasons. First, we intended to minimize the demands we made on the participants. We therefore asked the young people to complete the BIC-S 'only' for their present living environment at the facility. Second, the current experiences of young people and the scores they assigned to the living conditions at the facility are more suitable for exploring the validity of the instrument than their expected future living environment. We are aware that this is nonetheless a part of the picture that the questionnaire is intended to capture. Moreover, we used a convenience sample, which makes it difficult to investigate the impact of non-response. We recommend further research into the psychometric properties of the questionnaire because the sample size of 74 is rather small for MSA. Since the results are in line with BIC-Q results from other studies, we believe we can conclude that the BIC-S has potential to serve as an instrument for young people to voice opinions on their living environment while staying in residential care.

4.2 Further Research

Our previous study (Ten Brummelaar et al. 2014) already made '[…] clear that length, layout and distinctness were essential elements to attract the attention of the young person user' (p. 579). However, the analysis from our current observations and one-to-one conversations, combined with the BIC-S data, point to further adaptations to optimize the BIC-S as an assessment tool in secure and non-secure residential youth care.

It would also be interesting to consider young people's perceptions of their experiences of their secure residential care placement using the BIC-S questionnaire, in addition using the BIC-Q to record the perspectives of care professionals. Through this, it would be informative to see to what extent these two sets of perspectives on the young people's living environment correspond.

Furthermore, when a young person leaves residential care, it is important that he or she returns to a socio-pedagogical environment of good quality, thereby enhancing the 'sustainability' of the treatment outcomes achieved (Kalverboer et al. 2012). Mapping young people's perceptions and wishes regarding their post-residential living conditions and comparing these with their actual experiences after leaving care could yield valuable feedback for the professionals in charge of preparing and supervising these youths' transition to post-residential circumstances (cf. Stein and Munro 2008). Finally, despite the increased knowledge on 'what works' in residential care, it is still difficult to link specific care process content to outcomes (Harder and Knorth 2015). It would therefore be interesting to see if there is a relationship between the experienced living environment in the facility on the one hand, and the young person's development in the short and long term on the other (see also Heynen 2015).

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