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Development and initial validation of a camper-counselor relationship scale

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ABSTRACT



Residential summer camps, one of the most popular organized programs for children in the United States, may promote several aspects of positive youth development. These positive outcomes may stem in part from camp counselors, who often forge close relationships with youth, but few studies have examined these relationships. To facilitate this research, we developed a camper-reported camper-counselor relationship quality scale. In Study 1, scale items were created and/or adapted and evaluated through expert ratings and cognitive interviews. Exploratory factor analyses using data from 318 campers (ages 7–15) from Jewish overnight camps supported the hypothesized three-factor structure. In Study 2, confirmatory factor analyses of data from a second group of 324 campers from similar camps confirmed the three-factor structure and showed preliminary evidence of concurrent validity; camper Jewish identity scores and age were positively associated with camper-counselor relationship quality. Implications for practice and continued research and validation are discussed.

Residential summer camps are an important developmental context for youth in the United States. Of the more than 14,000 camps serving around 14 million youth each summer, the majority are residential (American Camp Association, 2017). Accordingly, millions of campers spend all day and all night, often for weeks at a time, in this developmental context (Henderson, 2018). Studies of summer camps have consistently found that campers demonstrate significant positive developmental gains over the course of their time at camp, including communication skills, teamwork, self-esteem, social skills, skill building, spirituality, and independence (Bialeschki et al., 2007; Thurber et al., 2007).


Less research, however, has focused on which specific elements of the summer camp context that may lead to these outcomes. Researchers have theorized that one main contributor is relationships that campers form with their counselors (Akiva & Li, 2016; Snider & Farmer, 2016; Thurber et al., 2007). Indeed, camper-counselor relationships may be a form of “developmental relationships” (Li & Julian, 2012; Pekel et al., 2018), defined as close connections between youth and adults marked by expressing care, sharing power, challenging growth, providing support, and expanding

possibilities. These relationships are hypothesized to promote positive outcomes in youth development settings (e.g., mentoring programs and classrooms), and some research supports that idea that these developmental relationships are an active ingredient in the development of these outcomes (Li & Julian, 2012; Pekel et al., 2018). Few studies, however, have focused specifically on the camper-counselor relationship. To facilitate that research, the availability of measurement instruments specific to this context is essential. In this paper, we describe the development and initial validation of a camper-reported scale of camper-counselor relationship quality designed for campers ages 7 to 15 (i.e., the typical age range of children attending overnight summer camps; Thurber et al., 2007).

We aimed to develop a measure that would be appropriate for all types of overnight summer camps. In this initial stage of the research, however, we gathered data from campers at overnight camps with an explicit Jewish mission (Arian, 2016). Although not representative of all overnight camps, Jewish camps play a central role in the lives of many North American youth (Cohen, 2017). An estimated 30 to 35% of Jewish-American children attend Jewish camp

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at some point during their camp-eligible years; this proportion of camp attendance is higher than the general U.S. population of children (Arian, 2016). There are about 160 Jewish overnight camps in North America with about 80,000 campers and 11,000 mostly college-aged staff members attending each summer (Arian, 2016; Cohen, 2017; Cohen et al., 2011).

The need to measure camper-counselor relationship quality

Camper-counselor relationships form in a specific context distinct from other settings (Roark et al., 2010). Overnight summer camp is typically a completely immersive experience in which campers and counselors spend the full day, every day, with each other for weeks or months at a time. The relationships that campers form with their counselors can play a role in campers' ability to navigate conflicts and new experiences. Counselors and campers decide what they want out of the relationship, how much they are willing to invest, and how important this relationship is to them (Rubin et al., 2018). Counselors may either become close with campers, taking on multiple roles (including quasi-parental roles) to help them navigate different experiences, or, counselors might be less interested in forming close connections with campers (Akiva & Li, 2016). Although other measures of youth-adult relationships exist, none capture all of the essential dimensions (i.e., closeness, intentionality, and social strain) of the camper-counselor dynamic. In addition, several other youth-adult measures (mentioned below) only capture the adult perspective. Youth voice is missing in much of the youth-adult relationship work more broadly (Lerner & Tolan, 2016). As the field aims to promote positive youth development, it is essential that scholars value the ideas and perceptions of youth by viewing youth as collaborators with strengths and therefore, create youth self-report measures.

One frequently studied youth-adult relationship is between teachers and students. Researchers studying these relationships often use the Student-Teacher Relationship Scale (STRS; Pianta, 2001), which includes dimensions of closeness, conflict, and dependency. Despite the many strengths and widespread use of this scale, there are limitations to its potential adaptation to camper-counselor relationships. First, the STRS scale only measures teacher perception of the relationship, and thus does not capture the teacher intentionality. Second, school settings differ from camp settings in many ways. For example,

camps are recreational, usually voluntary for youth to attend, and there is often a less hierarchical relational tone between campers and counselors as compared to students and teachers.

Mentoring relationships are another frequently studied youth-adult relationship. The quality of these relationships has often been measured using the Strength of Relationship (SoR) scales (mentor and youth; Rhodes et al., 2017), and there is considerable evidence for the validity of this scale in many settings. Like student-teacher relationship scales, however, mentor scales do not capture components of the camper-counselor relationship (e.g., intentionality). In addition, because these scales were constructed for use with one-on-one mentoring dyads, they do not measure differential preference or treatment (i.e., an important part of the social strain dimension) that may exist within a broader context of youth, such as when counselors are responsible for groups of campers.

Finally, another often-studied youth-adult relationship is between coaches and athletes. The Coach Athlete Relationship Questionnaire (CART-Q) is the predominant measure used to study this relationship (Jowett & Ntoumanis, 2004). The CART-Q was developed and validated with athletes ages 16 and older, and it measures relationship quality using three positive dimensions (i.e., closeness, commitment, and complementarity). In this scale, closeness refers to how much the athlete and coach trust, respect, and appreciate the other, commitment measures coach and athlete dedication to stay in the relationship, and complementarity gauges coach and athlete cooperative actions (Jowett & Ntoumanis, 2004). Although elements of the camper-counselor relationship are similar to the coach-athlete relationship, the CART-Q does not capture all important aspects of the camper-counselor relationship. For example, the CART-Q does not measure relational authenticity or differential feelings or treatment. In addition, while the commitment dimension taps into the concept of counselor intentionality, only one item explicitly measures commitment (i.e., "I feel committed to my athlete/coach") and it does not include tangible components of how one would demonstrate or perceive commitment or intentionality.

Dimensions of camper-counselor relationship quality

Although limited research exists on the camper-counselor relationships, existing camp studies and research

on other youth-adult relationships (e.g., student-teacher and mentor-mentee) point to several salient dimensions of camper-counselor relationship formation and quality. Based on this literature, we chose three dimensions to conceptualize camper-counselor relationship quality: intentionality, closeness, and social strain.

Counselor intentionality

Adult intentionality around nurturing youth-adult relationships can positively impact the establishment of a trusting relationship and relationship quality (Hershberg et al., 2015; Jowett & Cockerill, 2003). Intentionality involves adults actively showing youth that they care and are interested in them, trying to understand youths' behaviors, being non-judgmental, initiating connections, and paying attention (Hershberg et al., 2015; Spencer et al., 2016; Spencer & Rhodes, 2014). When adults pay attention, show investment, and take initiative, youth feel cared for, heard, appreciated, and more connected to these adults (e.g., Futch Ehrlich et al., 2016). Applied to the camp setting, counselor intentionality is the deliberate effort counselors put into developing close connections with campers. In one study at a residential summer camp, campers reported stronger relationships with counselors who they felt were working hard to understand them, prioritize them, and develop a close bond with them (Rubin et al., 2018).

Given that many youth identify shared interests as central to the formation of close connections with adults (Futch Ehrlich et al., 2016; Jones & Deutsch, 2011), capitalizing on shared interests is another way in which counselors can demonstrate intentionality. To build close connections, adults can intentionally engage in conversations and activities that demonstrate youth-adult similarities and are based around youths' interests (Ahrens et al., 2011). In the summer camp context, counselors who share and capitalize on similar interests with campers can further strengthen the relationship and may find themselves gravitating toward campers to whom they are similar. Counselors can also facilitate closer connections with campers by exploring what campers enjoy and showing interest in these areas (e.g., Rubin et al., 2018). As a result, camper perception of counselor intentionality is an important dimension to measure as it likely plays a role in the quality of the camper-counselor relationship.

Closeness

Another dimension of camper-counselor relationship quality is closeness, or the extent to which campers experience warmth, affection, and open communication within the relationship (Pianta, 2001). Youth perceptions of adult warmth and affection are necessary for the foundation of a close bond and might lead youth to feel more comfortable and safer in the relationship (Futch Ehrlich et al., 2016). A key component of closeness is youth perception of open communication and authenticity within the relationship. Authenticity (i.e., representing one's inner experiences in the context of a relationship; Miller et al., 1997), is shown through adults displaying genuine affection for youth, interacting with youth as though they are peers, and demonstrating emotion through facial expressions or speech (Ahrens et al., 2011; Futch Ehrlich et al., 2016; Rubin et al., 2018). Youth report being better able to connect with adults when they feel that adults are being "real" with them, which often involves appropriate adult self-disclosure (Ahrens et al., 2011; Futch Ehrlich et al., 2016; Jones & Deutsch, 2011; Jowett & Carpenter, 2015). Closeness has not been extensively investigated in the summer camp context. In a study focusing on camper-counselor relationship formation, campers described disliking when counselors "hide" their emotions because campers can tell they are being inauthentic (Rubin et al., 2018).

Social strain

The last broad dimension of camper counselor relationship quality included in the current measure is social strain, which can involve conflict in the relationship (Pianta, 2001) or campers' feeling that their counselor does not like them or have time for them. Conflict may include harsh criticism from counselors, a lack of nurturance, or poor communication strategies (e.g., yelling). In student-teacher relationships, conflict negatively impacts students' classroom functioning (Birch & Ladd, 1996).

Differential treatment is another component of social strain that is likely part of camper-counselor relationship quality. In a recent camper-counselor relationship formation study, both counselors and campers described how youth who take up large amounts of counselor time (often due to behavioral challenges) impeded relationship quality between this counselor and other campers (Rubin et al., 2018). In addition, some campers described observing overt favoritism, even when counselors were unaware of

their differential treatment of campers. Despite its reason, differential camper treatment affects campers' ability to connect with their counselors. Accordingly, the measure we developed included campers' perceptions of social strain within the camper-counselor relationship.

Factors associated with camper-counselor relationship quality

It is also important to understand the demographic characteristics of camp counselors and campers, as individual demographic factors are often related to youth-adult relationship quality. The majority of camp counselors in the U.S. are between 18 and 25 years old (76%), identify as White (85% of staff at overnight camps) and as women (60%), and tend to be college students (ACA, 2017; Wilson, 2015). Over 50% of summer camps also hire international staff (ACA, 2017), with about 20% of staff at Jewish summer camps being international staff members (8% Israeli; Foundation for Jewish Camp, 2016). In addition, many counselors work the same camp for several years in a row (ACA, 2017).

Campers may be more inclined to form relationships with counselors who share their race and ethnicity (Hurd & Zimmerman, 2014); however, camps often have difficulty recruiting diverse staff (Colgan-Snyder, 2011). When youth of color attend a camp with few counselors who share their race or ethnicity, it is possible that they will not create as close of connections (Ditter, 2013; ACA, 2006). Although there is still an opportunity, White camp counselors have been found both to uphold hegemonic understandings of race (e.g., taking a "colorblind" approach; ignoring the racialized nature of conflicts) and to prioritize White comfort (i.e., centering the emotions of White campers and staff) at the expense of re-marginalizing campers of color (Perry, 2018). In these cases, camps are not well positioned to cultivate the development of close youth-adult relationships between counselors and youth of color that could ultimately facilitate positive youth development outcomes. Although these findings about race and ethnicity at camp come from only few studies, the broader youth-adult relationship literature has found similar impacts. For example, Black children, compared to White children, are rated by teachers as having more conflictual relationships with their teachers, beginning in early childhood, and this discrepancy remains or, unfortunately, even grows over the course of children's academic careers (Jerome et al., 2009). Similarly, some mentoring relationship

studies have found that cross-ethnic minority mentoring matches ended more frequently than ethnically-matched (White) relationships (Grossman & Rhodes, 2002; Rhodes et al., 2002).

Gender may also be related to relationship quality in nuanced ways throughout the literature on youth-adult relationships. In one American Camp Association (2006) study of 10 to 18 year-old campers attending both resident and day camps, campers who identified as girls (compared to boys) were more likely to report optimal levels of supportive relationships with camp counselors. In the student-teacher literature, it has been widely documented that female students have relationships with teachers marked by more closeness and less conflict compared to their male peers (Crosnoe et al., 2004; Hughes et al., 2001; Jerome et al., 2009; Myers & Pianta, 2008; Rudasill et al., 2010; Silver et al., 2005; Spilt et al., 2012). Studies in youth mentoring and other youth-adult relational contexts (e.g., afterschool programming) have found inconsistent results about the role gender plays in youth-adult relationship quality. Some studies have shown that girls' mentoring relationships last longer than boys' mentoring relationships (e.g., Rhodes, Lowe, Litchfield, & Walsh-Samp 2008), while in other studies, females are more likely to end relationships (e.g., Grossman & Rhodes, 2002).

Likewise, camper age may impact camper-counselor relationship quality. In another summer camp study with day and resident camps, older campers (14–18 years) more frequently reported optimal levels of supportive relationships with counselors compared to younger campers (10–13 years old; ACA, 2006). In the mentoring literature, younger adolescents have sometimes been found to be more likely to initiate and stay longer in close mentoring relationships than older adolescents (Grossman & Rhodes, 2002; Hurd & Zimmerman, 2014). However, although these relationships are more likely to form early on, youth of all ages are able to form and benefit from these close connected relationships, especially if frequent contact is maintained (Hurd & Zimmerman, 2014). One qualitative study examined how mentoring relationship processes differed from early to late adolescence (Liang et al., 2008). Middle school students tended to idealize their mentors while older adolescents (high school and college students) were more accepting of their mentors' flaws and benefited from opportunities to learn from mentors' mistakes (Liang et al., 2008). In addition, older adolescents emphasized mutuality in the mentoring relationship, wanting a sense of respect and equality, which was not present for

younger adolescents (Liang et al., 2008). Findings from these mentorship studies likely map onto camper-counselor relationship formation. Older campers are likely to notice and begin to understand the flaws and constraints their counselors are experiencing while also potentially caring more than younger campers about mutuality and authenticity.

Finally, religious identity is another demographic factor that likely plays a role in camper-counselor relationship quality, especially in a religious camp context. In a study of campers 10–18 years of age attending both resident and day camps, more campers reported optimal levels of supportive camper-counselor relationships at religiously-affiliated camps compared to campers attending independent camps (ACA, 2006). One possible explanation for this finding is that counselors and campers at religiously-affiliated camps may have more clarity about the camp's mission (ACA, 2006). If this explanation is true, in order for campers and counselors to form close bonds, they should be in alignment regarding the mission and values of the camp. At Jewish camps, Jewish education and values are central to the mission and programming of camp (Arian, 2016; Cohen, 2017). Campers who do not identify as Jewish may feel less connected to the camp overall, and therefore also less connected to counselors. In addition, as the vast majority of counselors at Jewish camps identify as Jewish, campers who do not identify as Jewish, or do not feel that Judaism is a central component of their identity, may struggle to identify with and feel the shared connection that can often facilitate the formation of close connections with counselors.

The current study

To facilitate research on the role of camper-counselor relationships in positive outcomes for youth at camp, we developed a measure of camper-counselor relationship quality (i.e., the camper-counselor relationship quality scale (CCRS)) and conducted a preliminary investigation of its validity. The current research included two sequential studies. In Study 1, we developed a camper self-report scale to assess the quality of camper-counselor relationships. This process involved generating a pool of potential items (based on a prior qualitative study about the construct of camper-counselor relationships; Rubin et al., 2018), a content validation process, and exploratory factor analysis (EFA) of data collected from campers. Based on the literature, it was hypothesized that the EFA would show three factors for the scale (intentionality, closeness, and

social strain). In Study 2, we tested the factor structure identified in Study 1 by conducting confirmatory factor analyses (CFA) using data from a second sample of campers. Based on the literature, it was hypothesized that the CFA would show the same three factors for the scale. The dimensions of closeness and social strain were hypothesized to be negatively correlated with each other. Further, closeness and intentionality were hypothesized to be positively correlated with each other. We also investigated the concurrent validity of the scale by examining the associations of the scale with camp connectedness, camper satisfaction, intent to return, and camper perceptions of their friendship skills. It was hypothesized that CCRS would be positively associated with camp connectedness, camp satisfaction, camper friendship skills scores, and intent to return to camp. In addition, we examined the associations between camper-counselor relationship quality factors and demographics including gender, camper religious identity, and camper age. It was hypothesized that identifying as a female camper, being an older camper, and having stronger Jewish identity would be associated with increased camper-counselor relationship quality.

Study 1

Measure development and initial testing

The measure development process consisted of three steps: item generation, content validation by experts, and cognitive interviews.

Item generation process

First, a list of 30 potential items were generated (see Table 1) for the scale from reviewing relationship quality measures of similar relationships (e.g., mentor-mentee relationships; student-teacher relationships). Items generated from these existing measurement scales were modified to fit the camper-counselor relationship (e.g., changing the word mentor to counselor). Second, items based on camper-counselor relationship formation research (Rubin et al., 2018) were also included. Based on theory and prior research, items were organized into three factors: intentionality, closeness, and social strain.

Content validity process

Following Rubio and colleagues' (2003) procedure, a content validation procedure was conducted to evaluate the clarity and representativeness of each potential scale item. Nine experts in the fields of child and adolescent relationship development and/or summer

Table 1. Items for content validation, organized by hypothesized factors.

Factors and items	CVI	FVI
Social strain		
This counselor often seems uninterested in me or ignores me	1	.78
* CCRS1 This counselor makes fun of me in ways I don't like	1	1
* CCRS10 This counselor yells at me or uses a mean voice	1	1
* CCRS17 This counselor criticizes me, or makes me feel bad about myself	.89	1
* CCRS22 I think that this counselor doesn't like me	1	.78
* CCRS14 This counselor is too busy to pay attention to me	1	.67
This counselor would rather spend time with other campers than with me	.78	.89
* CCRS5 When I'm with this counselor, I get the feeling he/she would rather be doing something else	.89	.89
I am not one of this counselor's favorite campers	.89	.78
This counselor is always busy taking care of other campers	.78	.78
Intentionality		
This counselor starts the conversation with me	.67	1
* CCRS2 This counselor checks in with me almost every day	1	.67
* CCRS11 This counselor hangs out with me during free time	1	1
This counselor prioritizes me or puts me first	.67	.78
* CCRS3 This counselor makes me feel special	1	.33
This counselor tries to understand me	.89	.78
* CCRS20 This counselor asks me about what I like and what my interests are	1	.78
* CCRS6 This counselor does my favorite activities with me	1	.67
Closeness		
This counselor is very important to me	1	.89
* CCRS4 I feel close to this counselor	1	1
* CCRS13 I look forward to the time I spend with this counselor	1	1
I trust this counselor	1	1
* CCRS9 This counselor and I both have fun when we're together	1	.89
I talk to this counselor about problems I'm having with friends and cabin-mates	1	.89
* CCRS21 I feel comfortable with this counselor	1	1
* CCRS8 Out of all of my counselors, this is the counselor I would go to if I had a problem	.89	.89
* CCRS16 This counselor feels like more of a friend than a counselor	.67	.89
* CCRS19 This counselor tells me things about him/herself	.67	.44
I feel like this counselor is his/her "real" self with me	.67	.89
* CCRS18 This counselor listens when I talk about a problem	1	.33

Note. *Indicates retained items.

camp evaluated the 30 items through an online survey. Experts rated items for the clarity of item wording and relevance of the item for camper-counselor relationship quality, and indicated which of the three factors the item best represented. They also provided general feedback and suggestions for items and the overall measure. Four indices were used to evaluate experts' item ratings: the content validity index, factorial validity index, clarity scores, and inter-rater agreement. Rubio and colleagues' (2003) protocol was used for all indices given that it is widely accepted and utilized for conducting content validity studies in the social sciences. Across all indices, higher index scores (i.e., closer to 1) are preferable.

The content validity index (CVI) was calculated as the proportion of expert raters who indicated that an item was representative of the construct of camper-counselor relationship quality. Representativeness was rated on a scale from 1 to 4, with 4 being the most representative. For example, if five out of nine raters chose either a 3 or 4 (rating representativeness on a scale from 1 to 4), then $CVI = .56$. For social strain items, the CVI ranged from .78 to 1.0, ($M_{CVI} = .92$); for intentionality factor, the CVI ranged from .67 to 1.0 ($M_{CVI} = .90$); and for closeness it ranged from .67

to 1.0 ($M_{CVI} = .91$). An interrater agreement (IRA) score was calculated to determine the extent to which experts were reliable in their ratings. Ratings of 0.8 or greater are preferable and suggest high reliability. The IRA is computed by dividing the number of items considered reliable (i.e., items for which $CVI = .80$ or higher) by the total number of items. For these items, the IRA was .77.

The factorial validity index (FVI) was computed as the percentage of raters who matched an item to the hypothesized factor. For example, if seven of nine raters indicated that an item was related to the closeness factor as specified, then the $FVI = .78$. For items related to social strain factor, the FVI ranged from .67 to 1.0, ($M_{FVI} = .86$); for intentionality factor, the FVI ranged from .33 to 1.0 ($M_{FVI} = .75$); and for closeness, the FVI ranged from .33 to 1.0 ($M_{FVI} = .84$).

Clarity scores were also calculated for each item, with clarity rated from 1 to 4, with 4 being the clearest. Similar to the CVI, if five out of nine raters chose either a 3 or 4 then the clarity score = .56. Across the items, scores ranged from .44 to 1.0.

In the final step of item evaluation, items were either retained as written, modified, or removed. Based on Rubio and colleagues' (2003)

recommendation of retaining items with an FVI and CVI greater than .80, most items were retained. Some items with slightly lower FVIs or CVIs were also retained with minor wording changes after confirming the item was representative of the camper-counselor relationship construct (Rubio et al., 2003). In total, 20 items were retained, including 6 social strain items, 5 intentionality items, and 9 closeness items. Two items (i.e., “this counselor ‘gets’ me” and “I think this counselor likes me”) were added based on feedback from expert raters (see Table 1).

Cognitive interview process

Using the streamlined 22-item CCRS, cognitive interviews were conducted with children who attended overnight camp in the most recent summer. Cognitive interviews gauged participant comprehension of questions, how participants answered questions, and if the questions represented the intended constructs. Cognitive interviews included the administration of draft survey questions while simultaneously collecting additional verbal responses about participants’ thought processes while answering survey questions (Beatty & Willis, 2007). A combination of this “think-aloud” approach in addition to specifically probing participants about comprehension was used. Participants included four children (ages 10–12) who attended overnight camp in the summer prior to when the item development process began (i.e., 2018). Participants were recruited based on convenience sampling (e.g., children of acquaintances). Saturation was reached after interviewing these four children (Beatty & Willis, 2007; Corbin & Strauss, 1990). When cognitive interviewing was completed, identified problems were used to revise items and indicate items that could potentially be misunderstood (e.g., different ways campers may interpret the word “like” in the statement “I think this counselor likes me”).

Streamlined camper-counselor relationship scale (CCRS). Each question of the resulting 22-item CCRS was answered on a 5-point Likert-type rating scale of 1 = “strongly disagree,” 2 = “disagree,” 3 = “neutral,” 4 = “agree,” and 5 = “strongly agree.”

Initial psychometric evaluation of items

Once the initial item development process had been completed, we collected data for analyses of the psychometric properties of the items. Specifically, we planned to conduct exploratory factor analyses (EFA) to evaluate the factor structure of the items.

Procedure

Recruitment. The methodological literature is mixed regarding sufficient sample sizes for EFAs, although a relatively consistent guideline is to have a participant/variable ratio of more than 10:1 (e.g., Williams et al., 2010). Accordingly, we aimed to recruit at least 220 campers to complete the initial version of the camper-counselor relationship quality scale.

Recruitment efforts were concentrated on a Jewish overnight camp in the Midwest due to the first author’s connections with this camp. In addition, some of the qualitative research regarding camper-counselor relationship formation that informed this study was conducted in this specific summer camp context (Rubin et al., 2018). Although not all campers and staff identify as Jewish, Jewish values are central to the mission of the camp. This camp serves about 500 campers each summer who are rising second to rising tenth graders.

Although the original camp served about 500 campers, we conducted additional recruitment at two other camps as a precaution against low response rates at the first camp. To avoid introducing potential confounding factors related to type of camp, we sought out similar camps. The director of the first camp connected us with two other overnight camps with explicit Jewish missions. The second camp is also an overnight camp in the Midwest and serves about 200 campers (also rising second to tenth graders) each summer. The third camp, an overnight camp on the East Coast, serves about 250 campers (rising second to ninth graders) each summer.

The same recruitment and consent processes were used at all three camps. Consent forms were sent out with other camp forms using an online system. Parents or guardians received an email from the camp explaining the study, the camp’s approval of the research, and a link to the consent forms with researcher contact information for parents/guardians to read and fill out online. Campers had the opportunity to complete assent forms only if their parents or guardians had provided consent. Assent forms were provided on site by the researcher at the time of data collection.

Data collection. Data collection procedures were similar across the three summer camps. Through coordination with camp directors and/or assistant directors, the first author was on site to collect data between the seventh and thirteenth day of camp. It was important for campers to have been at camp for at least one week to have the opportunity to develop relationships with counselors. All campers with

consent from parents or guardians were invited to participate. Participants filled out paper questionnaires during a variety of times (e.g., after meals, during rest hour or other free periods). On average, cabins included 1–4 cabin counselors (i.e., counselors who live in cabins with campers and accompany campers to activities), and 10–12 campers. Campers completed the CCRS about only one of their cabin counselors; the specific counselor was randomly chosen by the research team to maximize camper efforts and participation, reduce fatigue that might accompany filling out multiple surveys, and to reduce bias if campers were to choose the counselor about whom they would answer. The first author was present at each data collection session to answer participant questions. Participants were entered into a raffle to win one of ten twenty dollar gift cards for their participation in the study.

Participants

Participants included 318 campers ($M_{\text{age}} = 12.15$ years, $SD = 2.08$) attending one of the three participating overnight camps ($n = 183$ from Camp One, 103 from Camp Two, 32 from Camp Three). Ninety-five percent of eligible campers participated in the study. Slightly over half (53.5%) of participants self-identified as female, 45.9% as male, .3% as transgender, and .3% as nonbinary. The majority identified as White (92.1%), 2.5% identified as multiracial, .6% as Black, 1.6% as Asian, .3% as Middle Eastern and North African, and 2.8% as another race. Most campers (95.3%) identified as Jewish.

Measures

Campers completed the CCRS as well as questions regarding age, gender identity, race, and religious identity. Campers were instructed to choose as many options as applied to them for race and religious identity.

Analysis plan

To evaluate the instrument's psychometric properties and conclude the factor structure's consistency with our hypotheses, an exploratory factor analysis (EFA) was conducted on the 22 items selected through the content validity process. We conducted the EFA using Principal Axis Factoring (PAF) in SPSS Statistics 26 because it explains the shared variance of items while excluding unshared variance. This approach aligned with the goal of determining the latent variables underlying scale items. To decide how many factors to extract, we used four criteria: (1) The Kaiser-

Guttman Rule (with the number of factors being equal to the number of eigenvalues >1), (2) The scree plot (the point of inflexion showing the potential number of factors); (3) Parallel analysis (a correlation matrix is computed from the noise datasets with eigenvalues of the correlation matrix then calculated to determine if factors are random noise or true factors; Turner, 1998), and (4) Minimum average partial correlations (where factors are no longer retained when there is proportionately more unsystematic variance than systematic variance in the correlation matrix; Velicer et al., 2000). Items were also reviewed for acceptable loadings (>0.4) and communalities (>0.3) (Netemeyer, Bearden, & Sharma, 2003; Pett et al., 2003). These statistics were combined with theory to determine the number of factors.

Results

Inter-item correlations

Before conducting the EFA process, inter-item correlations were examined separately by hypothesized subscale. In the social strain factor, inter-item correlations ranged from .32 to .62; in the intentionality factor, inter-item correlations ranged from .31 to .47; and in the closeness factor, inter-item correlations ranged from .32 to .70.

Factor extraction

The four statistical criteria used to evaluate the number of factors all suggested either two or three factors would be the best fit to the data. The scree plot suggested two or three factors, Kaiser-Guttman rule suggested three, and parallel analysis and minimum average partial correlation analysis suggested two factors. Accordingly, we focused our evaluation on the two and three factor solutions. However, given recommendations to examine models with at least one fewer and one additional factor than expected, one and four factor solutions were also examined. The one factor solution had lower communalities and poorer fit indices compared to the other solutions, so it was not further examined. For the four-factor model, fit indices were slightly higher compared to the three-factor model (see [Supplementary Table 4](#)). However, factor loadings were similar or slightly lower than the three-factor model (see [Table 2](#) and [Supplementary Table 1](#)), and the pattern of factor loadings showed that the four factors were less interpretable than in the three-factor solution. In addition, as mentioned above, all other analyses pointed to a two or three factor model.

Table 2. Factor loadings for three-factor model from the Study 1 exploratory factor analyses.

Item number	Item text	Factor			EFA communalities
		1	2	3	
CCRS1*	This counselor makes fun of me in ways I don't like	.20	-.61	-.18	.47
CCRS2	This counselor checks in with me to see how I am doing	.25	.08	.38	.31
CCRS3*	I feel special when I am with this counselor	.83	.02	-.05	.62
CCRS4*	I feel close to this counselor	.87	.08	.001	.69
CCRS5*	When I'm with this counselor, I get the feeling she'd rather be doing something else	.30	-.40	.04	.42
CCRS6	This counselor does my favorite activities with me	.58	.20	.21	.44
CCRS7*	This counselor "gets" me	.59	-.11	.074	.51
CCRS8*	I would go to this counselor if I had a problem	.54	-.15	.09	.49
CCRS9*	I have fun when I'm with this counselor	.71	-.08	.004	.59
CCRS10*	This counselor yells at me or uses a mean voice	-.05	-.59	.11	.36
CCRS11*	This counselor hangs out with me during free time	-.05	-.07	.59	.34
CCRS12	I trust this counselor	.59	-.31	-.01	.60
CCRS13*	I look forward to the time I spend with this counselor	.70	-.14	.01	.64
CCRS14	This counselor does not pay enough attention to me	.12	-.40	.29	.44
CCRS15	I think this counselor likes me	.33	-.25	.30	.55
CCRS16*	This counselor feels like a friend	.70	-.12	.10	.72
CCRS17*	This counselor makes me feel bad about myself	.01	-.81	.03	.68
CCRS18	This counselor listens to me	.20	-.34	.39	.58
CCRS19*	This counselor tells me things about him/herself	.02	-.03	.56	.34
CCRS20*	This counselor talks to me about my interests	.18	.07	.62	.53
CCRS21*	I feel comfortable with this counselor	.53	-.26	.13	.66
CCRS22	I think this counselor doesn't like me	.25	-.45	.17	.53

Note. *Indicates retained items.

Accordingly, the four-factor model was not further examined.

We then examined the two- and three-factor solutions more closely. Overall, the EFA results were equivocal between the two and three-factor solutions. In the two-factor solution, all items had loadings above .51 except for two (see [Supplementary Table 2](#)). In the three-factor solution, all items had loadings above .53 with the exception of six items (see [Table 2](#)). The communalities for the two-factor solution were slightly lower than the communalities for the three-factor solution (see [Table 2](#) and [Supplementary Table 2](#)). The two-factor model combined closeness and intentionality into one "positive" factor, while the hypothesized social strain factor remained. Based on the statistical results and theory, collapsing these two factors results in a loss of nuance and differentiation between feeling warmth in the relationship and how much effort counselors are putting into forming a bond. Accordingly, we chose the three-factor solution due to its slightly higher communalities and consistency with theoretical expectations. However, as the results were equivocal, both two- and three-factor models were tested in the CFA (described in Study 2).

Item retention

Using the EFA results, seven items were removed due to low factor loadings or high cross-loadings. In total, fifteen items were retained: four items on the social strain factor, three on the intentionality factor, and

eight on the closeness factor (see [Supplementary Table 3](#)).

Study 2

Study 2 had two aims. The first was to confirm the factor structure of the items identified in Study 1 in a new sample. The second was to investigate the concurrent validity of the CCRS.

Method

Procedure

Study 2 recruitment and consent processes were the same as Study 1. All campers who had consent from parents or guardians were invited to participate. Participants from the three camps in Study 1 (enrolled in a subsequent camp session) completed questionnaires between days ten and 20 of their session. Data collection for Study 2 began approximately two weeks after data collection ended for Study 1. Participants filled out paper questionnaires during a variety of times (e.g., after meals, during rest hour or other free periods) with the first author present to answer participant questions. Participants were entered into a raffle to win one of ten twenty dollar gift cards for their participation in the study.

Participants

Participants included 324 campers ($M_{\text{age}} = 11.67$ years, $SD = 2.19$) at one of the three camps. Of the eligible campers, 89% participated in the study.

Table 3. Summary of fit indices from confirmatory factor analyses from study 2.

Model	χ^2	df	Log likelihood (HO)	$\Delta \chi^2$	Δdf	CFI	TLI	RMSEA	SRMR
Hypothesized 3-factor	167.906	87	-5278.998	3factor-2factor= 21.296	2	.968	.961	.054	.037
Competing 2-factor	189.202	89	-5289.646	2factor-1factor= 51.518	1	.960	.953	.059	.040
Competing 1-factor	240.720	90	-5315.405			.940	.930	.072	.047

Note. CFI (comparative fit index); TLI (Tucker-Lewis index); RMSEA (root mean square error of approximation); SRMR (standardized root mean square residual).

Most (52.3%) self-identified as girls, 46.7% as boys, .6% as transgender, and .3% as nonbinary. The majority identified as White (94.7%), 3.4% identified as multiracial, .6% as Black, .3% as Asian, and .9% as another race. Most identified as Jewish (96%).

Measures

Campers completed both the CCRS as well as a set of measures included for tests of concurrent validity.

Camper-counselor relationship scale (CCRS). Campers completed the 15-item streamlined version of the previously described CCRS. As in Study 1, campers completed the CCRS about only one of their cabin counselors, who was randomly chosen by the research team.

Camp connectedness. Campers completed the Camp Connectedness Scale, a 12-item scale developed and validated by the American Camp Association that measures campers' connection to the camp's social environment including acceptance by staff and peers, belongingness, and emotional safety (Sibthorp et al., 2013). This measure was chosen as it is a common positive developmental outcome of the camp experience (Sibthorp et al., 2010). In prior studies, scores on this measure showed acceptable internal consistency and reliability ($\alpha = .87$, Sibthorp et al., 2013) which was also found in the current study ($\alpha = .89$). On a 6-point scale (false, somewhat false, a little false, a little true, somewhat true, and true), campers rated how true experiences were for them while at camp. Example items include: "The staff listen to me" and "I feel like I belong" (Sibthorp et al., 2013).

Intent to return. Campers rated the item, "I plan on returning to camp next summer" on a 5-point scale (1 = "strongly disagree"; 5 = "strongly agree") and completed a free response follow-up question of "why or why not?" This item was created for the study and was used because intent to return is an outcome of interest by summer camp administrators as well as researchers as another proxy for satisfaction.

Overall camp satisfaction. Campers answered five questions to measure their general satisfaction with camp for that session. Campers rated questions on a 5-point scale (1 = "strongly disagree"; 5 = "strongly agree"). This five item camp satisfaction scale ($\alpha =$

.87), created for the current study, included: "I enjoyed my time at camp," "I would recommend this camp to a friend," "Camp wasn't as good as I expected" (reverse-coded), "Camp was a good experience," and "I wish I hadn't come to camp this summer" (reverse-coded). Similar to intent to return, this scale was used as camp satisfaction is an outcome of interest by summer camp administrators as well as researchers and often used in camps' own end of session surveys.

Friendship skills. Campers completed seven items of the 14-item Friendship Skills scale, developed and validated by collaborators of the ACA (Ellis & Sibthorp, 2006). Only half of the measure was used in order to shorten the length of the overall questionnaire, increasing feasibility of completion. Prior studies suggest acceptable internal consistency ($\alpha = .938$, Ellis & Sibthorp, 2006) which was found in this study as well ($\alpha = .89$). Campers rated on a 5-point scale (*decreased* to *increased a lot*) how much their experience as a camper changed them in the domain of friendship skills. Example items include: "Becoming better at getting to know people who I might want to be friends with," and "becoming better at understanding my friends' feelings" (Sibthorp et al., 2013). This measure was chosen as it is a common positive developmental outcome of the camp experience.

Demographic items. Campers answered the same questions as in Study 1 about demographics including age, gender identity, race, and religious identity.

Analysis plan

The analysis included two components. First, we estimated a series of CFAs to confirm the CCRS factor structure identified from the EFA. As the EFA results were equivocal between the two and three-factor solutions, one-, two-, and three-factor models of the 15-item CCRS were tested using CFA. All measurement errors were modeled as uncorrelated, whereas the latent factors were permitted to correlate. To evaluate the strength of all factor loadings, the model was specified using the fixed-factor method, in which the variance of each factor was constrained to 1.00 to provide a scale for the latent factors.

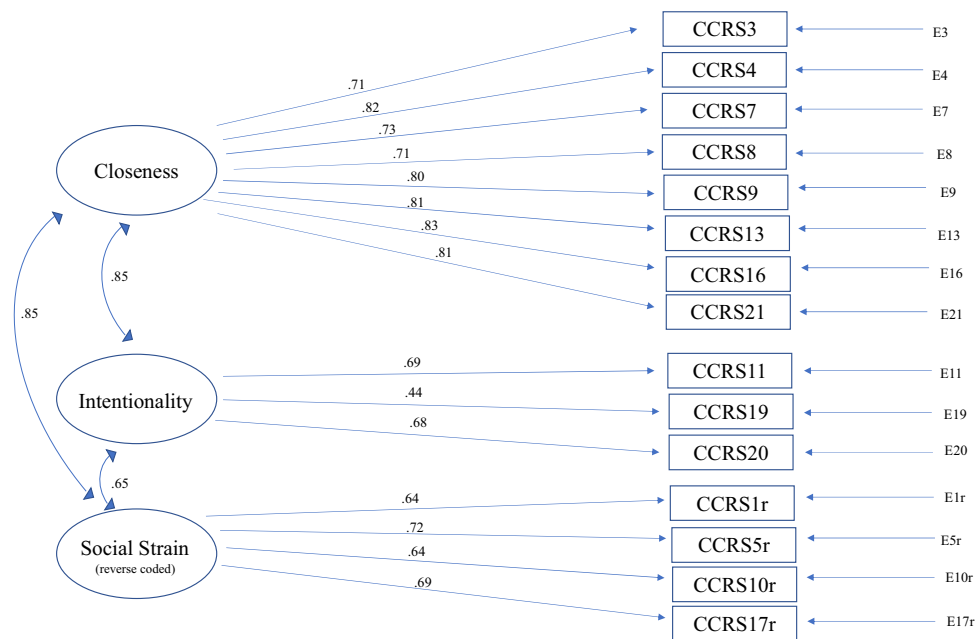


Figure 1. Standardized estimates for the three-factor, 15-item CCRS.

Multiple model fit indices were used to provide different information about model fit. Absolute goodness of fit was evaluated using chi-square analyses (where a p -value $> .05$ indicates good fit), and the standardized root mean square residual (SRMR), where $< .08$ indicates good fit. The root mean square error of approximation (RMSEA) was used to evaluate parsimonious fit, with acceptable values $< .05$. Finally, to assess fit relative to a null model, we used the comparative fit index (CFI) and the Tucker Lewis index (TLI), where values $> .95$ indicate good fit for both (Tabachnick & Fidell, 2007). To investigate whether there were any localized points of poor fit in the solution, we inspected modification indices as well as whether any standardized residuals were larger than 2.58.

Second, the concurrent validity of the CCRS was tested by investigating associations between the scale and other constructs that are theoretically related. Multiple regression analyses determined the concurrent validity of the three camper-counselor relationship quality factors (Closeness, Intentionality, and reverse-coded Social Strain) on camp connectedness, campers' intent to return to camp, camp satisfaction, and friendship skills. Social Strain was reverse coded to aid in the ease of interpretability of the overall scale in which higher scores of the CCRS equate to more positive relationship quality.

Results

Confirmatory factor analysis. The hypothesized three-factor model identified from the EFA in Study 1 consisted of the three factors of Closeness (8 items),

Intentionality (3 items), and Social Strain (4 items). This hypothesized three-factor model was compared against competing one and two factor models. In the one factor model, all 15 items loaded onto a single factor. In the two factor model, the closeness and intentionality factors were collapsed into one positive factor with 11 items, and the second factor was social strain (4 items). Closeness and intentionality factors were collapsed in the two factor model because items on these factors loaded together on one factor that could be conceptualized as positive aspects of the relationship quality.

Table 3 shows model fit indices for the three tested models. Model fit was relatively poor for the one-factor model, but better in the two- and three-factor models. The three-factor model fit significantly better than the two-factor ($\chi^2_{\text{diff-value}} = 21.30$, $p < .05$, critical value = 5.99). Accordingly, we chose the three-factor solution due to its better fit and consistency with theoretical expectations. Figure 1 presents the model of the camper-counselor relationship quality scale three-factor structure. All standardized factor loadings were statistically significant and salient ($> .40$). These CFA results supported the factor structure of the camper-counselor relationship quality measure created in Study 1.

Tests of validity

Concurrent validity. To establish concurrent validity, we estimated regression analyses with the latent factors of camper-counselor relationship quality as

predictors. As expected, closeness, intentionality, and reverse-coded social strain all statistically significantly predicted camp connectedness ($\beta = .41, p < .001$; $\beta = .52, p < .001$; $\beta = .36, p < .001$). None of the camper-counselor relationship quality factors significantly predicted intent to return to camp (all p -values $> .05$) or camp satisfaction (all p -values $> .05$). Intentionality was marginally significantly associated with campers' perceptions of their increased friendship skills ($\beta = .40, p = .05$).

Additional regression analyses

Finally, we estimated a series of regression analyses to examine the associations between camper-counselor relationship quality, and the three variables of camper gender, camper religious identity, and camper age. Contrary to expectations, gender was not significantly associated with camper-counselor relationship quality (all p -values $> .05$). As expected, higher camper Jewish identity was associated with higher closeness ($\beta = .19, p = .002$) and higher intentionality ($\beta = .25, p < .001$), but not social strain ($p = .06$). Although age was not significantly associated with social strain ($p = .12$), it was significantly positively associated with closeness ($\beta = .15, p = .01$) and intentionality ($\beta = .39, p < .001$). There was not enough variability in camper self-identified race to conduct race-based regression analyses. Also, there was not a significant correlation between the length of time campers had been at camp when they filled out the CCRS and CCRS scores (p -values were $> .05$ for all factors).

Discussion

The associations between CCRS responses and camper perceptions of camp connectedness are noteworthy. Connectedness, most studied in the school context, has been found both to be associated with reduced likelihood of poor adjustment (e.g., reduced behavior problems, emotional distress; McNeely & Falci, 2004; Pate et al., 2017) and promote positive developmental outcomes (Lerner et al., 2005; Oldfield et al., 2016). In addition, connectedness is prominent in many models of positive youth development; forging strong youth-adult relationships is posited as one key way to develop connectedness within youth programs (e.g., Lerner et al., 2005). Thus, the association between CCRS scores and camp connectedness shows promise for the CCRS's construct validity.

In addition, the CCRS factor of intentionality showed marginally significant positive associations

with campers' self-rated increased friendship skills, a common positive developmental outcome for youth attending summer camp (e.g., ACA, 2005). Contrary to expectations, the CCRS factor of closeness was not significantly associated with friendship skills. Although closeness is important, intentionality might be a more direct way to model the necessary skills to increase relationship quality with peers. These findings provide preliminary evidence of concurrent validity of the CCRS.

Contrary to expectations, CCRS scores were not significantly associated with intent to return to camp or camp satisfaction. Campers and their families are likely to make decisions about camp attendance based on a variety of factors (e.g., other commitments, family vacations, and financial resources). In the present research, campers provided various explanations for their intent to return scores including not being sure about returning because "I get really homesick," "I have another camp but I also like this camp," it is "expensive," or citing "the only reason I wouldn't is because I'll be going into high school and soccer is all summer." Moreover, as is the case in much of the camp outcomes research (e.g., Bialeschki et al., 2007; Henderson et al., 2007), mean scores for satisfaction items were high (i.e., 4.21 out of 5 or higher) and variability was low (i.e., 80–90% of campers rated 4 or 5 on each item). These scores may indicate a ceiling effect of camp satisfaction, which limits tests of concurrent validity.

In Study 2, relations were found between CCRS scores and demographic characteristics. As expected, camper Jewish identity scores were positively associated with closeness and intentionality scores. As Jewish education and values are central to the mission and programming of Jewish camps (Arian, 2016; Cohen, 2017), campers who identify strongly with Judaism may feel a shared connection that facilitates the formation of closer connections with counselors. In addition, age was significantly related to closeness and intentionality, with older campers reporting higher closeness and intentionality scores. This finding is consistent with prior research showing that older campers more frequently report supportive relationships with counselors (ACA, 2006). One possible explanation for this finding is that older campers are closer in age to their counselors which may lead to increased shared experiences and ability to connect. A self-selection bias may also be possible in which older campers are those who have formed strong connections in the past and therefore have chosen to return to camp (ACA, 2006). Additionally, older campers,

who have often attended camp for more summers than younger campers, may have increased skills in establishing connections and/or have existing connections with counselors.

Finally, gender was not significantly associated with camper-counselor relationship quality, despite literature demonstrating higher relationship quality for female students in student-teacher relationships (e.g., Spilt et al., 2012). Although one prior study (ACA, 2006) found that female campers reported higher levels of camper-counselor relationship quality than male campers, the sampling frame and measurement of relationship quality was different from the current study. Given that this is the first measure of camper-counselor relationship quality, there is still much to learn about the possible role of gender.

Limitations, strengths, and future directions

There are several notable strengths of the current study. The construct of camper-counselor relationship quality was first explored through qualitative research (Rubin et al., 2018) and some domains and items are grounded in findings from that foundational research. In addition, this study focuses on the development and validation of a measure of an understudied topic. Despite these strengths, several limitations should be acknowledged. First, the present investigation used samples from Jewish residential summer camps in which the majority of campers identified as White. As a result, the findings may be specific to the Jewish summer camp community. Campers and counselors at these Jewish camps might have a stronger shared identity than youth at other camps, therefore enabling particularly strong camper-counselor relationships. In addition, the camps involved in this study are typically attended by campers from middle to upper-middle class families. Future research should include more religiously, racially, and ethnically diverse samples as well as samples that include more socioeconomic diversity to increase the generalizability of the CCRS. In addition, due to convenience sampling, the cognitive interviews only consisted of children ages 10–12 while the target age range for the measure was 7 through 15. Given younger children's lower comprehension level, future research should engage in additional content validity testing of the measure with a younger population. Another limitation of the current studies is that campers were able to participate in both Study 1 and Study 2. Although only six campers completed the survey about the same counselor twice, campers who completed the survey both times may

have been biased the second time they filled out the survey due to their experience in the first study. In addition, participants in the study were not able to be compared with non-participants in the study due to a lack of information provided about the nonparticipating campers from the camps. This lack of comparison prevents examination of confounding variables and future research should aim to include these comparisons where possible.

Further, some concurrent validity variables (e.g., camp satisfaction) may have had ceiling effects. Future research should address this issue by including items that permit greater variability or more nuanced answer choices. Additionally, as the many factors behind campers' camp satisfaction scores are difficult to tease apart, future researchers could include multiple variables about the camp experience itself (e.g., how much campers enjoyed activities and food) alongside camper-counselor relationship quality. Having data on multiple variables in addition to relationship quality would allow researchers to examine whether relationship quality can predict a small amount of camp satisfaction above and beyond the other included variables.

More generally, although the CCRS was associated with camp connectedness, future research should continue to test the psychometric properties of the scale, specifically including tests of predictive validity, replicating the factor structure with other groups of campers, refining the items associated with each factor, and including non-self-report indicators (e.g., camper reenrollment for the following summer). It would also be useful to include relationship variables in concurrent and predictive validity tests (e.g., measures of social skills, measure of peer relationships/friendships at camp). Another limitation of the current study is the concurrent data collection in Study 2. That is, the validity data were collected at the same time as the CCRS data. Future studies using the CCRS should include multiple time points in order to determine its ability to predict variables like camper retention, satisfaction, and returns.

Finally, the CCRS captured only campers' perspective of the camper-counselor relationship. Future research should consider the development of a counselor-reported CCRS to complement the current camper-reported scale. Future researchers could conduct a paired assessment and intervention program based on the CCRS, similar to the pairing of the STRS with the STARS program (Pianta & Hamre, 2001) or the more recent pairing of the Classroom Assessment Scoring System-Secondary with the My Teaching Partner-Secondary program (Gregory et al., 2017; Pianta et al., 2008).

Conclusion

Taken together, the present research suggests initial evidence for the validity of the 15-item CCRS. The psychometric properties and validity of the CCRS illustrate its utility in both research and practice related to camper-counselor relationships. Until now, no validated measure has existed to evaluate the camper-counselor relationship; this study thus represents a contribution to the summer camp and youth development field. As connection is an essential component of the summer camp experience, the CCRS may facilitate the evaluation of specific camper-counselor relationships as well as the overall relationship quality climate at summer camps. In addition, the CCRS can be used to study the nature of the relationship itself as well as associations between camper-counselor relationship quality and many other variables (e.g., camper retention, outcomes, and demographics). In practice, the CCRS can be used for practitioners to measure the quality of camper-counselor relationships at their camps, which can then be used to make administrative decisions. For example, campers could complete the CCRS over the summer, allowing administrators to use the data to inform staff trainings. That is, based on findings, administrators might consider offering emotional attunement or cultural responsiveness trainings to facilitate connections between campers and counselors (e.g., Gilkerson & Pryce, 2021). In addition, the CCRS could be helpful in gauging the overall relational climate at camps including the extent to which campers feel connected to the camp community and/or how campers make decisions about intending to return. For example, knowing more about relationship quality and for whom it is positive or negative could inform counselors and administrators about what subgroups of youth (e.g., level of religiosity; gender; and race) might need more mindful or intentional matching in cabins or groups. Overall, although additional validation is necessary, the CCRS provides a preliminary tool with the potential to inform a critical but neglected relationship and, in doing so, promote positive developmental outcomes for campers.

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