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# Disordered Eating in First Year University Students - A Qualitative Study Exploring Student and Supportive Service Needs

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## Abstract

The study reports on a qualitative study exploring disordered eating in younger first-year students studying for professional health care related degrees (n=12), and illustrates some of the support mechanisms and services required to better support these students.

Key issues emerging in relation to disordered eating included: lack of understanding to the nature/risks associated; its use as a stress coping mechanism; isolation; perception as mental health issues with attaching stigma and reticence to acknowledge; concealed experience; wariness of eating in more public refectories. Finally positivity about their arrival at university and that their experience with disordered eating could potentially add to their repertoire as future health care professionals.

The University could; further develop its outreach to new students with a more consistently supportive program including stress training and more support via student buddying; extend its program on positive mental health; greater awareness particularly the sub-clinical group; consider some small changes and adaptations to the refectory eating areas to better facilitate at-risk students. Significantly the University could perhaps better use the first few months of student's arrival at university to help embed a program to develop a stronger sense of coherence and wellbeing.

## Background

Disordered eating represents an over focus on body shape and weight reflecting in conditions marked by abnormal and disrupted attitudes to food and patterns of eating [1,2]. Evidence suggests that adolescence and early adulthood are the most vulnerable times to develop disordered eating patterns and predominantly those affected are young women aged 15-25 years [3-5]. Disordered eating can form part of a spectrum of disturbed eating patterns and behaviour presenting both in terms of significant and evident disability (clinical anorexia nervosa, bulimia nervosa and binge eating) or as a 'subclinical syndrome' but with a significant risk of psychological, social and physiological damage [3,6-9]. The use of the term 'disordered eating' is possibly less pathologising and stigmatising than the use of the term 'eating disorder' and the connotations that may attached to this. The term disordered eating can reflect more the spectrum of disturbed eating patterns evident to the researcher during the course of the study and in reviewing the collective narrative from discussion.

The first year as an undergraduate university student can be significantly stressful [2,10-12]. We also know that stress may contribute to, or trigger patterns of disordered eating [4,13]. Young people cope with stress in various ways [14,15], and disordered eating patterns may represent a coping mechanism in periods of acute/on chronic stress [4,16-19].

Some of the contributory factors to a sense of coherence may help protectively for those who may be at risk [20-22]. A sense of coherence is represented by the ability to cope under stress and to use appropriate resources for stress management; thereby focusing less on the individual and individual disability and more focused on building and acquiring resources for health and wellness [20,21]. Symptoms of disordered eating are apparently not uncommon amongst the university population although perhaps often concealed or presenting sub-clinically [3,5,23,]. The Royal College of Psychiatrists' [12] report on the mental health of students in higher education suggests potentially significant patterns of disordered eating within the undergraduate student population.

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## Theoretical Framework

This study gave students with disordered eating 'a voice.' To do this the study had applied the theoretical model of 'salutogenesis' [20] to university student's experience of living with disordered eating patterns. Antonovsky [21] suggested that any stress, such as living with disordered eating, may promote 'severe stress' if good coping and resource management techniques are not employed by the person. Factors that facilitate movement toward the salutary or 'wellbeing' end of the continuum, and is operationalised by what Antonovsky [24] termed as the 'sense of coherence' [SOC]; a psychosocial concept that allows for collective coping in the ability to use resources to manage stress and trauma, such as domestic abuse. The concept of (SOC) and its key dimensions of (1) meaningfulness, (2) comprehensibility, and (3) manageability – is a core concept in the theory. The more the young university undergraduate copes positively with stress the more able they should be to focus at both a personal and at an academic level [25,26].

## Setting of the Study

Following pilot work the study took place in Queen's University Belfast in the latter part of 2013 and into 2014, with discussion setting at the student's option.

## Sample

The sample comprised first year undergraduate students (18-25yrs) drawn the School of Nursing and Midwifery and the School of Medicine, Queen's University Belfast.

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**Timing**

Pilot work was undertaken in late 2012 and the formal study in the latter part of 2013 extending to spring 2014.

**Phase 1** involved a narrative analysis of the open questions. Phase II applied qualitative and phenomenological methodology involving thematic content analysis of the semi structured questions. The researcher used a conceptual or analytical framework in preparing the interview materials for analysis as a deductive method of creating analytical categories for qualitative analysis [27]. The conceptual framework was drawn from the salutogenic model [21,24](Table 1).

**Comprehensibility**

Although all of the students were in or at the end of their first year in studying for their professional health related degrees, there was significant evidence or vagueness and misunderstanding of the nature of disordered eating, its causes and the possible risks attaching to this behaviour (5).

*'It never crossed my mind that I would ever end up developing an eating disorder, but it came as a consequence of that' (the way she managed and sought to control her weight). AO4*

*'I didn't think I was unwell-it was only later I realised'.AO9*

STAGE 1	STAGE 2	STAGE 3	STAGE 4
THEORY	CONCEPTUAL FRAMEWORK	EMERGENT THEMES	EMERGENT SUB THEMES AND CATEGORIES
Salutogenesis and a Sense of Coherence	Comprehensibility	Comprehension and insight	The experience
			Understanding
		Comprehensibility-social imbalance or pathology	Pre-existing pattern
			Disengagement
			Imbalance
			Pathology
	Manageability	Manageability and control	Body Image
		Manageability-the prior context, supporting or driving	Control
		Manageability-disclosure and impact	Stress and coping
			The family
			The public perception
		Manageability - and support	The prior experience
			Disclosure
			Labelling
			Academically and professionally
	Meaningfulness	Meaningfulness- towards a more salutogenic response	Emotional support
			Supporting environment
			Supporting outreach
		Meaningfulness- supporting the context	Positive challenge
			Positive experience

Table 1: The Conceptual Framework-Undergraduate Students and Disordered Eating.

**Credibility and Rigour**

This research sought to maintain rigor and credibility throughout the study. Confidentiality was assured and all tapes and transcripts analysed. Ethical approval was obtained for the research from one of the University ethical committees. Strict ethical standards were adhered to throughout the study, in engaging with a sometimes very sensitive subject and with a potentially vulnerable group.

**Findings**

The study examined 12 (n=12) first-year undergraduate students perceptions, understanding and management of disordered eating with analysis reflecting the three components of salutogenesis theory namely (1) comprehensibility; (2) manageability; and (3) meaningfulness.

**Manageability**

Manageability represented the largest area for data generation, with indication of some of the students experiencing significant stress within a social matrix which was sometimes seen as rather chaotic.

*'I just see it as something I can control, because I think it's because I've had such a lack of control over a lot of my life, that now I just like having the food and exercise.' A05*

*'Yes, I think so, because when everything else feels out of control, it is the one thing you feel you can control It's something that you are in charge of. I think it goes back to the whole "everything else feels so out of order", and its gaining some sort on hold on everything that you can control...it's the sort of thing'... OBI*

Although stress coping was not a particular focus of the study, the narrative analysis suggested a significant number of students were possibly using disordered eating as a stress/ distress coping mechanism (at least in part), a need to control a significant part of their life (7),

*'Yeah, I think whenever I'm stressed out about work, my eating would be worse, anxiety and stress'* AO5

*'I think some people have their good stress/positive stress set apart from the negative, but I need to work out how to do that.'* CI

**Disclosure** About half of the students suggested experiences of disclosure of their condition had either resulted in less than positive responses or their perception was that it would not be positively viewed (6).

*'Um, I think a negative, superficial response to try and close the conversation, so I don't talk anymore about it. I've opened up to three people, one of which would be my partner of about 5 years...it was an awful response.'* AO4

Whilst the message generally from the university and university tutors appeared to have been interpreted positively by the students, there were some suggestion of a mixed approach to messaging ( from perhaps some of the tutors/lecturers) within this issue and within (what were perceived by some at least as) mental health issues (5).

*'I was surprised that in a nursing school there was such... not a stigma, but a degree of naivety or ignorance, or maybe it's just genuinely people's views and opinions that people with mental health are never going to be healthcare professionals.'* CI

Students expressed concerns about any degree of acknowledgement or disclosure:

*'You don't want anybody to find out... they would threatened to take action and you'd be kicked out-you'd be set back-then the whole thing would be discovered not just them but everybody would find out-you'd feel ashamed.'* AO9

This was particularly evident in terms of the perceived impact both academically and professionally; and in some cases they appeared to feel that their academic progress could be significantly disrupted and their professional careers possibly damaged as a result of disclosure (6). Although anecdotal, some of the students suggested that there were other colleagues (perhaps a significant number) who were affected by disordered eating behaviour:

*'I know a few other girls in the year that think if they ever came out with it, they would just be told that they weren't fit to nurse.'* AO4

**Support** Some of the students were a little reticent to seek counselling for disordered eating either through fear of stigmatisation or misunderstanding both in terms of the nature of and level of confidentiality that would be observed within counselling sessions:

*'Um, not really for this issue as much it's not really talked about that much, you have to go and look for yourself...it then seems like too big of an issue...it's almost like you know, asking somebody to go to counselling...again the stigma probably comes up. I don't like to think about it as such a big deal.'* A11

Effective promotional and environmental support was seen as significant by number of students in terms of helping to support students (11).

*'Um, I think maybe just an awareness of eating disorders, and kind of a recognition that there is help, and that you won't be almost stigmatised, that you're not going to get kicked off your course or anything because you are ill...that kind of thing... I was always really worried about starting medicine, whether they'd let me do it.'* AO5

The importance was also emphasised by a number of students in terms of an effective, diplomatic and more reassuring outreach to students struggling with this condition or who might be at risk (11). The assurance of anonymity was also significant for a number of the students if they were to discuss issues of disordered eating.

In terms of a practical eating environment, it was evident from a significant number of interviews that students who experienced or were at risk from disordered eating felt less than comfortable in crowded collective eating refectories, and some degree of relative privacy or provision of some smaller and more discreet eating areas could possibly help encourage some of those at risk to eat more consistently or substantially during the day (9).

*'but I find that difficult when I don't like other people seeing me eat,- -I'm not so bad about it now, but I used to loathe eating in front of people ----- because I think eating in public is a big thing.'* OB1

*'possibly difficult to eat in front of others...I feel that people may be judging you on what you're eating ...a few more discreet areas... important however that those who have problems with should eat together with some others ... it's encouraging and normal.'* AO8

An historical experience reflecting inconsistency, professional negativity, some degree of criticism and negative labelling, together with perceptions of a limited sense of control, could act to undermine the student's sense of manageability in new situations of potential stress.

### Meaningfulness

For a significant number of students arrival at university was seen very positively, had significant meaningfulness, and possibly represented a real opportunity in their lives (11).

*'Yeah, I mean Queen's had got me up in the morning, and studying again, it's just made everything more positive...Yes, because it's getting them away from one of the trigger factors, and then they are able to get more of a sense themselves.'* AO4

*'I see it as an achievement...I was over the moon to get here'* CI

At a practical level and in terms of developing a supporting and contextual approach to meaningfulness for the students, some of the students suggested that there should be more focus on the individual rather than the condition, more emphasis upon their achievements in obtaining a university place rather than pathologising differences as disability, and this might help to present a more positive image (4).

*'I think when people know about you and value other things you do that aren't in regards to how you look... if you take the dysmorphia of the table and build a person up, and then they start to get more confidence within themselves.'* AO4

Some of the other students felt the experience with disordered eating could help to inform their understanding in practice as health care professionals (7).

*'I actually think coming from my background, with my life experiences makes me more suitable, as long as it's being maintained, and I am aware of it, and it's not something that is going to impair my judgement or my behaviour. I believe that good healthcare professionals are those with significant history', . OBI*

The general emergent narrative suggested the value of an enhanced educative programme, to the general student population to help address some of the perceived rather negative labelling attaching to the condition and might also help some of the students experiencing or at risk from disordered eating to raise their visibility (10).

### Limitations

There are a number of limitations attaching to the study, including the idiosyncratic and subjective nature of qualitative enquiry that it is time limited, not easily reproducible and represents the researcher's particular perspective. In addition, the study involved a hard to reach group and there was some difficulty in recruiting the research sample. Furthermore the study represents students from one faculty and from one University in Northern Ireland and may not therefore be generalisable to similar groups out-with this particular setting. However, the results of this qualitative study do seem to mirror/reflect a significant range of the issues raised within existing quantitative studies generated from a range of settings.

### Discussion

The stories and narratives conveyed in this study provide a powerful picture of young peoples' experiences of living with or previously living with disordered eating. By using this living phenomenological material we can to some extent enter into their lives and come to understand the meanings these young people give to disordered eating, and what support frameworks are needed to be put in place to help improve their university lives. Three-quarters of the students interviewed (n=9) had experienced or were experiencing patterns of disordered eating. Research within some other universities would suggest possibly 10%-22% of the (predominantly female) population might be at risk [3,5,9]. Evidence [3,28,29] highlights the value programmes to educate and to reform student attitudes to food and eating. Within this study a number of the students (n=5) had a limited understanding of disordered eating and the risks attaching to disordered eating, although perhaps importantly they are in the process of training as health care professionals About 3/4 of the students seemed to acknowledge that they used food as a stress coping mechanism The literature suggests that the misappraisal of stress and over- focus on avoidance coping or transferring coping to less health promoting approaches, is significantly evident with those experiencing disordered eating [26,30,31,32]. The students' stress coping approaches were not specifically explored within the study although the narrative might suggest some degree of negative coping which in some cases involving patterns of disordered eating. The literature suggests evidence of exaggerated perceptions of stressors amongst undergraduate students [31,33]. For some of the students they talked to the issues of stress possibly correlated with disordered eating, within the context of a lonely and isolating experience (n=9). For a number of the students food, eating, the limitation of food intake or the avoidance of eating appeared to have developed a disproportionate focus for them (n=7); again this dis-proportionality and possibly damaging over- focus would seem to reflect in a range of the literature [16,18,34,35]. For at least some of the students it appears that patterns of disordered eating had emerged before their arrival at university

(n=5) and this could correspond with existing studies of pre-existing conditions [36,37] although Ruggerio et al. [13] suggest that stressors could possibly trigger disordered eating in pre-disposed personalities. The literature notes a potentially significant number of undergraduate students manifest patterns of disordered eating [5,6,9,38] and whilst this would appear to be supported by the study population, this study did not explore the quantitative dimensions of disordered eating within this particular university institution. However, the literature does suggest a potentially invisible and subclinical proportion of particularly female students who engage in disordered eating or who may be at risk [3,5,6,9,28]. This study suggests that part of the reason that students do not acknowledge issues with disordered eating may be concern with regards to public, academic and future professional impact (n=6); they appeared to fear the consequences of disclosure.

Whilst a very high proportion of the students were very positive about their arrival at university (n=11) some of the students suggested that their issue with disordered eating would not be positively addressed by lecturers and personal tutors with in some cases the impression of rather negative messages from teaching and lecturing staff (n=5). The British Psychological Society [39] suggest that the classification of feeding and eating disorders as mental illnesses and the stigma attaching to that term rather ignores the context and social causation at least in part contributing to these conditions. The Royal College of Psychiatrists [12] underlines the importance of the setting in relation to addressing patterns of disturbed eating, and the requirement for a positive and consistent institutional approach in supporting students.

A significant number of the students associated disordered eating with mental illness (n=8), again this association is mirrored in some of the literature [16,35,40]. Whether this is reflected in their reticence to acknowledge to tutors that there was an issue was not evident from the study and the study did not explore this. However, as already noted there is debate within the literature as to what extent disturbed eating patterns represent mental illness; Katsching's [41] questions the criteria used to diagnose disturbed eating patterns and the British Psychological Society [39] underlines the need to acknowledge the impact of social context arguing for more focus upon the spectrum of health and on difference rather than disability. Again this approach is perhaps more reflective of a salutogenic model of health and wellbeing [20]. However, within this study, there appeared to be a significant correlation between perceptions of mental illness and perceptions of a negative response to disclosure.

Some of the students had already experienced health care services within the context of emerging disordered eating (n=5). In some cases the experience had been less than positive and some of the students felt that healthcare professionals did not understand the issues associated with disordered eating (n=4). Both the Royal College of Psychiatrist [12] and the British Psychological Society [39] emphasise the need to focus less upon pathology and more upon consistency of support and understanding when seeking to support and outreach to those struggling with problems in living or challenges to the individuals mental health. Generally the students felt that disordered eating attracted a negative if not stigmatising label (n=9). This would seem to correspond with the literature where Wingfield et al. [42] suggest a degree of stigma attaching to university students manifesting disordered eating and might possibly correlate with low treatment seeking evident amongst some students [5].

A very significant proportion of the students felt the need for support at least during their early period at university (n=11). Again

a significant proportion of the students felt that the eating arrangements in the refectory did not really facilitate those who might be experiencing or at risk from disordered eating, and suggested the need for at least some smaller and discreet areas where students could eat in less large groups (n=9). The Healthy Universities initiative underlines the need for context and setting to be addressed for student support to be effective [43,12]. Scheel [44] suggests that setting and some degree of discreet eating facility is sometimes important for those who may experience disordered eating.

Again a significant number of the students felt that an educative programme directed towards other students could help to both address the negative label which they perceived as attaching to disordered eating and also help to encourage students to come forward if they had issues in this regard (n=10). However a significant number of the students felt that the counselling and support services would need to reassure students that they understood the condition and that there wouldn't be academic and professional consequences following through from disclosure; importantly anonymity was emphasised by the students (n=10). Evidently some of the students did not fully understand the extent, the quality and the professionalism of the student support and counselling services already provided by the university (n=4). Again the Royal College of Psychiatry [12] report on student mental health underlies the need for service support availability, the need to extend training in mental health issues and to raise the visibility of service provision to the students.

A very high proportion of the students felt particularly positive about their arrival at university (n=11) and a significant proportion of the students acknowledged confidence in their personal tutors (n=6). The narrative within this dimension of the study was substantially positive and meaningful. All of the students were studying to healthcare related undergraduate degrees and a significant proportion felt that their experience with disordered eating could help to better inform their future understanding and practice as a potential health care professional (n=7); a focus upon difference rather than disability and more reflective of a salutogenic approach to wellness [20,21,24].

## Conclusion and Recommendations

The study suggests that a proportion of students struggle with disordered eating at a concealed and subclinical level. The study also suggests that many of the students do not understand the potential risks involved in this and that disordered eating may be used as a form of stress coping. This can significantly isolate the students at a time when they would need to build new relationships and supportive bonds. A number of the students associated disordered eating with mental illness, reinforcing the sense of stigma, concealment and reticence to acknowledge or discuss their issues and concerns.

In addition, for a number of the students open refectories would provide limitations to their wish to eat publicly, again raising stress levels, or increasing a sense of isolation. More positively a significant proportion of the students felt very positive about their arrival at University and also felt that their experience with disordered eating could possibly assist them in their future outreach to patients and clients as health care professionals. There were a number of achievable and practical healths promoting approaches that the university could implement arising from this study, including;

- Consistency in terms of the university's projected culture and model of public health outreach to students focussed within building and sustaining a sense of coherence.

- Education and awareness training to staff and particularly to health care professionals within the university when approaching or presented with students who may be at risk, with a better informed and consistent understanding and approach.
- Focus upon students who are evidently struggling with disordered eating but seeking to encourage those who are at risk (subclinical) to seek support.
- Focus upon positive health education particularly to the 'fresher' with more focus upon a health promoting mental health wellness programmes and seeking to more effectively educate to and to de-stigmatise disordered eating amongst the student population.
- Effectively outreaching and facilitating/training in terms of stress coping, stress appraisal and stress management.
- Practically addressing such things as the refectory eating environment and providing at least some more discreet areas for eating which for some students might be more supportive to their issue with food and eating.
- Orientation of the 'fresher' undergraduate programme within a more health promoting salutogenic model focusing upon developing and sustaining a sense of coherence in all the new students including those who may be at risk from disordered eating- to use the 'window' of new arrival and enthusiasm more effectively.

## Competing Interests

The authors have no competing interests with the work presented in this manuscript.

## References

1. Pereira RF, Alvarenga M (2007) Disordered Eating: Identifying, Treating, Preventing and Differentiating it from Eating Disorders. *Diabet Spect* 5: 141-148.
2. Quick VM, Byrd-Bredbenner C (2013) Disturbed eating behaviours and associated psychographic characteristics of college students. *J Human Nut Diet* 26: 53-63.
3. Sanlier N, Yabancı N, Alyakut O (2008) An evaluation of eating disorders among a group of Turkish university students. *Appetite* 51: 641-645.
4. Sulkowski ML, Dempsey J, Dempsey AG (2011) Effects of stress and coping on binge eating in female college students. *Eating Behaviours*. 12: 188-191.
5. Eisenberg D, Nicklett EJ, Roeder KM, Kirz N (2011) Eating Disorder Symptoms among College Students: Prevalence, Persistence, Correlates, and Treatment-seeking. *J Am Coll Health* 59: 700-707.
6. Pokrajac-Bulian A, Zivcic-Becirevic I (2005) Locus of Control and Self-Esteem Has Correlates of Body Dissatisfaction in Croatian University Students. *Europ Eat Dis Rev* 13: 54-60.
7. Simon-Boyd G, Bieschke JK (2003) predicting eating disorder continuum groups: hardness and college adjustment.
8. Boyd C (2006) Coping and Emotional Intelligence in Women with a History of Eating Disordered Behaviour. *McNair Sch J* 10: 4-12.
9. Dissing AS, Bak NH, Pedersen LE, Petersson BH (2011) Female medical students are estimated to have a higher risk for developing eating disorders than male medical students. *Danish Med Bull* 58: 207.
10. Harvey L, Drew S (2006) The first year experience: a review of the literature for the Higher Education Academy. The Higher Education Academy.
11. DeHart T, Tennen H, Armeli S, Todd M, Mohr C (2009) A diary study of implicit self-esteem, interpersonal interactions and alcohol consumption in college students. *J Exp Soc Psychol* 45: 720-730.
12. Royal College of Psychiatrists (2011) Mental Health and Students in Higher Education.

13. Ruggiero GM, Bertelli S, Boccalari L, Centorame F, Ditucci A, et al. (2008) The influence of stress on the relationship between cognitive variables and measures of eating disorders (in healthy female university students): a quasi-experimental study. *Eat Weight Disord* 13: 142-148.
14. Morrison V, Bennett P (2009) *An Introduction to Health Psychology* (2nd edition) Harlow: Pearson Education.
15. Walker J, Payne S, Smith P, Jarrett N (2012) *Psychology for Nurses and the Caring Professions* (4th edition) Maidenhead : OU Press.
16. National Institute of Clinical Excellence, National Collaborating Centre for Mental Health (2004) *Eating Disorders: Core Interventions in the Treatment and Management of Anorexia*.
17. Gross R, Kinnison N (2007) *Psychology for Nurses and allied health professionals*. London: Hodder Arnold.
18. Beat (2013) *Beating Eating Disorders*.
19. Gan WY, Nasir MT, Zalihah MS, Hazizi AS (2012) Psychological distress as a mediator in the relationships between biopsychosocial factors and disordered eating among Malaysian University students. *Appetite* 59: 679-687.
20. Antonovsky A (1987) *Unravelling the mystery of health: how people manage stress and stay well*. San Francisco: Josey-Bass.
21. Antonovsky A (1996) The salutogenic model as a theory to guide health promotion. *Health Promotion Int* 11: 11-18.
22. Ahern NR, Norris AE (2011) Examining factors that increase and decrease stress in adolescent community college students. *J Paediatr Nurs* 26: 530-540.
23. Pokrajac-Bulian A (1998) Dissatisfaction with body and bulimic symptoms in the student population *Društvena istraživanja* 7: 581-601.
24. Antonovsky A (1979) *Health, stress and coping*. San Francisco: Jossey-Bass.
25. Chemers MM, Hu L, Garcia BF (2001) Academic self-efficacy and first year college student performance and adjustment. *J Edu Psychol* 93: 55-64.
26. Sampson A (2009) *Stress and College/University Students*, Berlin: Lambert Academic Publications.
27. Polit DF, Beck CT (2010) *Essentials of Nursing Research* (7th edition). Philadelphia: Lippincott Williams & Wilkins.
28. Piran, N (2005) Prevention of eating disorders: A review of outcome evaluation research. *Israel J Psychiatry Relat Sci* 42:172-177.
29. Ansari W, Clausen SV, Mabhala A, Stock C (2010) How Do I Look? Body Image Perceptions among University Students from England and Denmark. *Int J Environ Res Public Health* 7: 583-595.
30. Reesnick M, Dearman T, Blum R, Bauman A, Harris K, et al. (1997) Protecting adolescence from harm; findings from the longitudinal study on adolescent health. *J Am Med Ass* 278: 823-832.
31. Bittinger JN, Smith JE (2003) Mediating and moderating effects of stress perception and situation type on coping responses in women with disordered eating. *Eating Behav* 4: 89-106.
32. Macneil L, Esposito-Smythers C, Mehlenbeck R, Weismoore (2012) The effects of avoidance coping and coping self-efficacy on eating disorder attitudes and behaviors: a stress-diathesis model. *Eat Behav* 13:293-296.
33. Beaukes M, Walker S, Esterhuysen K (2010) The role of coping responses in the relationship between perceived stress and disordered eating in a cross-cultural sample of female university students. *Stress Health* 26: 289-291.
34. Steiner H, Kwan W, Shaffer TG, Walker S (2003) Risk and protective factors for juvenile eating disorders. *Euro Child Adol Psychiat* 12: 138-1466.
35. Ball K, Lee C (2000) Relationships between psychological stress, coping and disordered eating: a review. *Psy Health* 14: 1007-1035.
36. Vohs KD, Bardone AM, Joiner TE, Abramson LY, Heatherton TF (1999) Perfectionism, perceived weight status, and self-esteem interact to predict bulimic symptoms: A model of bulimic symptom development. *J Abnor Psychol* 4: 695-700.
37. Vohs K, Heatherton T, Herrin M (2001) Disordered eating and the transition to college: A longitudinal study. *Int J Eat Dis* 29: 280-288.
38. Sanftner JL (2011) Quality of life in relation to psychosocial risk variables for eating disorders in women and men. *Eating Behav* 12: 136-142.
39. British Psychological Society (2011) *Response to the American Psychiatric Association: DSM-5 Development*.
40. Treasure JA (2009) *A Guide to the Medical Risk Assessment for Eating Disorders*. Kings College London. South London and Maudsley NHS Trust.
41. Katsching H (2010) Are Psychiatrists and endangered species? Observations on internal and external challenges to the profession. *World Psychiatry* 9: 21-28.
42. Wingfield N, Kelly N, Serdar K, Shivy V, Mazzeo SE (2011) College Students ' Perceptions of Individuals with Anorexia and Bulimia Nervosa. *Int J Eat Disord* 44: 369-375.
43. Healthy Universities (2013) *Evaluating a Healthy University Initiative*.
44. Scheel J (2012) *When Food is Family*. Enumclaw US. Idyll Arbor Inc.