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YOUNG ADULT CANCER SURVIVORS' SATISFACTION WITH INTERPERSONAL LIFE CHANGES

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Abstract:

This study looked at the life satisfaction of young adult cancer survivors in comparison to adult cancer survivors. Satisfaction was focused on three separate domains: romantic relationships, fertility and sexuality, and family and friendships. 292 participants completed the survey, which included measures such as the Zebrack Cancer Impact Scale, the Ferrans and Powers Quality of Life Index, the Post-Traumatic Growth Scale, and a new measure developed for this study. Bivariate correlation analyses were used to identify significant relationships among the domains. It was determined that there was no significant difference between young adult cancer survivors and adult cancer survivors in terms of satisfaction in life among the areas previously mentioned. However, several other significant correlations were found between the satisfaction domains and other items on the survey. Future studies would benefit from using healthy controls for both young adults and adults to determine if there are any between-group differences.

Introduction:

Romantic relationships and friendships can be seen in the general population every day. However, when a cancer diagnosis occurs, making and maintaining these relationships becomes more difficult. Several studies have demonstrated that cancer survivors have a more difficult time forming relationships than their healthy counterparts (Thompson, Marsland, Marshal, & Tersak, 2009; Syse & Aas, 2009; Evan, Kaufman, Cook, & Zeltzer, 2006). This study takes an in-depth look at various aspects of relationships and how a cancer diagnosis at different ages has affected those survivors.

Present research findings on young adult cancer survivors' relationships are conflictual. Enskar and Bertero reported in their 2010 study of survivors of childhood cancers that 10% of participants reported a more positive interaction with others due to their experience with cancer. However, a lower percentage of these survivors are married or living with a significant other than their peers of the same age (Enskar & Bertero, 2010; Langeveld, Stam, Grootenhuis, & Last, 2002). Enskar and Bertero also found that these young adult cancer survivors reported more difficulty in finding a romantic partner than their peers. This was attributed by the authors to a decreased self-image from effects of the cancer treatment.

Part of the difficulties that young adult cancer survivors may have in relationships is due to a lack of social knowledge (Evan et al., 2006). Because of hospital stays and possible cognitive impairments, cancer survivors tend to be isolated from peers of their own age and miss out on learning some of the vital social rules for initiating relationships (Evan et al., 2006; Thompson et al., 2009; Thomas, Seymour, O'Brien, Sawyer, & Ashley, 2006). This lack of social knowledge can lead to further problems down the road when these young adults start to venture into activities in the sexual domain including, but not limited to, dating, marriage, and

sexuality. They lack information from their peers and therefore go into this realm without safety information.

Thompson and colleagues (2009) found that adolescent survivors report fewer romantic relationships and more intense distress when the relationship ended. Several explanations for this finding have been offered: adolescent survivors may engage in fewer relationships because they are afraid of being intimately involved, or the relationships of adolescent survivors are stronger and therefore they stay in relationships longer. Thompson et al. (2009) also found that treatment intensity, as well as trait anxiety, were inversely related to relationship satisfaction. Researchers have also found that adolescent survivors surveyed tend to act more cautious and guarded in romantic relationships (Whyte & Smith, 1997).

Lower self esteem may also be a determinant of lower relationship satisfaction with young adult survivors. This population is likely to be stuck in the identity foreclosure stage in which they don't explore for their own identity, but simply adopt the identity of their healthy peers or one that their parents have chosen for them (Evan et al., 2006). Negative body image comes from effects of treatment, varying from scars to retained fluid and weight. The more negative the body image, the lower the self esteem, making it more difficult to enter into a trusting romantic relationship (Evan et al., 2006; Enskar & Bertero, 2010). Fertility loss can also lead to a decrease in self esteem, which has been associated with damage to intimate relationships and marriages (Zebrack, Casillas, Nohr, Adams, & Zeltzer, 2004).

In addition to self esteem, cognitive components can also be a determining factor in relationship formation after diagnosis and treatment. Adolescents diagnosed with cancer function at a higher cognitive level and are able to understand more of what is occurring than younger children who are diagnosed (Thomas et al., 2006). Young adults comprehend the

impact cancer will have on their life. Younger children do not fully understand what is happening and may simply cope with the immediate pain and move on, never looking ahead to the future. Adolescents not only deal with the current treatment, but also build up an image in their heads of what their futures will be like (Thompson et al., 2009).

In regards to fertility, it has been shown that adolescent cancer survivors report having fewer children than their same age peers (Langeveld et al., 2002). Most cancer survivors who were diagnosed in adolescence are unaware of their fertility status because of conflicting messages from doctors and sometimes even no information whatsoever. Survivors who are told that they are infertile also struggle with this information in regards to romantic relationships (Zebrack et al., 2004). Especially as age increases, most people are looking to settle down and start a family. Some survivors shy away from entering into relationships because they know that providing a child is something they cannot give due to fertility issues and do not want to disappoint their romantic partner (Zebrack et al., 2004). Those who do tell their significant other about their fertility problems still find it hard to come to terms with this devastating information and relationships sometimes end because of it (Zebrack et al., 2004).

Sexual functioning as a component of relationship satisfaction has also been studied. Young adult survivors have been found to undergo more stress in regards to sexual dysfunction and reproductive related areas than older survivors (Zebrack, Foley, Wittman, & Leonard, 2010). Zebrack and colleagues delved further into this topic to find that 43% of young adult survivors reported at least "'a little bit of a problem'" in the sexual functioning area (Zebrack et al., 2010). This same study also found that females were twice as likely to report dysfunction in the sexual area than males, perhaps due to self image, infertility, and other cognitive components (Zebrack et al., 2010).

However, research has shown that adolescent survivors may experience a positive posttraumatic growth from their cancer experience, leading to a thirst for life and positive self esteem (Evan et al, 2006). One of the best ways to promote this growth is through personal control. Giving the young adults the power to choose what day treatment will be on or when in a specific time period they can take medications shows them that they still have power over some portion of their lives and can still make decisions that are germane (Sabiston, McDonough, & Crocker, 2007).

Although fertility remains an issue, informing adolescent survivors about their status can help to alleviate the anxiety and stress caused by the unknown. In addition, when informed about the potential fertility risks from cancer treatment, the adolescent should be given options for the future such as sperm banking or freezing eggs to keep the chance of biological children alive. If this is not an option, other avenues for expanding future families should be talked about such as surrogates and adoption (Zebrack et al., 2004).

While there has been research done in the past regarding sexual function and fertility, this research has been specific to diagnosis. There is a lack of research regarding age of diagnosis and the impact that this can have on a survivor in the long run. For purposes of this research, young adults will be defined as those who were age 25 and under at the time of their cancer diagnosis.

This research attempted to evaluate the relationship formation of young adult cancer survivors as compared to somewhat older survivors using various measures including the Zebrack Cancer Impact Scale, Positive States of Mind, Positive Traumatic Growth Scale, the Ferrans and Powers Quality of Life index. In addition, a new measure, the Late Adolescence

Young Adult Satisfaction Scale, was developed for this study specifically focusing on life satisfaction after being diagnosed with cancer.

It is hypothesized that age at diagnosis will be positively correlated with romantic relationship satisfaction, as well as fertility and sexual satisfaction. This hypothesis comes from literature as cited above showing that young adults with a cancer diagnosis have a more difficult time entering in to a romantic relationship as well as dealing with fertility and sexual dysfunction issues. However, it is also hypothesized that age of diagnosis will be negatively correlated with satisfaction with other relationships including friends and family which stems from young adults relying more on their friends and family for support during their diagnosis and treatment (Enskar & Bertero, 2010). In other words, satisfaction with romantic relationships, fertility, and sexuality will be lower than satisfaction with friendships and family.

Method:

Procedures

Data were obtained through paper and pencil survey at the start of the research process. 48 of the 400 participants to whom the survey was mailed completed it. These individuals were recruited from the Cancer Registry at Hartford Hospital, Hartford, Connecticut. A second mailing to the registry required those interested to return a signed copy of the HIPPA and consent and once this was received, a personalized email link was sent to them with the survey. 69 of the 691 people this second mailing was sent to responded for a rate of 10%.

In May 2010, a version of the survey was posted online. Although advertising through flyers and other online venues, only six surveys were completed. In October, the advertisements were revised to portray a $20 compensation for partaking in the survey. A PlanetCancer email

invitation led to 67 people sending the consent forms in for compensation and 120 completing the anonymous version of the online survey.

In total, 387 participants began the survey with 308 completing the first part of the measure, and a total of 292 completing the entire measure.

Participants

In the final sample (*N*=292), *M* age was 33.32 years (*SD*=7.14), ranging from 18 to 47 years. Mean age at diagnosis was 29.51 years (*SD*=7.09), ranging from 15 to 39 (see Table 2). Mean years since diagnosis was 3.77 (*SD*=2.79), ranging from 0 to 16 years. The majority of participants were between 1 and 4 years post-diagnosis (*N*=189, 66%).

The sample was 80% women (*N*=235), and 92% identified as Caucasian/White (*N*=268). Three percent identified as African American/Black (*N*=8), 2% as Asian/Pacific Islander (*N*=6), one person as Native American/Alaska Native, and 3% as Other (*N*=9), and two individuals did not provide race or ethnicity. Five percent also identified as Hispanic/Latino/a (*N*=13). The majority was married (*N*=131, 45%) or cohabiting (*N*=27, 9%), and 38% were single (*N*=109), with 8% divorced (*N*=22), and one widowed (two individuals did not provide marital status). The majority of the sample had no children (*N*=168, 58%), and three individuals did not say. Nearly one third reported a family income over $100K (*N*=77, 27%), and most had a college degree (*N*=125, 43%) or graduate degree (*N*=78, 27%).

The majority of participants were breast cancer survivors (*N*=71, 24 %). Most had completed primary treatment (*N*=272, 94%), and 21% reported evidence of recurrence (*N*=58). A specific break down of cancer typology can be seen in Table 3.

Measures

Zebrack Cancer Impact Scale

Impact of cancer on life was measured using Zebrack's 82-item scale. Questions were asked on a five point scale ranging from strongly disagree to strongly agree. For purposes of this research, only 41 of these items were used and then further broken down to subscales, four of which were used for this paper. These subscales consist of health awareness, body changes, life interference, and value of relationships. Sample items on each scale include (in the same order) "I am more aware of physical problems or changes in my body since having had cancer," "I worry about how my body looks," "On-going cancer-related or treatment-related symptoms interfere with my life," and "I place a higher value on my relationships with family or friends than I did before having had cancer," (Zebrack, et.al, 2006).

Ferrans and Powers Quality of Life Index

The Ferrans and Powers Quality of Life Index is a two part scale. The first part measures satisfaction of life using 33 items on a 6 point scale ranging from very dissatisfied to very satisfied. The second part measures importance of life using 33 items on a 6 point scale ranging from very unimportant to very important. These 33 items form four subscales, two of which were used for this research. The first subscale used regards the family and is made up of items including satisfaction/importance with children and/or spouse. The second subscale is the health and functioning subscale asking about items such as satisfaction/importance of sex life~~,~~ (Ferrans & Powers, 1985).

Post-Traumatic Growth Scale

Tedeschi and Calhoun's Post-Traumatic Growth Scale is a 21 item measure using a 6 point Likert scale ranging from did not experience to experienced to a very great degree about specific life changes following a trauma, cancer specifically for this research. The scale can be

broken down to five subscales, with the one used for this research being the relating to others factor made up of items such as "I have a greater sense of closeness with others," and "I put more effort into my relationships," (Tedeschi & Calhoun, 1996).

Late Adolescence Young Adult Cancer Scale

A new measure was developed for this study specifically focusing on life satisfaction after being diagnosed with cancer. Items on the new measure were developed from conversation with experts and review of the current literature. The measure had two foci: impact of cancer on life and satisfaction of life after cancer. For purposes of this study, only the satisfaction data will be used and referred to. The original measure was made up of 86 items and after duplicates were removed, totaled 80 items. However, duplicates were not taken out until after the survey had been completed by all participants. To account for these duplicate items, the participants' first response was counted and the second one was removed from the data set.

Forty-one of the eighty items were used to make up fifteen factors which were designated to reflect relevant domains of Health Related Quality of Life based on expert opinion and the items chosen to reflect face validity of those domains. A preliminary Confirmatory Factor Analysis using the satisfaction items evinced acceptable model fit, and preliminary analyses indicated construct validity. The factors used for this research were fertility, sexuality, relationship, friends, and family. Each of these factors consisted of three items. It should be noted that on the family scale, one item was added that was not originally on the study so the factor was run on two items. The fourteen items used for these factors can be seen in Table 1.

Statistical Analysis

Data from the surveys was analyzed using SPSS version 19.0. Data using "0" as "Not Applicable" were qualified as missing values and therefore did not affect the ending calculations and averages.

Results:

General Findings:

Significant correlations were found between age of diagnosis and if the subject had children ($r = .542$, $p < .01$) as well as age of diagnosis and cancer site ($r = -.393$, $p < .01$). Cancer sites were each given on number on the survey which can be seen on Table 3. This correlation shows that as age increased, the cancer site number decreased. In other words, older individuals were more likely to have testicular, breast, prostate, or lung cancer. This will be further explained in the discussion. No significant correlations were found in regards to gender so it will not be addressed further. A significant negative correlation was found between age of diagnosis and life interferences ($r = -.044$, $p < .01$). All correlation information can be found in Table 4.

Hypothesis 1: Satisfaction with Romantic Relationships

The first hypothesis stated that age would be positively correlated with relationship satisfaction. This hypothesis was not supported. No correlation was found between age of diagnosis and relationship satisfaction ($r = -.012$, $p > .05$). One significant result that was found in regards to this hypothesis was a negative correlation between age of diagnosis and relating to others measured by the PTGI ($r = -.127$, $p < .05$).

Further analyses were completed comparing relationship satisfaction with items on the Zebrack Cancer Impact Scale. Negative correlations were found for impact of body changes (r =

-.449, p< .01) as well as life interferences (r = -.400, p< .01). In addition, when relationship satisfaction was tested against the PTGI factor of relating to others, a significant positive correlation was found (r = .192, p< .01). It should also be noted that significant positive correlations were found between relationship satisfaction and satisfaction of fertility (r = .289, p< .01) and sexuality (r = .759, p< .01).

Hypothesis 2: Satisfaction with Fertility and Sexuality

The second hypothesis stated that age would be positively correlated with fertility and sexuality satisfaction. This hypothesis was not supported by the data. Bivariate analysis showed a negative correlation between age of diagnosis and sexual satisfaction (r = -.135, p< .05). There was no correlation noted between fertility and age of diagnosis (r = .022, p> .05), however there was a significant positive correlation between age of diagnosis and if the participant had children (r = .542, p< .01).

Further analyses were run measuring satisfaction with fertility and sexuality against other domains. Negative correlations for fertility satisfaction were found for impacts on body changes (r = -.346, p< .01), life interference (r = -.406, p< .01), and value of relationships (r = -.171, p< .01). In addition, negative correlations were also found for sexual satisfaction for impacts on body changes (r = -.479, p< .01) and life interference (r = -.470, p< .01). It should also be noted that a positive correlation was found between fertility and sexual satisfaction (r = .335, p< .01).

Hypothesis 3: Satisfaction with Other Relationships

The third hypothesis stated that age would be negatively correlated with satisfaction with other relationships. A significant negative correlation was found between age of diagnosis and the PTGI factor of relating to others (r = -.127, p< .05). Trends towards significance were found between age of diagnosis and family satisfaction (r = -.053, p> .05), friendship satisfaction (r = -

.021, $p > .05$) and value of relationships ($r = -.069$, $p > .05$). However, a significant positive correlation was found between Ferrans and Powers Family Satisfaction and age of diagnosis ($r = .316$, $p < .01$). With conflicted findings, it cannot be stated for certain if this hypothesis was supported or not.

Additional analysis was done to investigate satisfaction with other relationships further. Significant negative correlations were found between impact of body changes and life interferences in terms of both friendship and family satisfaction. A significant correlation was also found between value of relationships and friendship ($r = .131$, $p < .05$) and family satisfaction ($r = .191$, $p < .01$). Satisfaction with friendships was also found to be positively correlated to family satisfaction ($r = .638$, $p < .01$). Significant positive correlations were also found between friendship and family satisfaction, as well as Ferrans and Powers family satisfaction, and the PTGI factor of relating to others (see Table 3 for significance numbers).

Discussion:

This study set out to find how age of diagnosis affected romantic relationship satisfaction, fertility and sexuality satisfaction, and satisfaction with friendships and family. While not all hypotheses were supported, some interesting conclusions were reached.

Contrary to the first hypothesis that there would be a positive correlation between age of diagnosis and romantic relationship satisfaction, no correlation was found between these two factors. This finding opposed what Thompson and colleagues found in their 2009 study that the older the age of diagnosis, the less relationship satisfaction there would be. However, in terms of positive growth, it was found that as the age of diagnosis increased, relating to others decreased,

showing that young adults' perspectives on life and growth are affected more than older adults (Evan, et al., 2006).

In terms of general romantic relationship, it was found that as body changes and life interferences decreased, relationship satisfaction increased. This is in line with previous research that decreased self esteem due to body changes decreases satisfaction in romantic relationships (Evan et al., 2006). It was surprising that young adults did not have significantly different body change impacts than their older counterparts because adolescents are more highly concerned about body image and social status (Enskar & Bertero, 2010). However, there was a significant difference in life interferences. Young adults were found to have more life interference impacts than older adults, potentially leading to their increased positive growth after trauma (here considered the cancer diagnosis). These findings have been represented in other studies as well and it is believed that age at time of the trauma is the determining factor in growth response (Meyerson, Grant, Carter, Kilmer, 2011).

Analysis also determined that as romantic relationship satisfaction increased, satisfaction of fertility and satisfaction increased as well. Decreased sexual dysfunction has been found to increase satisfaction in other domains (Zebrack et al., 2010) so it is logical that it would also increase satisfaction in a romantic relationship as well. In addition, increased satisfaction with fertility has been linked to higher self-esteem, in turn being tied to romantic relationship satisfaction (Zebrack et al., 2004). It is hard to say whether these findings are solely related to age at diagnosis, or just general findings in terms of cancer survivors because of the lack of significant correlations. It is shown in the correlation table, however, that those with children already have more satisfaction with fertility and those with children are older than those without.

This can lead to the conclusion that young adults have less satisfaction with fertility, although no correlation was found during analysis.

However, it was found that sexual satisfaction decreased as age of diagnosis increased. It was also determined that fertility satisfaction increased as sexual satisfaction increased as well. One possible explanation for the negative correlation between age of diagnosis and sexual satisfaction is that older adults may not be partaking in as much sexual activity anymore as their younger counterparts. Eker and Acikgoz (2011) found a significant decrease in sexual activity and satisfaction among older adults after a cancer diagnosis. This study supports the findings from the current research and gives plausible reason for the cause. Furthermore, it was found that fertility and sexual satisfaction decreased as body changes and life interferences increased. This is in line with other research finding the same effects (Evan et al., 2006; Whyte & Smith, 1997; Enskar & Bertero, 2010; Pendley, Dahlquist, & Dreyer, 1997).

In terms of satisfaction with friendships and family, conflicting results were found by this study. For one, as age of diagnosis decreased, relating to others increased. However, as age of diagnosis increased, quality of family satisfaction as measured by the Ferrans and Powers scale increased as well. In contrast, a trend toward family satisfaction decreasing as age of diagnosis increased was found using the measure developed for this study. One possible reason for having stronger family satisfaction for those with younger ages of diagnosis is that they rely on their family a lot more than someone who can support themselves independently. At the age of fifteen, a young adult cannot transport himself to a doctor's appointment or financially pay for the expensive costs of treatment. Family is a huge role in the process of treatment and the support that they give leads to a higher satisfaction (Enskar & Bertero, 2010). Furthermore, adolescents diagnosed with cancer tend to spend more time at home before moving out on their

own, showing a higher reliance on family support (Langeveld et al., 2002). On the contrary, there are also [plausible explanations for an appearance of a positive correlation. Patients who were older at time of diagnosis were more likely to be married and have established families. It has been found that family support for older adults is extremely important and prevalent (Arora, Rutten, Gustafson, Moser, & Hawkins, 2007).

In terms of friendship satisfaction, it was found that those who value relationships more have a higher satisfaction of friendships as well as those who have increased family satisfaction. Another notable finding was that those who showed higher satisfaction of family and friendships also related to others better in terms of the PTGI scale. From the above discussion it has been shown that adolescents show higher growth after a cancer diagnosis, so it follows that they would show higher satisfaction in their relationships although significant findings were not discovered in this study. Some possible explanations for not uncovering a significant trend may have to do with body changes and life interferences. A moderate negative correlation was found between these factors and satisfaction of friendships. As previously stated, self esteem in adolescence is a large player in social relationships. Body changes related to diagnosis can have a negative effect on self esteem, leading to decreased friendship satisfaction (Evan, et al., 2006). This theory is supported by the correlations found in Table 3. Whyte and Smith (1997) proposed that young adults diagnosed with cancer may feel less socially competent than their peers and do not make friendships as easily which is a possible explanation why a significant correlation was not found. This explanation can also give cause to the reason behind why there was a significant correlation between the value of relationships and satisfaction with friendships. If young adult cancer survivors have a difficult time making new friendships (Whyte & Smith, 1997), they are likely to value the ones that they already have even more.

In summary, this research found no correlation between age of diagnosis and romantic relationship, fertility, or sexual satisfaction. Trends towards significance were found between age of diagnosis and friendship and family satisfaction. This study was limited in the sense that a majority of the participant pool was older than 25 at diagnosis. Because there were about two thirds more participants in the older segment, this could have affected how the data were correlated. Another limitation is that this study did not focus specifically on cancer site. While it was included in the data set, there were not strong enough samples in all of the dimensions to run appropriate correlations. It should also be noted that the survey taken was extensive which may have led to participants reducing their focus on properly answering the questions.

Although no independently significant findings were discovered in this research, this article marks a step towards understand the support and interventions young adult cancer patients need at time of diagnosis and during treatment. Along with other research completed and studies that will be done in the future, it is hoped that the world will one day understand the complexity of a cancer diagnosis and the impact that it has on a life.

Table 1- Factors on the Late Adolescent Young Adult Satisfaction Scale

Fertility
1. My ability to have children
2. My fertility
3. My control over my reproductive ability

Sexuality
1. My comfort with physical intimacy
2. My sexual functioning
3. My desire for physical intimacy

Relationship
1. My ability to express affection to a romantic partner
2. My attraction to a partner
3. My ability to begin or maintain a romantic relationship

Friends
1. My social life
2. My relationships with my friends
3. My ability to form new friendships

Family
1. My relationships with my family
2. My ability to care for my family

Table 2- Age Diagnosed with Cancer

Age Diagnosed with Cancer	Total	Percent
15-20	38	13.0
21-25	48	16.4
26-30	64	22.0
31-35	60	20.6
36-39	79	27.0
Missing	3	1.00
Total	**292**	**100.0**

Table 3- Cancer Type Demographics

Cancer Type	Number on Survey	Total	Percent
Testicular	0	9	3.10
Breast	1	71	24.3
Lung	2	1	0.30
Prostate	3	1	0.30
Colon/Rectal	4	9	3.10
Cervix/Uterus/Ovary	5	27	9.20
Stomach/Intestines	6	0	0.00
Brain	7	16	5.50
Leukemia/Blood	8	19	6.50
Lymphoma	9	63	21.6
Skin, Basal Cell, non-Melanoma	10	2	0.70
Skin, Melanoma	11	7	2.40
Other	12	64	21.9
Missing		3	1.00
Total		**292**	**100.0**

Table 4- Zero Order Correlations Between Measures

				Zebrack Impact Scale				LAYA Satisfaction Scale				Ferrans & Powers		PTGI Scale
	Kids	Age	Site	BC	LI	VR	Fer	Sex	Rlshp	Friends	Family	Family	Health	Relate
	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	-.043	-.072	.063	-.095	-.090	-.110	.038	.008	-.049	-.092	-.109	.046	.094	-.088
2. Children	-	.542**	-.195**	-.012	-.113	-.014	.233**	-.013	.097	.040	.130*	.647**	.090	-.032
3. Age Diagnosed		-	-.393**	.072	-.044**	-.069	.022	-.135*	-.012	-.021	-.053	.316**	-.055	-.127*
4. Cancer Site			-	-.116**	.003	-.118*	.113	.183**	.111	.070	.064	-.116	.063	-.043
5. BC				-	.632**	.121*	-.346**	-.479**	-.449**	-.404**	-.240**	-.253**	-.566**	-.004
6. LI					-	.093	-.406**	-.470**	-.400**	-.385**	-.313**	-.314**	-.624**	.003
7. VR						-	-.171**	.075	.108	.131*	.191**	.030	.016	.563**
8. Fertility							-	.335**	.289**	.268**	.178**	.355**	.400**	-.034
9. Sexuality								-	.759**	.530**	.335**	.262**	.535**	.120*
10. Relationship									-	.625**	.473**	.450**	.576**	.192**
11. Friendship										-	.638**	.342**	.550**	.357**
12. Family											-	.379**	.495**	.345**
13. Family Satis.												-	.515**	.070
14. Health Satis.													-	.186**
15. Relating to Others														-

**= Correlation is significant at the 0.01 level (2-tailed)
*= Correlation is significant at the 0.05 level (2-tailed).
Notes: BC= Body changes
LI= Life Interferences
VR= Value of Relationships
Gender: Male= 0, Female=1

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