

THE QUALITY OF RESIDENCE LIFE INVENTORY SCALES:
RASCH MODEL ANALYSES

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The Quality of Residence Life Inventory Scales: Rasch Model Analyses

Significant emphasis has been placed on comprehensive assessment of higher education in the past two decades (Astin, 1993, 1996; Banta, 1993; Banta, Lund, Black & Oblander, 1996; Ewell, 1985; Pascarella & Terenzini, 1991). This emphasis has manifested itself not only in terms of academic achievement, but also in the areas of student life (Erwin, 1991, 1996; Komives & Woodard, 1996; Kuh, Schuh & Whitt, 1991; Schroeder & Mable, 1994; Winston & Anchors, 1993). A central concern related to student life is the quality of residential facilities. In light of this concern the Quality of Residence Life Inventory (QORLI; Smart, Smart, & Nielsen, 1997) was developed.

The authors of the QORLI initially identified five general aspects of a student residential experience: (a) organizational values, (b) lifestyle, (c) learning support, (d) basic services, and (e) general satisfaction. These aspects were gleaned from the literature on psychosocial development of college age youth and the practices of residence life. Fourteen constructs were identified within the framework of these aspects and 103 items were generated to measure the constructs. The QORLI's authors pilot tested these items with a small group of college students before administering it to 572 students in 79 different residence hall floors at eight colleges and universities in four states. Smart and his colleagues then conducted a number of psychometric analyses including calculations of reliability (internal consistency and test-retest) and factor loadings. Based on these analyses and feedback from 20 members of the Association of College and University Housing Officers (ACUHO), the inventory was reduced to 72 items. A validity study examined correlations between QORLI scales and subscales of the University Residence Environment Scale (URES, Moos, 1988) with favorable results (Smart, in press).

The general satisfaction construct was represented by only one item and cannot be considered a scale. At the sponsor's direction this item was not considered in the present report. The version of the QORLI analyzed in this study is a self-report questionnaire consisting of 71 Likert-type items designed to assess residents' perception of the quality of life in residence halls and fraternity or sorority houses. The questionnaire contains 13 scales (see Table 1). The QORLI includes items such as: "There is a spirit of friendship in this hall" (Community), "Students here have a strong voice in hall government" (Student Input), "This is an orderly house" (Compliance), and "People here have an active social life" (Social Life). Five response categories are used for all 71 items. These five categories include: strongly agree, agree, neutral, disagree, strongly disagree. The Appendix contains the administered inventory.

While preliminary investigations of validity and reliability have been conducted, more comprehensive psychometric methods have not yet been employed to analyze the QORLI scales. At the request of Dr. David Smart, the principal author of the QORLI scales, the Rasch rating-scale model¹ was used to evaluate the scales and to make recommendations for improved scale function. The data were analyzed using the WINSTEPS computer program (Version 2.93; Linacre & Wright, 1999). The results of the Rasch analysis were used to make recommendations concerning the removal, refinement, addition, and retention of items in each scale and the refinement of response categories.

Rasch analyses differ in a number of ways from other approaches to statistical analysis. Perhaps the most apparent difference is the notion that the user seeks to fit data to the model,

¹ The Rasch rating-scale model is a member of a family of mathematical models named for Danish mathematician Georg Rasch. Rasch's *Probabilistic Models for Some Intelligence and Attainment Tests* explicates the foundation upon which the rating-scale model was based.

Table 1

Summary of the QORLI Scales

Name of Scale	Number of Items
Academic Emphasis	6
Administrative Service	2
Community	6
Compliance	4
Control of Drugs and Alcohol	6
Diversity	6
Health and Wellness	6
Physical Comfort	6
Safety and Security	6
Sexual Responsibility	5
Social Life	6
Student Input	6
Study Support	6

rather than the model to the data. The philosophical basis for this approach emanates from the definition of measurement. Rasch proponents contend that fundamental measurement requires an “additive structure” (Michell, 1997) in which the units of measurement are interval in nature, and “objectivity” which requires the measure assigned to a quality to be independent of the observer. If rulers are going to be useful in measuring length, for example, then the units of measurement (inches or centimeters) must not vary from use to use or depend upon what is being measured.

Bond and Fox (2001, p. 2) argue:

Scientific measures in the social sciences must hold to the same standards as do measures in the physical sciences if they are going to lead to the same quality of generalization. That is, they must be objective abstractions of equal units. Measures must meet these criteria to be both reproducible and additive. These are basic requirements for any scientific quantitative attributes.

The Rasch model possesses these attributes of fundamental measurement. It is the only statistical model that meets the requirements of additivity and objectivity.² In other words, the Rasch model is a “mathematical description of how fundamental measurement should appear” (Bond & Fox, p. 173). The analyses in this report involve comparing the responses obtained from the QORLI with the expected responses based on the Rasch model. A scale consisting of items that result in responses that fit the model well is a scale that can be considered a “measure,” whereas those that do not fit the model well are not measures. Bond and Fox (2001) explain:

The Rasch model provides us with useful approximations of measures that help us understand the processes underlying the reason why people and items behave in a particular

² Bond and Fox (2001) provide a very accessible treatment of the mathematical transformation of raw data from the human sciences into abstract, equal-interval scales. Bond and Fox explain in short: “Equality of intervals is achieved through log transformations of raw data odds, and abstraction is accomplished through probabilistic equations” (p. 7).

way. These approximations help us to solve problems that cannot be solved currently with any other model. (p. 8)

Method

Dr. Smart and several colleagues have administered the QORLI to 2,143 students at several universities between 1998 and 2000. These included both public and private institutions in different parts of the United States. Dr. Smart provided a data file containing the participants' responses to all 71 items as well as a map indicating the items assigned to each scale. A separate WINSTEPS control file was written for each of the 13 scales upon which the analyses were based. The author examined the following characteristics of each scale: (a) the person reliability estimate,³ (b) the mean and standard deviation of the standardized items outfit statistics which summarizes the fit of the responses to the Rasch model; (c) the individual item fit statistics, including the item-to-total-score correlations (item-total correlations); and (d) the threshold structure of the response categories. This report examines these four characteristics on each scale. Based on these characteristics recommendations were made for improving each of the 13 scales. Subsequent iterative analyses were conducted to examine the effects of deleting items on reliability estimates, fit statistics, and threshold structure that informed the author's recommendations.

Results

The Results are presented in 13 separate sections, one for each of the scales. Each section begins with a table summarizing the item numbers, item wording, positive or negative orientation of the item, item-total correlations, an item fit statistic, and total scale statistics. The scale summary table is followed by a discussion of reliability, item fit, and threshold structure

³ The Rasch person reliability estimate is roughly analogous to Cronbach's coefficient alpha. Rasch person reliability, however, is a more conservative (lower) estimate than alpha because it excludes extreme response sets.

function. The author has included in each analysis a graphical representation of response category function. Finally, a set of recommendations concludes the discussion of each scale.

Academic Emphasis Scale

This scale is designed to measure the degree to which academics are emphasized in the residence setting. Table 2 summarizes both the content of the scale and the statistics resulting from the analysis described above.

Assessing reliability and fit. The reliability estimate of .75 is acceptable particularly with a scale of only six items. As a general rule, Smith (1998) recommends a reliability greater than .70 with rating-scale data. An examination of the item fit statistics, however, point to some problems. The mean standardized item fit statistic is -.2, close to the expected value of .00. The standard deviation of the item fit statistic is higher than the expected value of 1.00. Items 67, 9, and 21 all have fit statistics greater than the critical value of +2.0. The Item-total correlations range from .60 to .73 and are within acceptable limits for rating-scale data.

Item 67 appears to misfit because it is measuring something other than the targeted trait of emphasis on academics in the residence halls. The focus of item 67 is on recognition and admiration of academic excellence. This differs from the other items on the scale that focus on actual intellectual or academic activity. It is possible that such activity might be prevalent although explicit recognition is not. Additionally, item 9 focuses on enjoyment of intellectual or academic activities. Students may emphasize academics without explicitly acknowledging that

Table 2

Summary of Academic Emphasis Scale Content and Statistics

Item Number	Statement	Orientation	Item-Total Corr.	Fit Statistic
9	Students here enjoy discussing abstract ideas and theoretical issues.	Positive	.73	3.8
21	Students in this hall go to a lot of concerts, plays, and other cultural events.	Positive	.60	3.2
33	There is a very active "life of the mind" in this house.	Positive	.72	-9.4
45	Residents here are very academically minded.	Positive	.68	-3.1
56	People here read a lot for intellectual interest and enrichment beyond class assignments.	Positive	.67	-1.5
67	People in this hall who achieve academic excellence are recognized and admired.	Positive	.69	5.5
mean				-0.2
Sd				5.1

Note. The fit statistic values summarize the individual item statistics that are given for each item in the table immediately preceding the analysis of each scale. The expected values for a given scale, if the responses perfectly fit the model, are a mean of 0.00 and a standard deviation of 1.00.

they enjoy the enterprise. Finally, item 21 focuses on extra curricular activities that might be related to academic excellence, whereas the other fitting items are more general in nature.

I recommend, therefore, that item 67 be deleted from the scale and that items 9 and 21 be revised to better reflect the latent trait of interest. I suggest that item 9 be revised to read: “Students here discuss abstract ideas and theoretical issues;” and that item 21 be revised to read: “Students in this hall seek to expand their intellectual and academic experience by participating in extracurricular activities.” While new data must be obtained to determine the effects of these changes, re-analysis of the scale without item 67 using the existing data set reveals improved Item-total correlations. The reliability estimate decreases to a still acceptable .71. Given the scale developer’s desire to reduce the overall length of the QORLI, I would reduce the Academic Emphasis scale to 5 items with the recommended revisions of items 9 and 21.

Assessing the threshold structure. Although a neutral category often tends to function poorly and is difficult to interpret, Figure 1 suggests that these response categories and their thresholds function relatively well for this scale. There is no reversal in the step calibrations and the category probability curves demonstrate the desired functionality with distinctive hills or peaks for each response option.

Although these response categories are functioning relatively well for this scale they do not function well for several of the other QORLI scales. I would anticipate that dropping the neutral option would improve performance. I recommend, therefore, a four-option response continuum without a neutral option that would be used for all scales to avoid the confusion that might be caused by different sets of response categories on the same form.

Summary of recommendations.

1. Delete item 67.

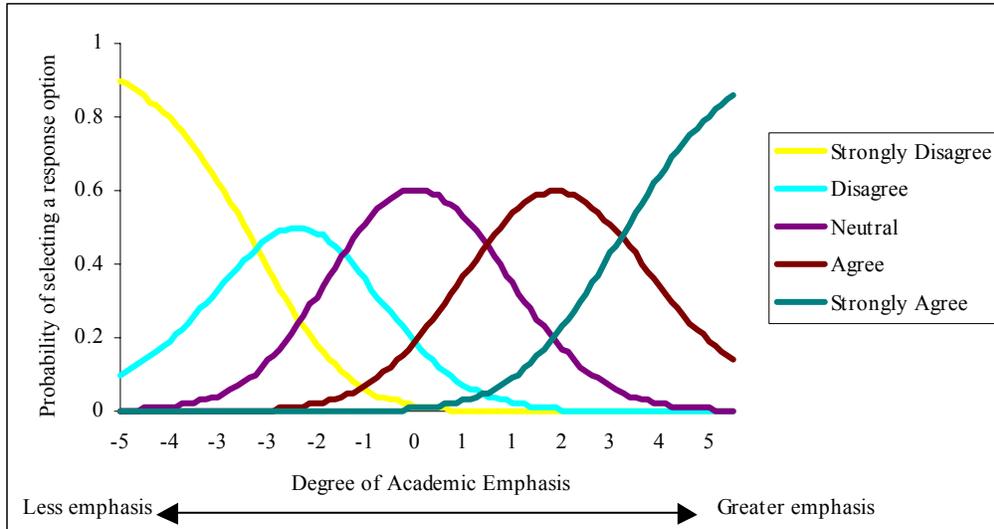


Figure 1. Academic Emphasis Scale Category Probability Curves.

2. Revise item 9 to read: “Students in this residence hall discuss abstract ideas and theoretical issues.”
3. Revise item 21 to read: “Students in this hall seek to expand their intellectual and academic experience by participating in extracurricular activities.”

Administrative Service Scale

This scale is designed to measure the quality of administrative services (see Table 3).

Assessing reliability and fit. The reliability of .52 is not acceptable; however, it is also not unexpected given that the scale consists of only two items. The item fit statistics are expectedly problematic. With a two-item scale these statistics are not particularly meaningful. The item-total correlations, however, are high (.78 and .79) suggesting that the items provide a good foundation for building a properly functioning scale. While suspect because of the small number of items in the scale, Figure 2 suggests that the response categories are working reasonably well.

Summary of recommendations. Since the problems lie in the small number of items on the scale, I would recommend that three items be added yielding a five-item scale with the likelihood of acceptable reliability and fit. The additional items should tap the extremes of the scale because the two existing items are near the middle of the scale. Possible items include:

1. My residence hall goes “above and beyond the call of duty” to make admission to housing, room assignments, and paying bills understandable and easy.
2. The paper work required to be admitted to my residence facility was straightforward and easy to complete.
3. Administrative practices in my residence are of the highest quality.

Table 3

Summary of Administrative Service Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
64	The process for admission to housing, roommate selection and room assignment here is complicated and bothersome	Negative	.79	-2.3
70	Administrative procedures here (admission to housing, room assignment, paying bills) is a smooth and easy process.	Positive	.78	-2.8
mean				-2.5
sd				0.2

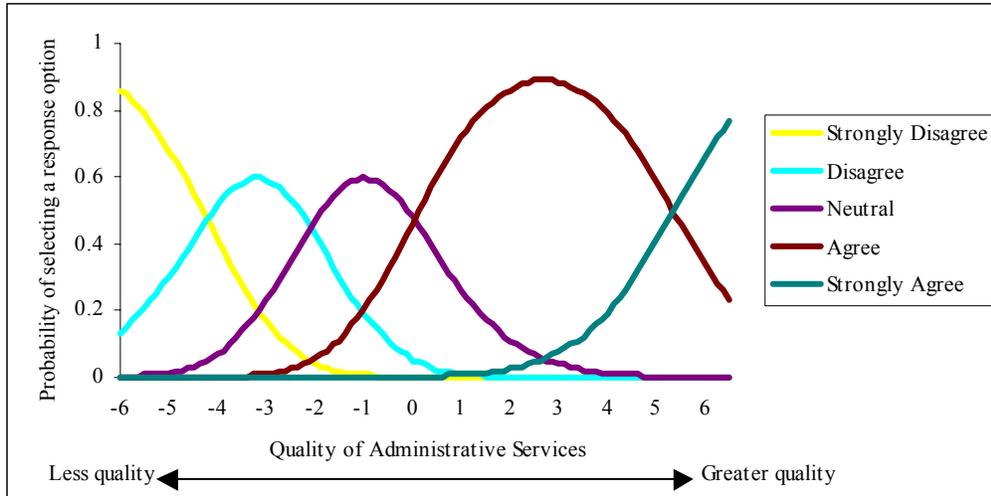


Figure 2. Administrative Services Scale Category Probability Curves.

Community Scale

This scale is designed to measure the degree to which residents feel a sense of community in their facility (see Table 4).

Assessing reliability and fit. The reliability of .85 is quite acceptable. The item fit statistics reveal minor misfit. The mean standardized item fit statistic is .10, close to the expected value of .00. The standard deviation of the item fit statistic is slightly higher than expected at 2.2. The individual item fit statistics look good with the exception of item 49 (4.0) which is the only negatively oriented item on the scale. I do not see any substantive reasons for this item misfitting. However, negatively oriented items tend not to function the same way as their positively oriented counterpart. I would recommend, therefore, that the item be revised so as to be written with a positive orientation: “Students seem to know each other very well here.” The score correlations for these items are strong, ranging from .72 to .79 further confirming that a well-defined construct is being measured by these items.

Assessing the threshold structure. The response categories are functioning reasonably well although they may be improved by the removal of the, difficult to interpret, neutral category (Figure 3).

Summary of recommendations.

1. Re-orient item 49 to read: “The residents here all seem to know each other very well.”
2. Reduce the number of response categories to four by dropping the neutral category.

Compliance Scale

This scale is designed to measure the degree to which residents comply with residence hall rules and guidelines (Table 5).

Table 4

Summary of Community Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
1	There is a spirit of friendship in this hall.	Positive	.77	-1.0
13	People in this house care about one another.	Positive	.76	-2.8
25	People in this hall show a lot of trust in one another.	Positive	.72	2.0
37	In this house people do not give a lot of support to one another.	Positive	.78	-.9
49	Students don't seem to know each other very well here.	Negative	.79	4.0
60	People here seem to avoid one another.	Positive	.77	-.6
mean				0.1
sd				2.2

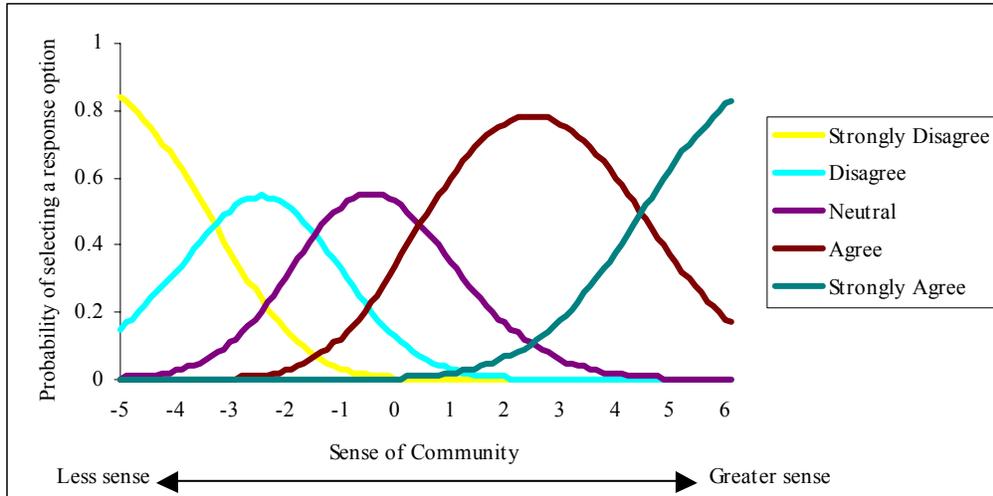


Figure 3. Community Scale Category Probability Curves.

TABLE 5

Summary of Compliance Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
3	This is an orderly house.	Positive	.69	-.8
15	In this hall, students support house policies and procedures.	Positive	.73	-4.2
27	Defacing or destroying furniture, fixtures or other property is very rare in this hall.	Positive	.72	9.0
39	This house is well organized and runs smoothly.	Positive	.70	-7.4
mean				-0.9
sd				6.1

Assessing reliability and fit. Reliability is low (.66). This is not unexpected, however, given a scale of only four items. Deletion or revision of misfitting items and the addition of an item will likely increase the reliability of the data to greater than .70. The item fit statistics raise concerns over item fit. With a mean of -.9 and a standard deviation of 6.1 there is clearly much more variability than desired. Item 27 has substantial misfit (9.0). The item reads: “Defacing or destroying furniture, fixtures or other property is very rare in this hall.” It is possible that respondents see vandalism as separate from compliance with house rules and regulations. It is also possible that residents comply with rules regarding damage to furniture and property and that the vandalism is perpetrated by non-residents of the hall. Whichever is true, I believe that the misfit can be resolved by revising the item to read: “Residents of this hall always comply with house rules and regulations by avoiding damaging furniture, fixtures, or other property.” I recommend use of the qualifier “always” to make the item more difficult to endorse and thereby tap the upper end of the scale. I also suggest the addition of an item to increase the reliability estimate. An additional item might read: “Residents of this hall find it very important to comply with the rules and regulations of the facility.”

Assessing the threshold structure. The response categories’ threshold structure is functioning moderately well (Figure 4). The “ability” levels for which response categories 2 and 3 are most probable are somewhat narrow. The collapsing of these categories should be considered. Which category with which to collapse the neutral option, however, is problematic because we really have no way of divining which way the neutral responses lean. I recommend that the neutral option be dropped in subsequent administrations of the QORLI.

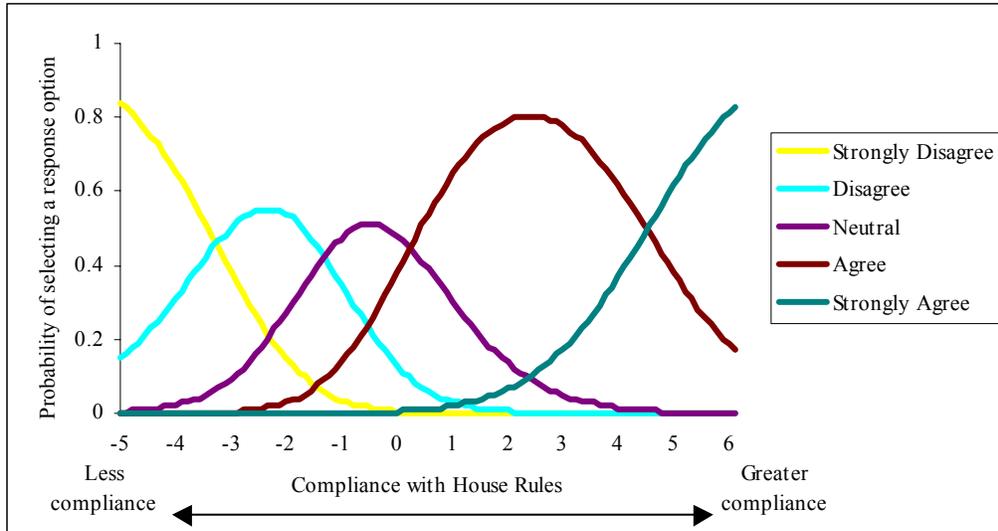


Figure 4. Compliance Scale Category Probability Curves.

Summary of recommendations.

1. Revise item 27 to read: “Residents of this hall always comply with house rules and regulations by avoiding damaging furniture, fixtures, or other property.”
2. Add an item that reads: “Residents of this hall find it very important to comply with the rules and regulations of the facility.” These changes will produce a five-item scale that should have a reliability estimate greater than .70.

Control of Drugs and Alcohol Scale

This scale is designed to measure the degree to which drugs and alcohol are controlled in residence halls (Table 6).

Assessing reliability and fit. The reliability estimate of .79 is acceptable. However, there is significant misfit in the items. The analysis indicates that item 7 and item 54 have misfit statistics that exceed acceptable standards. Item 7 misfits dramatically, while item 54 misfits moderately. A review of the item content suggests a possible reason for this misfit. The scale is ostensibly intended to measure the degree to which drug and alcohol use is controlled in the residences. However, most of the items relate to some sort of abuse of alcohol and drugs, or negative effects resulting from their use. Item 7 is somewhat ambiguous. Does “high rate of consumption” refer to the number of residents who consume alcohol? Or does it refer to large amounts of alcohol being consumed by individual residents. Perhaps the respondents do not necessarily correlate the consumption of alcohol, whatever the quantity, with *abuse* of alcohol. To obtain better fit for item 7, I recommend that it be rewritten to focus on abuse as do the other items in the scale. For example: “Residents in this house abuse alcohol.” The resulting scale, however, may not address the desired trait. The name of the scale “Control of Drugs and Alcohol” suggest that the targeted dimension has more to do with what residence hall administrators do to control drug and alcohol

TABLE 6

Summary of Control of Drugs and Alcohol Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
7	There is a high rate of alcohol consumption in this house.	Positive	.64	9.9
19	People in this hall don't know when to stop drinking.	Positive	.73	-2.2
31	There is too much use of street drugs in this house.	Positive	.77	-4.2
43	Substance abuse is a problem in this house.	Positive	.80	-8.1
54	Student use of street drugs disrupts this hall.	Positive	.68	4.9
65	There are serious drug problems in this hall.	Positive	.75	-3.2
mean				-0.5
sd				6.0

abuse. Such a scale would consist of items that look very different than those above. If the items do address the targeted trait, then I recommend renaming the scale “Drug and Alcohol Abuse.” If abuse is the focus then item 54 should be revised. The current wording misses the point of abuse and asks if use of street drugs disrupts the hall. Can drug abuse take place without obvious disruption to the hall? Because it can, the item is a poor one. I recommend that the item read: “Students in this residents abuse street drugs.” With the revision of items 7 and 54 the scale addresses the degree to which drugs and alcohol are abused by residents.

Assessing threshold structure. The threshold structure is fair. The “disagree” option does not function but for a narrow range of the continuum (Figure 5). However, improving item fit will likely improve the threshold structure.

Summary of recommendations.

1. Rewrite item 7: “Residents in this house abuse alcohol.”
2. Rewrite item 54: “Students in this residence abuse street drugs.”

Diversity Scale

This scale is designed to measure the degree to which diversity is manifest among residents.

Assessing reliability and fit. The reliability of 0.73 is acceptable. The item fit statistics, however, suggest considerable misfit (Table 7). Item 18 demonstrates extreme misfit, clearly functioning differently than the other items. The item-total correlation of 0.44 is further evidence that this item is getting at something different than the rest of the items. Item 18 has little to do with diversity other than state of origin of students. Diversity may exist where there is little difference in state of origin. Additionally, many states may be represented by a group of students who are homogenous. I would recommend the deletion of Item 18 from the scale. The effect of this deletion is inconsequential to the reliability estimate, lowering it from 0.73 to 0.72. Item 53,

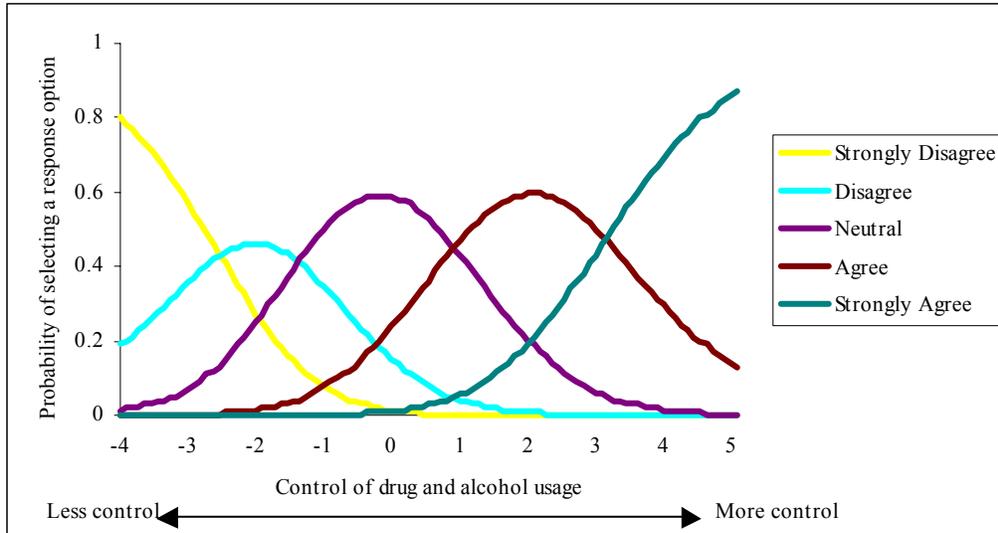


Figure 5. Control of Drugs and Alcohol Scale Category Probability Curves.

TABLE 7

Summary of Diversity Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
6	There is a lot of racial/ethnic diversity in this hall.	Positive	0.73	1.5
18	There are people from many different states living here.	Positive	0.44	9.9
30	The word "multicultural" describes the people in this hall.	Positive	0.79	-9.9
42	The lifestyles of residents here show a lot of diversity.	Positive	0.66	-8.7
53	Students and staff in this hall value diversity.	Positive	.56	-4.2
71	Quite a few people in this house are bilingual or multilingual.	Positive	0.61	0.5
mean				-1.8
sd				6.7

which has a correlation of 0.56, can also be excluded with minimal impact on reliability (0.71 without item 53).

Assessing the threshold structure. Unlike the previous scales the five-point response category structure is not functioning well with these items (Figure 6). The neutral category is functioning for only a sliver of the continuum. However, when item 18 is removed the categories function similarly to the previous scales examined.

Summary of recommendations.

1. Delete item 18.
2. Delete item 53.

Health and Wellness Scale

This scale is designed to measure the degree to which residents lead healthy lifestyles (Table 8).

Assessing reliability and fit. The reliability of .62 is lower than desirable. The item fit statistics suggest considerable misfit and hence poor reliability. The individual item fit statistics show significant misfit for items 17 and 63. The items with the highest interitem correlations are items 5 and 29. Both of these items are couched in terms of physical health and diet. Though less highly correlated, item 52 mentions alcohol use and fits along the continuum of physical health. The misfit of items 17 and 63 are likely due to respondents not directly associating sleep and mental depression with physically healthy behavior. College students seldom get a healthy amount of sleep, but may consider themselves and others as healthy nevertheless. Similarly, they may not consider mental health to be highly correlated with physical health. For example, a person may lead a physically unhealthy lifestyle without suffering from mental health problems. I do not believe that items tapping both physical and mental health can be grouped into a single

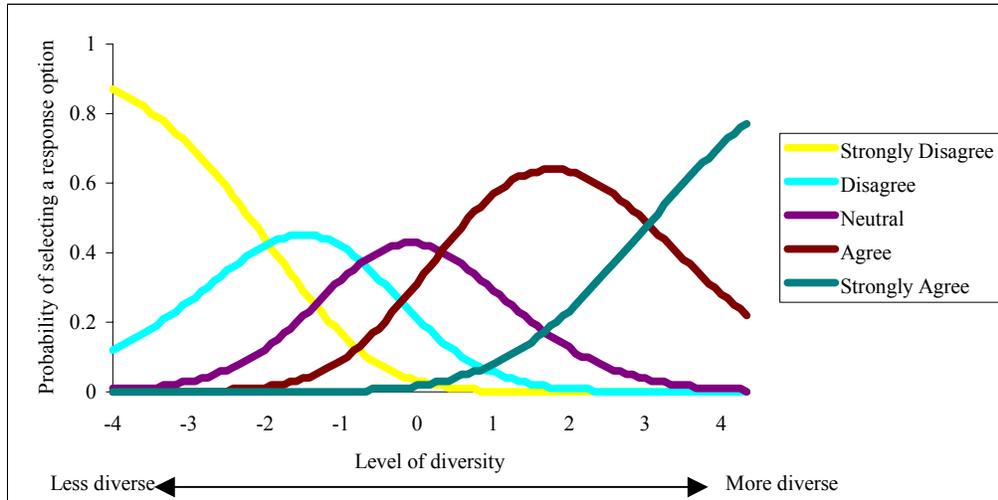


Figure 6. Diversity Scale Category Probability Curves.

TABLE 8

Summary of Health and Wellness Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
5	People here have good health habits.	Positive	0.65	-1.9
17	Students here get a healthy amount of sleep.	Positive	0.55	5.6
29	Students here eat a healthy diet.	Positive	0.70	-7.1
41	People here emphasize regular exercise and physical activity.	Positive	0.57	1.7
52	The people who live here have good driving habits (use seat belts, don't speed, don't drink and drive).	Positive	0.59	-3.8
63	Students here are not troubled by serious mental depression or suicidal thoughts.	Positive	0.53	4.8
mean				-0.1
sd				4.6

scale because they are not sufficiently unidimensional. Each domain would have to be sampled independently with a separate set of items.

Assessing the threshold structure. The five-point response category structure is functioning reasonably well with these items. Improved item fit would likely improve category functioning (Figure 7).

Summary of recommendations.

1. Create separate scales for mental and physical health, but do not attempt to combine into one scale items that tap both traits.
2. For a physical health scale delete items 17 and 63.
3. Add two or three items that tap the physical health dimension to improve the reliability of the scale. Attempt to write additional items that tap the extremes (easier/more difficult to endorse than existing items).

Physical Comfort

This scale is designed to measure the degree of physical comfort experienced by residents in their living quarters as well as in the cafeteria and the public areas of the residence hall complex.

Assessing reliability and fit. The reliability of .66 is lower than desirable although it is approaching the benchmark of .70. The item fit statistics suggest considerable misfit. Items 35, 47, and 69 misfit (Table 9). The other items focus primarily upon properly maintained facilities. If proper maintenance of residence facilities is the primary object of measurement then I recommend deleting items 35, 47, and 69 because they get at other issues. Replace the deleted items with other items that get at properly maintained facilities to improve overall reliability. If, however, the physical comfort of the facilities for the residents is the object of measurement,

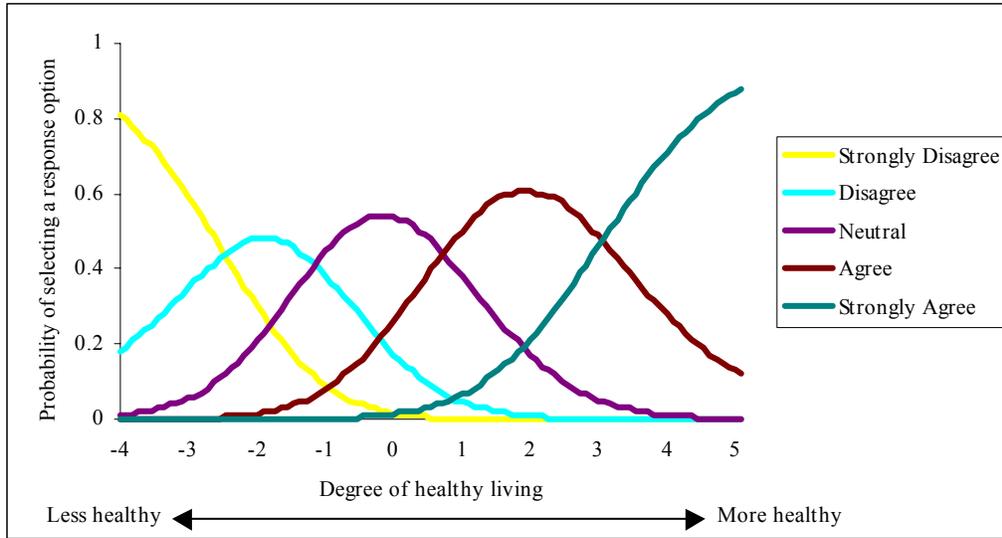


Figure 7. Health and Wellness Scale Category Probability Curves.

Table 9

Summary of Physical Comfort Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
11	This hall is kept clean and tidy.	Positive	0.61	-1.8
23	Bathroom facilities here are good.	Positive	0.69	-5.7
35	Room temperature here is kept in a comfortable range.	Positive	0.57	7.6
47	The rooms here are very academically minded.	Positive	0.60	3.5
59	The building, grounds, furniture, and other physical features are well maintained here.	Positive	0.67	-9.1
69	Students like the food here.	Positive	0.54	8.3
mean				0.5
sd				6.5

then additional items must be written. Tidiness is not equivalent to personal comfort; nor does an academically oriented residence result in personal comfort necessarily. Similarly, the food may be great, but the residence hall itself uncomfortable. If these misfitting items better tap the targeted trait then additional items will have to be written that better address that trait.

Assessing threshold structure. The item misfit makes assessing the threshold structure somewhat irrelevant. If the items do not constitute a unidimensional scale then the responses do not form a coherent picture of the underlying trait. The original six-item scale produces a threshold structure that is very problematic (Figure 8). If only items 11, 23, and 59 are analyzed, however, the threshold structure is acceptable; these three items generate a reliability of 0.62. I believe, however, that these items do not tap the intended trait.

Summary of recommendations.

1. If items 11, 23, and 59 constitute the targeted trait then add more related items to improve reliability.
2. If other traits are to be measured then several items must be written to better form a unidimensional construct of interest.
3. Reduce the response categories to four options.

Safety and Security Scale

This scale is designed to measure the degree to which residents feel safe and secure in their residence (Table 10).

Assessing reliability and fit. Respondents found all of the items relatively easy to endorse. The mean person measure (1.42) is significantly above the mean item calibration (set to 0.00 by default). This suggests the need for items that are more difficult to endorse to better sample the domain. The reliability estimate of .71 is acceptable. The item fit statistics reveal modest misfit

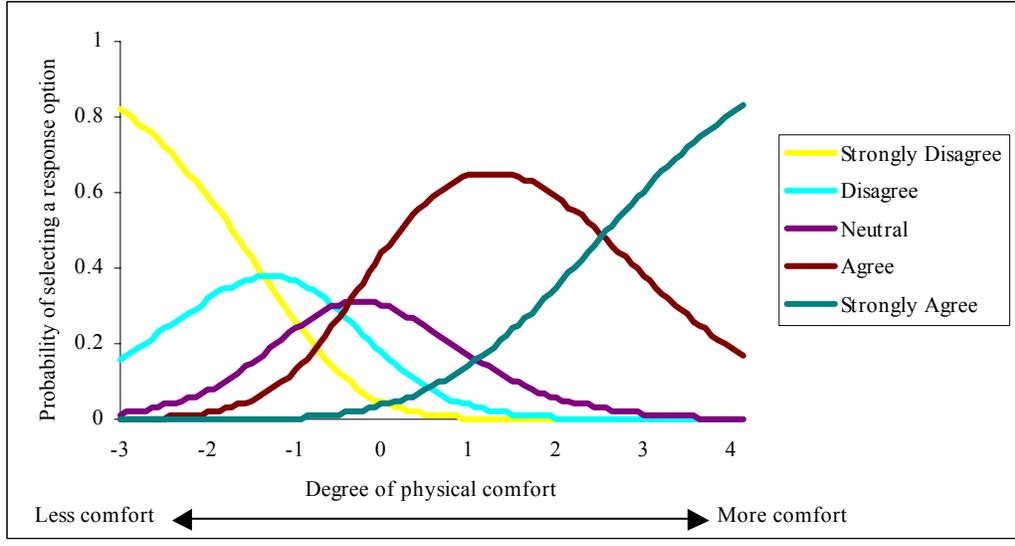


Figure 8. Physical Comfort Scale Category Probability Curves.

TABLE 10

Summary of Safety and Security Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
10	Residents here feel safe from harm or danger.	Positive	0.60	-5.0
22	Security here is good.	Positive	0.55	1.2
34	There is little or no theft in this house.	Positive	0.59	-.9
46	Perpetrating or being victimized by sexual assault or date rape is very rare in this hall.	Positive	0.68	3.1
57	There are no guns or other dangerous weapons in this hall.	Positive	0.63	4.4
68	Date rape and sexual assault are not perpetrated by or upon students in this hall.	Positive	0.67	-0.4
mean				0.4
sd				3.0

in the scale. The misfit statistics for items 46 and 57 exceed the normally accepted levels. The misfit in item 46 may be due to the wording of the item. It is considerably longer than the other items and may be misread or misunderstood. I had to read the item three times before I felt like I understood it. There is nothing in the content of the item that would suggest that it is tapping a dimension other than safety and security, so I would recommend that the item be simplified or deleted. Deleting the item would not be a significant concern given that item 68 addresses the same dimension. I would recommend: “I feel extremely safe from sexual assault in my residence hall” or “Residents in my hall are very safe from date rape.” The use of “extremely” and “very” in these two suggestions are intentional to make them more difficult to endorse. By using these words the items better tap the upper end of the scale. The problem with item 57 is that while guns or dangerous weapons may be present in the hall they are not perceived as a threat to safety and security. I would consider deleting this item or rewriting it. One option is: “I feel completely safe from injury by guns or other dangerous weapons in this hall.”

Assessing threshold structure. The “disagree” category functions for an extremely narrow range of person measures (Figure 9). While there are no reversals of thresholds, a five-response continuum does not function well with these items. Perhaps the rewritten items would improve the step structure. Use of a neutral category, however, is problematic when interpreting the results. The scale will likely be improved by dropping the neutral category.

Summary of recommendations.

1. Add items that are more difficult to endorse. This may be achieved by rewriting items 46 and 57 with more extreme wording.
2. Delete or rewrite items 46 and 57. If deleted, additional items should be written to replace them in order to maintain acceptable reliability.

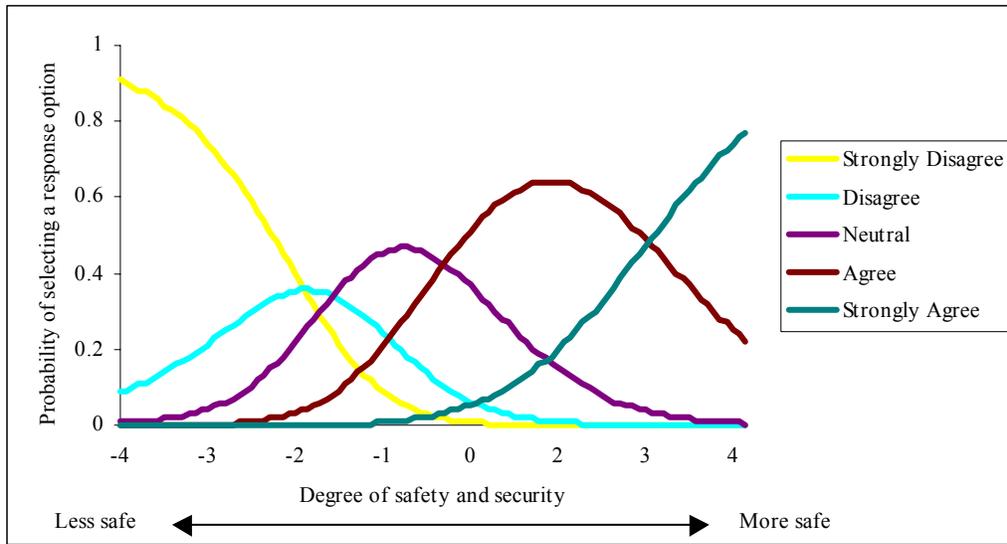


Figure 9. Safety and Security Scale Category Probability Curves.

3. Use a four-category response continuum. Delete the neutral category.

Sexual Responsibility Scale

This scale is designed to measure the degree to which residents demonstrate responsible sexual behavior.

Assessing reliability and fit. These items clearly do not form a unidimensional scale. The item fit statistics for this scale are the poorest yet encountered (Table 11). The reliability estimate is also predictably poor (0.54). The mean item calibration 0.62 is near the mean person measure of 0.00, but this is essentially irrelevant given the way in which the items fail to function together. Based on the item correlations, it appears that items 12, 24, and 48 are functioning well together to form a unidimensional scale. These items focus upon responsible sexual behaviors. Items 12 and 24 are negatively oriented, that is to say that high scores represent irresponsible sexual behavior. Item 48 is positively oriented; high scores represent responsible behavior. The use of mixed positively and negatively oriented items tend to be problematic in the development of scales. This could be avoided by rewriting the negatively oriented items with a positive orientation. For example, item 12 might read: "Very few students in this hall put themselves at risk for HIV/AIDS." Item 24 might read: "People here always practice safe sex." Items 36 and 58, however, are functioning very differently than the other items. Item 36 focuses on knowledge about sex. I believe this item is functioning differently than the others because it represents a separate dimension. For example, one may be knowledgeable about sex, but demonstrate irresponsible behavior. Item 58 focuses upon sexual activity rather than responsible sexual behavior. One may be perceived as very sexually active, but also responsible. In other words, sexual activity is not the same thing as being sexually responsible in the minds of the

TABLE 11

Summary of Sexual Responsibility Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
12	Many students in this hall put themselves at risk for HIV/AIDS	Negative	0.79	-9.9
24	People here ignore safe sex practices.	Negative	0.76	-9.9
36	Students here are very knowledgeable about sex.	Positive	0.12	9.9
48	Students in this hall are very responsible in their sexual behaviors.	Positive	0.77	-9.9
58	To be sexually active is accepted behavior for residents who live here.	Negative	0.66	7.0
mean				-2.6
sd				9.0

respondents. The fit and the reliability estimates could be improved by deleting or rewriting items 36 and 58. Item 36 might be altered to read: “Students knowledge about sex is reflected in their responsible sexual behavior.” Item 58 could be rewritten: “Sexually active residents protect themselves and their partners from sexually transmitted diseases and unwanted pregnancy.”

Assessing threshold structure. The response categories are functioning poorly (Figure 10). The “disagree” and “agree” options function for a very narrow range. I would predict, however, that the rewritten items would produce a much better threshold structure. The deletion of the neutral category may further improve the structure. Also, the use of more extreme wording in the items, such as the rewrite suggested for item 24: “People here always practice safe sex,” may tap a broader range of the trait and result in better threshold structure.

Summary of recommendations.

1. Rewrite items 12 and 24 with a positive orientation.
2. Rewrite items 36 and 58 to better address the underlying trait of interest.
3. Examine the threshold structure given data collected with the rewritten items and assess their utility. Consider deleting the neutral category.

Social Life Scale

This scale is designed to measure the social activity of the occupants of a university residence facility (Table 12).

Assessing reliability and fit. A reliability estimate of 0.71 suggests that the scale discriminates moderately well between persons. The mean person measure of 1.23 indicates that it is easy for persons to assign high scores on this scale. The mean item fit statistic is above the expected value of 0.0 suggesting that these responses are less consistent than the model predicts.

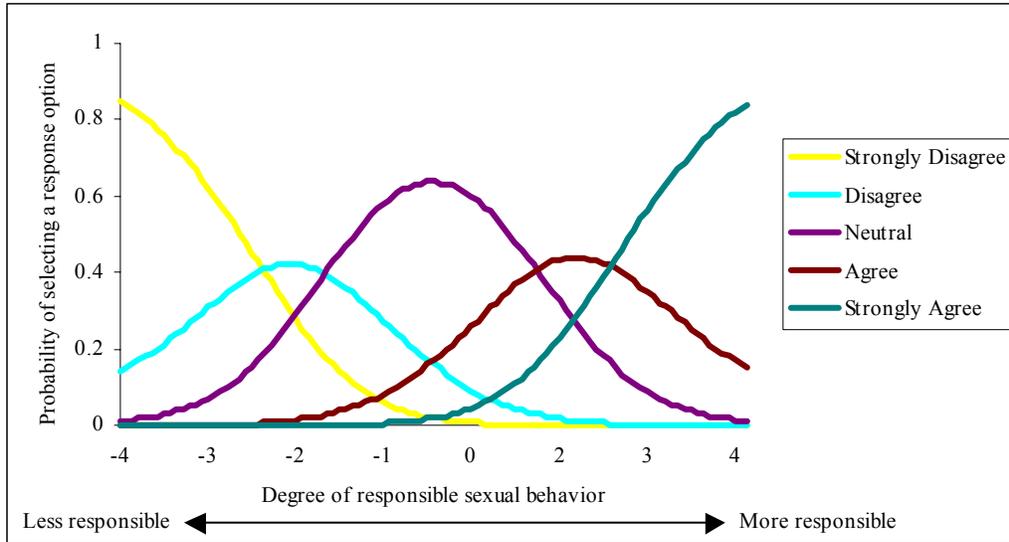


Figure 10. Sexual Responsibility Scale Category Probability Curves.

TABLE 12

Summary of Social Life Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item-Total Corr.</i>	<i>Fit Statistic</i>
2	People here have an active social life.	Positive	0.66	-2.6
16	There is a lot of emphasis on dating here.	Positive	0.59	8.1
28	Life in this hall is very socially oriented.	Positive	0.75	-5.8
40	This hall sponsors many social activities.	Positive	0.59	9.3
51	Most people here regularly go to socials and parties.	Positive	0.67	-3.9
62	Students in this hall go to a lot of sporting events, movies and concerts.	Positive	0.66	-3.4
mean				0.3
sd				6.0

The standard deviation is quite high, suggesting misfit. Items 40 and 16 have fit statistics well above the cutoff of +2.0.

Assessing threshold structure. The response categories appear to function moderately well. The overfit of the items (where the middle categories are overused), however, suggests that removing a middle category may result in better overall item fit (Figure 11).

Most of the standardized residuals for Item 40 are negatively signed suggesting that respondents are marking scores on this item that are lower than what the model predicts. This raises the question: Is there something about the item that suggests a reason for students responding in this systematically unexpected way? The item focuses on hall sponsorship of social activities. While sponsorship of social activities would theoretically contribute to a positive social environment, I would suggest that this item differs from the other items in the scale in that it focuses on the administration of the hall rather than on the social activity of the residents of the hall. The other items focus on residents' activities or their lifestyle, while item 40 focuses on sponsorship. Hall residents may have positive social interaction without their individual hall sponsoring activities. Therefore I would suggest that item 40 be excluded or rewritten to better represent the underlying construct represented by the other items. Item 16 focuses on "dating." While dating may be a central feature of social life at BYU, my experience at other universities suggests that formal dating is a peripheral aspect of what most students consider social life. Therefore I would suggest that the item be excluded or rewritten to better reflect a broader social context.

Summary of recommendations. Given the relatively small number of items in this scale and the moderate reliability estimate, I would suggest that rather than dropping the misfitting items that they be rewritten to better reflect the underlying construct or that new items be written to

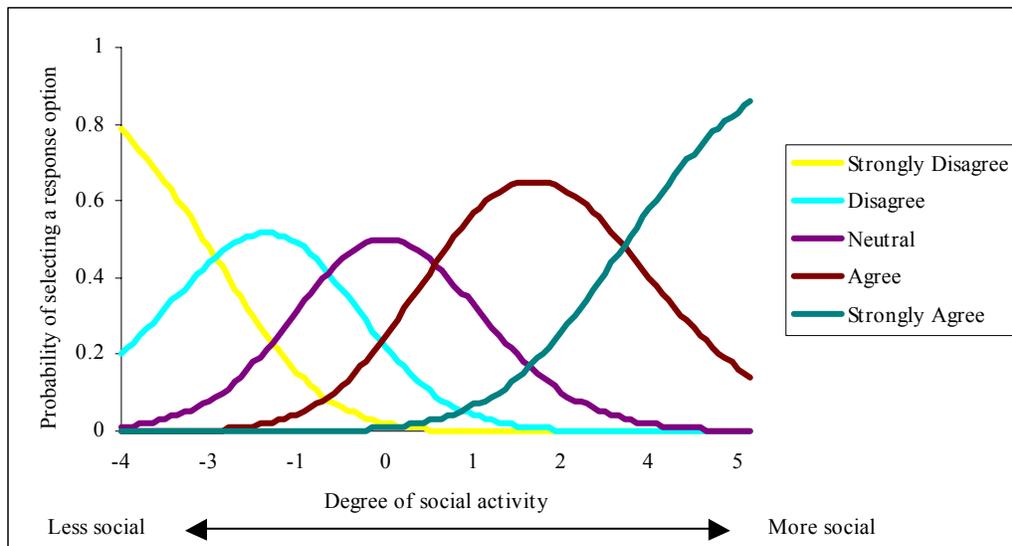


Figure 11. Social Activity Scale Category Probability Curves.

replace them. I would anticipate that with better fitting items and improved response categories six items would generate data approaching a very acceptable reliability estimate while limiting the length of the overall questionnaire. The new or rewritten items should be designed to be more difficult for respondents to endorse than the retained items so as to tap the upper end of the scale.

Student Input Scale

This scale is designed to measure the degree to which residents feel they have input into the operation of the residence hall (Table 13).

Assessing reliability and fit. The person reliability estimate of 0.76 is quite good for a scale consisting of only six items. Similarly, the item statistics reveal a relatively coherent, one-dimensional trait being measured. The item fit statistics reveal strong score correlations, further supporting the argument that a unidimensional scale has been constructed. Items 4 and 26 have the most extreme misfit, though relatively mild compared to misfitting items on the other QORLI scales. Item 4 focuses on hall government. It is possible that students may have influence without a voice in hall government. Or, it may be that hall governments do not exist in many cases resulting in responses that are systematically different than the responses to the other items. I recommend deleting or rewriting this item. Item 26 appears to be tapping a different trait. It focuses on students' taking responsibility. This is very different than students having the opportunity for input. I recommend deleting or rewriting the item to better fit the construct. A four item scale consisting of items 14, 38, 50, and 61 has a reliability of 0.73 which is extremely good considering only four items are used.

Assessing threshold structure. The response categories function well for the items constituting this scale (Figure 12).

TABLE 13

Summary of Student Input Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
4	Students here have a strong voice in hall government.	Positive	0.68	3.8
14	Students don't have much input into the rules here.	Negative	0.71	2.7
26	Students take a lot of responsibility for running this hall.	Positive	0.65	3.6
38	Students here are pretty powerless to change things.	Negative	0.74	2.6
50	This hall readily accepts feedback from students.	Positive	0.66	-0.5
61	It is easy for students here to make changes in policies and procedures.	Positive	0.72	-7.1
mean				0.0
sd				3.9

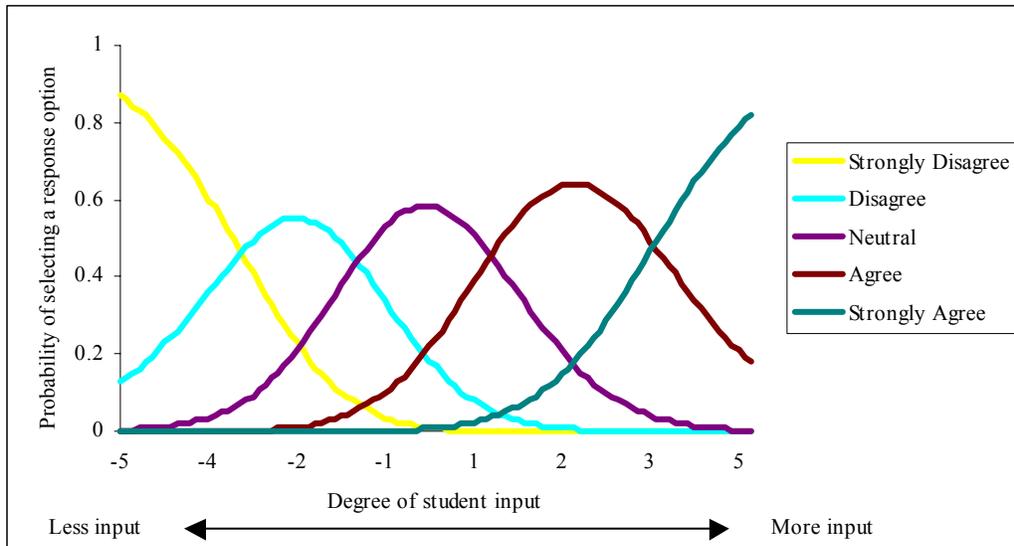


Figure 12. Student Input Scale Category Probability Curves.

Summary of recommendations.

1. Delete item 4.
2. Delete item 26. The reliability of the resulting four-item scale is acceptable.

Study Support Scale

This scale is designed to measure the degree to which students feel support for their efforts to study in the residence.

Assessing reliability and fit. The person reliability estimate of 0.73 is quite good for a scale consisting of only six items (Table 14). The item statistics, however, reveal considerable misfit in items 8 and 32. Both of these items focus on residence hall support for, or sponsoring of, study groups. This is a separate dimension than that represented by the other items. The other items focus on the ability of students to study in the residence hall. One may study effectively without a hall-sponsored study group. When items 8 and 32 are dropped from the analysis, the reliability of the scale increases to 0.78. I recommend that these items be dropped, unless hall-sponsorship of study groups is an important trait to measure. In this case, develop additional items that harmonize with that trait.

Assessing threshold structure. Threshold function is poor. The response categories would be improved by dropping the neutral option (Figure 13).

Summary of recommendations.

1. Delete item 8.
2. Delete item 32.
3. Delete the “neutral” category and use a four-item scale.

TABLE 14

Summary of Study Support Scale Content and Statistics

<i>Item Number</i>	<i>Statement</i>	<i>Orientation</i>	<i>Item- Total Corr.</i>	<i>Fit Statistic</i>
8	This hall encourages study groups.	Positive	0.56	6.2
20	Noise and other distractions make it hard to study in this hall.	Negative	0.74	-2.4
32	This hall actively supports study by organizing or providing study groups.	Positive	0.52	9.9
44	There's not much respect for serious students here.	Negative	0.65	1.5
55	It's hard to study in this house.	Negative	0.78	-9.1
66	Distractions in this hall interfere with concentration and studies.	Negative	0.75	-8.9
mean				-0.5
sd				7.1

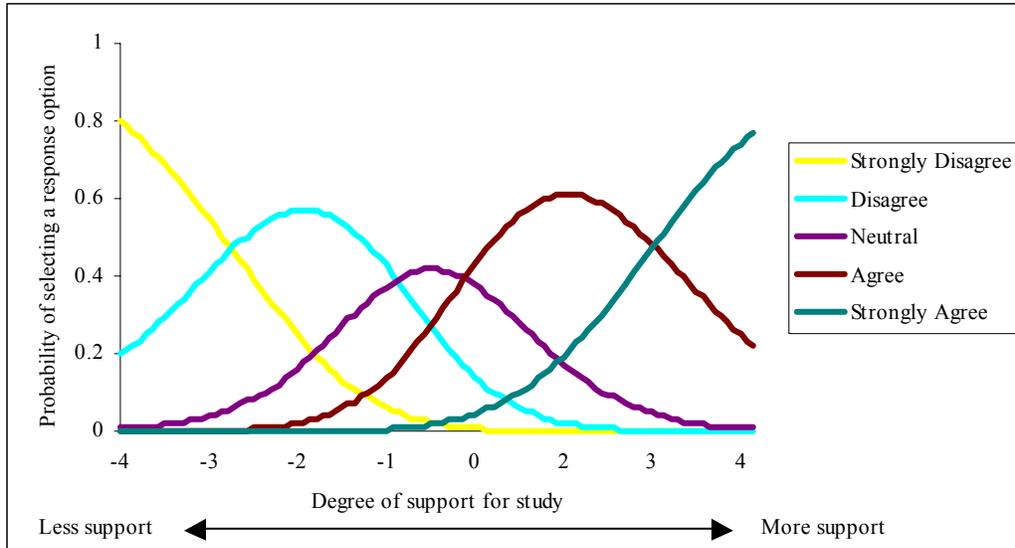


Figure 13. Study Support Scale Category Probability Curves.

Discussion and Conclusions

The QORLI Scales assess a variety of issues related to residence living on college campuses. Some of the scales consist of items that form a unique, reasonably coherent, one-dimensional construct. However, others do not. In almost every scale at least one or two items appear to be addressing a dimension other than the one targeted. Item statistics form an empirical basis upon which to judge the way in which items actually function. In instances where items have significant misfit, we have made recommendations to delete or rewrite specific items. If the deletion of items was not estimated to have a significantly negative impact on the reliability of the scale, then no recommendation was made for the addition of items (Student Input Scale). In some instances, the deletion of misfitting items actually resulted in higher reliability estimates (Study Support Scale). Some scales, for which the deletion of items was recommended, require the addition of items in order to obtain acceptable reliability estimates (Compliance Scale). If it is to be retained in the inventory, the Administrative Services Scale, consisting of only two items, needs considerable work in order to construct a meaningful scale that would meet the needs of researchers and other users.

The analyses demonstrate which items function together in meaningful ways. It may be that the items that do not fit in a particular analysis better capture the intent of the author of the scales. In these instances decisions have to be made regarding which scales are measuring the constructs of interest to the author. A weakness in the development of the QORLI scales is the absence of clearly articulated definitions of the constructs that the instrument is intended to measure. In the absence of such definitions the analyst is forced to infer from the scale title and the items what the inventory authors intended. Without a clear definition of the targeted

constructs against which individual items may be judged, the author's recommendations, although based on empirical evidence, may miss the point.

The five-point response continuum works well with some scales (Student Input Scale) and very poorly with others (Sexual Responsibility Scale). The proper functioning of the response categories is somewhat a function of item fit. As items are deleted, rewritten, or added, and fit is improved, the threshold structures will likewise improve. Nevertheless, the majority of the scales would benefit from a four-point response continuum resulting from the deletion of the neutral category. The primary reason for this conclusion is the difficulty in interpreting a neutral response. Is neutral at the center of the response continuum or does it "mean" something else? The answer to this question cannot be satisfactorily answered from the data. The second reason for recommending a four-point response continuum is the potentially improved function demonstrated by the removal of the neutral category from the analyses. I have not included category probability curves for a four-point continuum because to do so prior to addressing the issue of misfitting items would be unduly premature. Nevertheless, preliminary investigation of a four-point continuum appears promising. Finally, using one set of response categories for all scales will conserve space on the form and reduce the potential for respondents' confusion resulting from multiple sets of response categories.

The process outlined in this study must be followed by additional analyses of data gathered using the revised scales. This is an iterative process that ultimately leads to scales that are defensible *measures* of the constructs of interest. Use of the Rasch model in the development and analysis of these scales allows the author to produce person measures that are interval in nature. Although this is an underlying assumption of most statistical analyses, it is seldom tested in

practice. Social scientists frequently apply complex statistical analyses to raw data as if they were interval. This is a tenuous assumption at best.

Critique

Budget

The project required the anticipated 80 hours to complete. This included time required to prepare data for analysis, to run multiple analyses of each of the thirteen scales, to interpret the results, and to write a comprehensive report with summaries of the analyses and recommendations for improvements to each scale. The project required the use of commercial software that was owned by the university and therefore required no additional expenditure. Existing computer hardware was used. By using existing resources the cost of the project was limited to cost for the analyst's time. At \$15.00 per hour the total cost of the project came to \$1200.00.

Benefits

The benefits likely to result from this project include refined scales that are more likely to provide reliable data from which valid conclusions can be drawn concerning the quality of residence life at institutions of higher learning. Quality data will allow administrators and staff to make informed, defensible decisions about existing hall policies and procedures and potential changes that might improve the overall quality of the residence experience. Careful psychometric evaluation will also lend greater credibility to the instrument. This study is an important piece of the ongoing process of constructing a validity argument for the QORLI scales.

The benefits to the author have been numerous. The repetitive and iterative nature of the analyses has required me to become very familiar with one of the leading applications that apply the Rasch model to psychological and educational assessment. The project has also required me

to become more familiar with the philosophical and mathematical foundations of fundamental measurement, in general, and the Rasch model, in particular. I am learning to communicate more clearly and meaningfully what Rasch measurement is and why it holds advantages over classical test theory and other latent trait models.

The analyses outlined in this report focus on key factors contributing to proper scale function. These factors were examined in a simple and straightforward manner that is intended to be understandable to those with limited exposure to the complex statistical approach employed. While this is an advantage it also points to a limitation of the study. That limitation is the constrained nature of the empirical evidence presented. The WINSTEPS computer application provides much more information about scale function than was presented in this report. For example, person fit statistics are not addressed in this report, but WINSTEPS provides exhaustive data regarding persons. I consciously chose to exclude such statistics from the present report because the focus was on scale refinement rather than on inferences about the respondents. Considerable work on construct definition, as well as item and response category function, must be done before inferences are drawn about the quality of residence halls. As the scales are refined and begin to function reliably then the wealth of information provided by the analytical tool will be more fully exploited. Additionally, though beyond the scope of this study, the multi-faceted Rasch model implemented in the FACETS software, also produced by Mesa Press, holds the potential to inform users of the QORLI scales about the varying severity of the raters (residents). Such analyses would provide an even more highly refined view of how items, scales, and raters interact to produce responses upon which inferences and judgments are based.

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Appendix



Quality of Residence Life Inventory

This is a questionnaire about campus living groups such as residence halls and fraternity or sorority houses. Please describe yourself and life in your hall or house by completing each of the questions in this survey.

MARKING INSTRUCTIONS

Use a soft pencil only--a No. 2 pencil or softer. Fill response bubbles completely. Avoid making any stray marks. Erase changes, smudges or stray marks cleanly. CORRECT: ● INCORRECT: ☞ ☘ ☙ ☚

These questions will help us know a bit more about you and your situation. This information will be kept strictly confidential.

Your gender: Male Female

Your racial or ethnic identity:

Asian American African American/Black
 Hispanic/Latino Native American/Alaskan
 White/Caucasian Multi-Racial/Multi-Ethnic
 Pacific Islander Other

Your class in school: Freshman Sophomore Junior Senior Graduate Student

Your hall or house is: All Men All Women Men and Women

TODAY'S DATE			YOUR AGE	IDENTIFICATION NUMBER																
MONTH	DAY	YEAR																		
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Aug <input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Sep <input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Oct <input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Nov <input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Dec <input type="radio"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

For how many months have you lived in your current hall or house? (Fill in one response bubble, only.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

<i>Write in the name of your college or university:</i>	<i>Write in the name of your house or hall:</i>	<i>Write in the number of your floor (if applicable):</i>
<small>(Keep all writing within the lines)</small>	<small>(Keep all writing within the lines)</small>	<small>(Keep all writing within the lines)</small>

The following questions will help us understand your residence experience. Your answers will be kept strictly confidential.

Instructions: If you live in a large hall (over 100 students), think only of your floor or wing when you respond. If there are fewer than 100 students in your building, rate the whole building. If you live in a fraternity or sorority house, think of the word "house" where the word "hall" is used in the question.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

1 There is a spirit of friendship in this hall. SA A N D SD

2 People here have an active social life. SA A N D SD

3 This is an orderly house. SA A N D SD

4 Students here have a strong voice in hall government. SA A N D SD

5 People here have good health habits. SA A N D SD

6 There is a lot of racial/ethnic diversity in this hall. SA A N D SD

7 There is a high rate of alcohol consumption in this house. SA A N D SD

8 This hall encourages study groups. SA A N D SD

9 Students here enjoy discussing abstract ideas and theoretical issues. SA A N D SD

10 Residents here feel safe from harm or danger. SA A N D SD

Instructions: As you respond to these questions think only of your particular floor or wing if there are more than 100 students in your hall. If there are fewer than 100, students in your hall, think of the whole hall when you answer. Exchange the word "house" for "hall" if you live in a fraternity or sorority house.

Strongly Agree
Agree
Neutral
Disagree
Strongly Disagree

11 This hall is kept clean and tidy. SA A N D SD

12 Many students in this hall put themselves at risk for HIV/AIDS. SA A N D SD

13 People in this house care about one another. SA A N D SD

14 Students don't have much input into the rules here. SA A N D SD

15 In this hall, students support house policies and procedures. SA A N D SD

16 There is a lot of emphasis on dating here. SA A N D SD

17 Students here get a healthy amount of sleep. SA A N D SD

18 There are people from many different states living here. SA A N D SD

19 People in this hall don't know when to stop drinking. SA A N D SD

20 Noise and other distractions make it hard to study in this hall. SA A N D SD

PLEASE CONTINUE ON THE OTHER SIDE

(Continued from front side. These questions will help us understand your residence experience.)

Instructions: If you live in a large hall (over 100 students), think only of your floor or wing when you respond. If there are fewer than 100 students in your building, rate the whole building. If you live in a fraternity or sorority house, think of the word "house" where the word "hall" is used in the question.

- | | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|----------------|-------|---------|----------|-------------------|
| 21 Students in this hall go to a lot of concerts, plays, and other cultural events. | SA | A | N | D | SD |
| 22 Security here is good. | SA | A | N | D | SD |
| 23 Bathroom facilities here are good. | SA | A | N | D | SD |
| 24 People here ignore safe sex practices. | SA | A | N | D | SD |
| 25 People in this hall show a lot of trust in one another. | SA | A | N | D | SD |
| 26 Students take a lot of responsibility for running this hall. | SA | A | N | D | SD |
| 27 Defacing or destroying furniture, fixtures or other property is very rare in this hall. | SA | A | N | D | SD |
| 28 Life in this hall is very socially oriented. | SA | A | N | D | SD |
| 29 Students here eat a healthy diet. | SA | A | N | D | SD |
| 30 The word "multicultural" describes the people in this hall. | SA | A | N | D | SD |
| 31 There is too much use of street drugs in this house. | SA | A | N | D | SD |
| 32 This hall actively supports study by organizing or providing study groups. | SA | A | N | D | SD |
| 33 There is a very active "life of the mind" in this house. | SA | A | N | D | SD |
| 34 There is little or no theft in this house. | SA | A | N | D | SD |
| 35 Room temperature here is kept in a comfortable range. | SA | A | N | D | SD |
| 36 Students here are very knowledgeable about sex. | SA | A | N | D | SD |
| 37 In this house people do not give a lot of support to one another. | SA | A | N | D | SD |
| 38 Students here are pretty powerless to change things. | SA | A | N | D | SD |
| 39 This house is well organized and runs smoothly. | SA | A | N | D | SD |
| 40 This hall sponsors many social activities. | SA | A | N | D | SD |
| 41 People here emphasize regular exercise and physical activity. | SA | A | N | D | SD |
| 42 The lifestyles of residents here show a lot of diversity. | SA | A | N | D | SD |
| 43 Substance abuse is a problem in this house. | SA | A | N | D | SD |
| 44 There's not much respect for serious students here. | SA | A | N | D | SD |
| 45 Residents here are very academically minded. | SA | A | N | D | SD |
| 46 Perpetrating or being victimized by sexual assault or date rape is very rare in this hall. | SA | A | N | D | SD |
| 47 The rooms here are adequate in size. | SA | A | N | D | SD |
| 48 Students in this hall are very responsible in their sexual behaviors. | SA | A | N | D | SD |

Instructions: As you respond to these questions think only of your particular floor or wing if there are more than 100 students in your hall. If there are fewer than 100, students in your hall, think of the whole hall when you answer. Exchange the word "house" for "hall" if you live in a fraternity or sorority house.

- | | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|---|----------------|-------|---------|----------|-------------------|
| 49 Students don't seem to know each other very well here. | SA | A | N | D | SD |
| 50 This hall readily accepts feedback from students. | SA | A | N | D | SD |
| 51 Most people here regularly go to socials and parties. | SA | A | N | D | SD |
| 52 The people who live here have good driving habits (use seat belts, don't speed, don't drink and drive). | SA | A | N | D | SD |
| 53 Students and staff in this hall value diversity. | SA | A | N | D | SD |
| 54 Student use of street drugs disrupts this hall. | SA | A | N | D | SD |
| 55 It's hard to study in this house. | SA | A | N | D | SD |
| 56 People here read a lot for intellectual interest and enrichment beyond class assignments. | SA | A | N | D | SD |
| 57 There are no guns or other dangerous weapons in this hall. | SA | A | N | D | SD |
| 58 To be sexually active is accepted behavior for residents who live here. | SA | A | N | D | SD |
| 59 The building, grounds, furniture, and other physical features are well maintained here. | SA | A | N | D | SD |
| 60 People here seem to avoid one another. | SA | A | N | D | SD |
| 61 It is easy for students here to make changes in policies and procedures. | SA | A | N | D | SD |
| 62 Students in this hall go to a lot of sporting events, movies and concerts. | SA | A | N | D | SD |
| 63 Students here are not troubled by serious mental depression or suicidal thoughts. | SA | A | N | D | SD |
| 64 The process for admission to housing, roommate selection and room assignment here is complicated and bothersome. | SA | A | N | D | SD |
| 65 There are serious drug problems in this hall. | SA | A | N | D | SD |
| 66 Distractions in this hall interfere with concentration and studies. | SA | A | N | D | SD |
| 67 People in this hall who achieve academic excellence are recognized and admired. | SA | A | N | D | SD |
| 68 Date rape and sexual assault are not perpetrated by or upon students in this hall. | SA | A | N | D | SD |
| 69 Students like the food here. | SA | A | N | D | SD |
| 70 Administrative procedures here (admission to housing, room assignment, paying bills) is a smooth and easy process. | SA | A | N | D | SD |
| 71 Quite a few people in this house are bilingual or multilingual. | SA | A | N | D | SD |

72 On a scale of 1 to 10, my overall satisfaction with this hall is 1 2 3 4 5 6 7 8 9 10
 VERY LOW NEUTRAL VERY HIGH

PLEASE DO NOT WRITE IN THIS AREA



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