

the iafor

journal of psychology & the behavioral sciences

Volume I – Issue I – Winter 2015

Editors: Sharo Shafaie & Deborah G. Wooldridge



ISSN: 2187-0675

iafor

The IAFOR Journal of Psychology & the Behavioral Sciences
Volume I – Issue – I

IAFOR Publications

Executive Editor:

Joseph Haldane

The International Academic Forum

The IAFOR Journal of Psychology & the Behavioural Sciences

Editors

Dr. Sharo Shafaie, Professor, Southeast Missouri State University, USA

Dr. Deborah G. Wooldridge, Professor, Bowling Green State University, USA

Editorial Board

Dr. Ruben Anguiano, Professor, University of Colorado at Denver, USA

Dr. Thomas Chibucos, Professor, Bowling Green State University, USA

Dr. Maher Khelifa, Professor, Qatar University, UAE

Dr. Gloysis Mayers, Associate Professor, Zayed University, UAE

Dr. Ken Newbury, OSMP Grant Coordinator, Bowling Green State University, USA

Dr. Susan Peet, Senior Lecture, Bowling Green State University, USA

Dr. Sandra Poirier, Professor, Middle Tennessee State University, USA

Dr. Anita Sani, Associate Professor, Ministry of Education, UAE

Dr. Nancy Sonleitner, Research Associate, University of Oklahoma, USA

Dr. Arpan Yagnik, Assistant Professor, Penn State University, USA

Published by the International Academic Forum (IAFOR), Japan

Executive Editor, IAFOR Publications: Joseph Haldane

Editorial Assistance: Rachel Dyer

IAFOR Publications, Sakae 1-16-26-201, Naka-ward, Aichi, Japan 460-0008

The IAFOR Journal of Psychology & the Behavioral Sciences

Volume I – Issue I – Winter 2015

IAFOR Publications © Copyright 2015

ISSN: 2187-0675

iafor.org/publications/iafor-journals/iafor-journal-of-psychology-and-the-behavioral-sciences

Cover image: Pixabay/BlakeWilliams

The IAFOR Journal of Psychology and the Behavioral Sciences
Volume I – Issue 1 – Winter 2015

Edited by Dr. Sharo Shafaie and Dr. Deborah G. Wooldridge

Table of Contents

Introduction Sharo Shafaie & Deborah G. Wooldridge	1
A Structured Review of Generic and Specific Instruments for Measuring the Subjectively Assessed Quality of Life of Seniors Monika Kacmarova & Peter Babincak	2
A Longitudinal Case Study of the Quality of Life Trajectory: A Mother of Multiple Children with Pervasive Developmental Disorders Miyako Kimura	17
Cognitive Dissonance Among Chinese Gamblers: Cultural Beliefs Versus Gambling Behavior Robert J. Taormina & Blair K.H. Chong	33
Islamic Religiosity, Depression and Anxiety among Muslim Cancer Patients Nadzirah Ahmad Basri, Gan Chun Hong, Ng Lai Oon & Shuzo Kumagai	53
Sensation Seeking or Empathy? Physically Aggressive and Non-Aggressive Antisocial Behaviors (ASBs) Amongst University Students Saima Eman, Roderick I. Nicolson & Mark Blades	65
Living with Suffering: Buddhist Wisdom Illustrated by a Widow Fung Kei Cheng	89

Introduction

We are delighted to introduce you to the first issue of the *IAFOR Journal of Psychology & the Behavioral Sciences*. Overall, this journal covers a variety of topics about the implications of psychological theories and principles in educational settings, improvement of mental health conditions, human development, psychological outreach services and community development, family studies and professional practice, as well as articles addressing the needs of at-risk children, youth and families, and vulnerable populations.

This issue is devoted to several interdisciplinary studies which represent a variety of topics, cultures, and disciplines in the fields of psychology and the behavioral sciences. The journal is an internationally peer reviewed and editorially independent, interdisciplinary journal associated with IAFOR (The International Academic Forum) Conferences on Psychology and the Behavioral Sciences. All papers published in the journal have been subjected to the rigorous and accepted processes of academic peer review. Some of the articles are original and some are significantly revised versions of previously presented papers or published reports in IAFOR's conference proceedings.

We would like to express our profound gratitude to all reviewers for taking time from their busy schedules to review each assigned manuscript and for offering their professional expertise, recommendations, and suggestions for improvement of these published manuscripts. Also, we appreciate the hard work of the staff at IAFOR who were involved with the publication of this journal.

Please note that we are seeking manuscripts for our upcoming issues. Below is the link to the journal's webpage for your attention; please review this webpage to become familiar with the journal's objectives and the submission guidelines for authors:

iafor.org/publications/iafor-journals/iafor-journal-of-psychology-and-the-behavioral-sciences/

If you have any questions, please do not hesitate to contact us, otherwise please send your manuscripts to the journal editors below. Thank you for considering this invitation and we look forward to hearing from you soon.

Dr. Sharo Shafaie, Ph.D.

Email: sshafaie@semo.edu

Dr. Deborah G. Wooldridge, Ph.D.

Email: dgwoold@bgsu.edu

Editors

A Structured Review of Generic and Specific Instruments for Measuring the Subjectively Assessed Quality of Life of Seniors

Monika Kacmarova
Peter Babincak
University of Presov, Slovakia

Abstract

The objective of the study is to offer a review of the instruments designed for measuring the subjectively assessed quality of life of seniors. At present it is possible to notice an increase of interest in the issue of the quality of life of specific groups of population; in addition, there is a large number of tools for its measuring. The aim of the present study is to provide a systematic review of generic and specific instruments for measuring quality of life of seniors which have been published in peer-reviewed journals and whose psychometric parameters have been verified. The search procedure formed a part of a larger retrieval search in which we analyzed 4829 abstracts in EBSCO and ProQuest Central full-text databases. We found 831 instruments which claimed to be measuring quality of life and were verified their reliability or validity. We identified 3 groups of instruments suitable for use in the senior age-group: generic methodologies applicable to adults in general, 7 generic tools and 9 specific tools designed exclusively for the senior age. The paper presents the measures designed for seniors who were analyzed and compared with regard to their psychometric parameters, purpose and theoretical framework utilized for their construction. In conclusion the authors of the study provide recommendations for the use of the selected methodologies for measuring the subjectively assessed quality of life of seniors.

Keywords: quality of life, generic instruments, specific instruments, review, seniors

Introduction

Already in the 1990s many publishing authors (e.g. Farquhar, 1995; O'Boyle, 1997; Grundy & Bowling, 1999) pointed out the fact that there is a significant increase in the number of older people who live longer, more healthy and lead more active lives, and for this reason it is necessary to reassess the way how the quality of life in this age group is conceptualized and measured. At the same time they emphasize that in the construction of instruments for its measuring, the knowledge of understanding the concept of quality of life coming from subjective statements of older people should be applied. Older people usually welcome the attention paid to their personal view.

At the theoretical level but also at the empirical level it is necessary to distinguish between the quality of life in general (QoL) and health related quality of life (HRQoL) which is especially in seniors perceived as a key indicator. HRQoL may be simply defined as perception of the impact of health and sickness on several dimensions of a person's life (French, Irwin, Fletcher & Adams, 2002), for example the physical, mental or social dimensions. It is possible to state that HRQoL is a part of the general concept of QoL and it only represents the part of QoL which is directly related to the person's health (Davis et al., 2006). Similarly, Leow et al. (2013) described HRQoL as aspects of individual's life that is impinged on by health, disease and its treatment, and is a fundamental component of successful ageing covering life expectancy, life satisfaction, mental and psychological health, physical health and functioning.

The most general and most frequently encountered division in the description of instruments for measuring the quality of life is their categorization into generic and specific scales. Generic scales are suitable to compare findings within different populations or groups as well as with different disease groups and also after using certain interventions, and at the same time they are economically not demanding (Patrick & Deyo, 1989; Hart, Redekop, Bilo, Meyboom-de Jong & Berg, 2007). The instruments related to a specific illness evaluate special states and are focused on certain diagnostic groups. Specific scales are also able to capture more sensitively, and to quantify, even minimal changes which are important for the doctors as well as for the patients themselves (Wiebe, Guyatt, Weaver, Matijevic & Sidwell, 2003). These measures may be more responsive to clinically important changes in QoL brought on by the disease, compared to the generics scales (Ettema et al., 2005; Banerjee et al., 2009). Majority of generic (general) instruments for measuring the quality of life, including generic and specific scales of health related quality of life, have multidimensional nature as they examine for instance physical, social, emotional, environmental, mental or spiritual dimension, or the influence of the illness on the individual dimensions (Babincak, 2013; Kelley-Gillespie, 2009).

The objective of this study is to provide a structured overview and description of generic QoL and HRQoL tools and also specific instruments intended for measuring the quality of life in persons of senior age which have resulted from a more widely conceived analysis of two full text databases, EBSCO and ProQuest Central.

Methods

Search strategy

The search scheme was supposed to include as many (peer reviewed) publications as possible dealing with measuring some of the aspects of quality of life associated with evaluation of psychometric or clinimetric quality of measurement. In the first step there were 4829 abstracts identified. These were analyzed by a focus group and the tools for measuring the quality of life encountered in them were gradually summarized and arranged in alphabetical order. In total

there were 831 different tools found. Then further selection and categorization of these tools into groups followed – by their content, focus or by target group for which they are intended. Besides generic tools which are used in adult persons in general and are usable also for senior age (e.g. SF-36, WHOQOL-BREF, Health Utility Index, etc.), the analysis brought a list of 7 generic and 9 specific tools constructed exclusively for identifying subjectively assessed quality of life in seniors. There were 16 tools included in the overview and in the description of instruments from the aspect of their theoretical framework, purpose, descriptive and psychometric characteristics.

Results

The tables 1 and 2 include seven generic and nine identified specific instruments developed for the senior population of people over 60 years old. Six of the seven generic measurements are self-assessed or can also use interview form of administration. Among the specific instruments there are five self-assessed tools and in cases of two of them, the use of a questionnaire is recommended in a structured interview, namely when administered to older people with vision problems. Especially, the OMFAQ can be administered only by a trained interviewer. Four of the specific instruments are used by proxy and they are assessed by caregiver or other medical professionals. This proxy-rating is mostly used for very old and severely demented persons. The proxy report can be related to how caregivers or other related persons imagine they would feel if they were in a similar circumstance. Self-assessment questionnaire can provide information from an individual or a patient that is not easily obtained from other sources. As Moyle and Murfield noted (2013) “it is generally accepted that self-report is the ‘gold standard’ by which HRQoL should be assessed” (p. 110).

Table 1 Generic QoL and HRQoL self-assessed quality of life instruments

<i>Name, original authors, publication year</i>	<i>Purpose</i>	<i>Theoretical framework</i>	<i>Items</i>	<i>Domains/scales/subscales (no. of items)</i>	<i>Response format and scoring</i>	<i>Administration and example of item (domains)</i>	<i>Psychometric properties</i>
CASP-19 (Hyde et al., 2003)	This is a self enumerated QoL scale for early old age people.	It is base on models of human needs satisfaction and self-actualization.	19	Control (4), Autonomy (5), Self-realization (5), Pleasure (5)	4-point Likert scale: 0 = never to 3 = often. High score indicates a better QoL.	SA; Item No.10 – “I look forward to each day.” (Autonomy)	Cronbach’s alpha. Factor analysis. Face validity. Content validity. Construct and concurrent validity.
Leiden-Padua questionnaire – LEIPAD (DeLeo et al., 1998)	An internationally applicable instrument to assess QoL in the elderly.	Developed under the auspice of the European office of the WHO.	49	Core instrument scales: Cognitive function (5), Depression/anxiety (4), Life satisfaction (6), Physical function (5), Self-care (6), Sexual function (2), Social function (3) Moderator scales: Self-perceived personality disorders (5), Anger, resentment and irritability (4), Social desirability (3), Self-esteem (4), Faith in God (2)	Core scales use 4-point response format from 0 = best to 3 = worst condition. Moderator scale use dichotomy response format: 0 = yes, 1 = no. Lower score indicates a better QoL.	SA or interview; Item No.3 – “Are you able to dress all by yourself?” (Self-care scale)	Cronbach’s alpha. Test-retest reliability. Factor analysis. Concurrent validity.
Older Americans Resource and Services Multidimensional Functional Assessment Questionnaire – OMFAQ (Fillenbaum & Smyer, 1981)	Instrument for evaluation of QoL of the elderly that provides a comprehensive profile of personal functioning and service use.	The OARS Program forms of the Duke University Center for the Study of Aging and Human Development.	120+24+10	Part A: Activities of daily Living (14), Economic resources (15), Mental health (21), Physical health (16), Social resources (9), Demographic items (11), Informant items (10); Interview section: Interview-specific (4), Interviewer assessments (15), Interview ratings (5) Part B: Services assessment	6-point response scale: 1 = level of functioning excellent, 6 = level of functioning totally impaired.	OMFAQ must be administered by a trained interviewer; Item No.59 – “Can you prepare your own meals...” (Activity of daily living)	Cronbach’s alpha. Inter-rater reliability (ICC). Test-retest reliability. Content and consensual validity. Criterion validity. Responsiveness to change.

Table 1 continued

<i>Name, original authors, publication year</i>	<i>Purpose</i>	<i>Theoretical framework</i>	<i>Items</i>	<i>Domains/scales/subscales (no. of items)</i>	<i>Response format and scoring</i>	<i>Administration and example of item (dominant)</i>	<i>Psychometric properties</i>
Older People's Quality of Life Questionnaire – OPQOL (Bowling, 2009, 2013)	Measure of quality of life in older age.	It is grounded in lay views from the baseline QoL survey, integrated with theory from a synthesis of the literature.	32-35 full 13 brief	Life overall (4), Health (4), Social relationship and participation (7-8), Independence, control over life, freedom (5), Home and neighbourhood (4), Psychological and emotional well-being (4), Financial circumstances (4), Religion/culture (2; can be eliminated).	5-point Likert response scale: 1 = strongly disagree to 5 = strongly agree. Higher score represents higher QoL.	SA or interview; Item No.1 – "I enjoy my life overall." (Life overall)	Cronbach's alpha. Factor analysis. Face validity. Content validity. Construct validity (convergent and discriminant).
Quality of Life in Later Life – QuiLL (Evans et al., 2005)	Assessment of QoL in later life.	The conceptual framework derives from Campbell et al. & Lehman (in Evans et al., 2005).	64 full, 27 short	Social, Self, Safety, Occupy time, Neighborhood, Living situation, Health, Finances, Family + Overall quality of life	7-point Likert scale: 1 = terrible to 7 = delighted. High score indicates a good level of life quality.	SA or interview; "How do you feel about financial situation?" (Finances)	Cronbach's alpha. Inter-rater reliability (ICC). Test-retest reliability. Concurrent and discriminant validity. Responsiveness to change.
Quality of Life Profile-Seniors Version – QOLPSV (Raphael et al., 1995a; Raphael et al., 1995b)	Profile was designed to evaluate the QoL of community-dwelling older people.	Toronto Quality of life model	111 full, 54 short, 24 brief	Being: Physical (12), Psychological (12), Spiritual (12), Belonging: Community (12), Physical (12), Social (12), Becoming: Growth (13), Leisure (13), Practical (13)	Completion in 2 stages: 5-point scales of importance and enjoyment (1. stage) and degree of control (2. stage)	SA or interview (up to 1 hour); "Being able to have clear thoughts." (Psychological Being)	Cronbach's alpha. Construct validity. Responsiveness to change.

Table 1 continued

<i>Name, original authors, publication year</i>	<i>Purpose</i>	<i>Theoretical framework</i>	<i>Items</i>	<i>Domains/scales/subscales (no. of items)</i>	<i>Response format and scoring</i>	<i>Administration and example of item (dominant)</i>	<i>Psychometric properties</i>
WHOQOL-OLD (Power et al. & WHOQOL-OLD Group, 2005)	The module represents an empirical assessment of older adult's quality of life from the respondent's point of view.	It was developed on the basis of WHO definition of the QoL.	24	Sensory abilities (4), Autonomy (4), Past, present and future activities (4), Social participation (4), Death and dying (4), Intimacy (4)	5-point scales measures frequency, intensity and satisfaction. High score indicates better QoL.	SA, for use in conjunction with WHOQoL-BREF or WHOQoL-100. Item No. 3 – "How much freedom do you have to make	Cronbach's alpha. Factor analyses. Convergent validity. Discriminant group validity.

Table 2 Older people specific quality of life instruments

<i>Name, original authors, publication year</i>	<i>Purpose</i>	<i>Theoretical framework</i>	<i>Items</i>	<i>Domains/scales/subscales (no. of items)</i>	<i>Response format and scoring</i>	<i>Administration and example of item (domain)</i>	<i>Psychometric properties</i>
Age-Related Hormonal Decline of Quality of Life Questionnaire – A-RHQoL (McMillan et al., 2003)	Individualized questionnaire measuring QoL in older men with age-related hormonal decline.	No theory	21	Family life, Social life, Work, Health, Physical appearance, Physical capabilities, Physical stamina, Energy, Sex life, Sleep, Bodily pain, Stress-tolerance, Memory, Concentration, Travel, Holidays & leisure, Household tasks, Confidence, Motivation, Society's reaction, Worry about future	7-point scale of impact of the difficulties: -3 = very much better to 3 = very much worse; then importance on the 4-point scale: 3 = very important to 0 = not at all important. Respondents can also use the option: not applicable (N/A).	SA; Item No. 6a) – „If my hormone levels had not declined with age, my physical capabilities would be: ...“ Item No. 6b) – “This aspect of my life is: ...”	Cronbach’s alpha. Factor analyses (Unforced FA, Forced I-FA) Content and preliminary construct validity.
Aging Males' Symptoms scale – AMS (Heinemann et al., 1999)	To measure and to compare HRQoL of aging males over time or before/after androgen replacement therapy.	HRQoL	17	Psychological (5), Somato-vegetative (7), Sexual (5)	5-point scale of severity: 1 = none to 5 = extremely severe	SA; Item No. 10 – “Decrease in muscular strength feeling of weakness.” (Somato-vegetative factor)	Cronbach’s alpha. Test-retest reliability. Factor analyses. Construct validity.
Nursing Home Vision-Targeted Health-Related Quality of Life questionnaire – NHVQoL (Dreer et al., 2007)	To assess vision-targeted HRQoL in older adults residing in nursing homes.	HRQoL	57	General vision (6), Reading (3), Ocular symptoms (9), Mobility (7), Psychological distress (10), Activities of daily living (6), Social activities/hobbies (8), Adaptation/coping (2), Social interaction (6)	4-6-points scale measure the amount of difficulty, frequency of problem, trueness of statement and degree of difficulty of the symptoms. High score represents the highest functional level.	Structured interview; Item No.3 – “How much of the time do you worry about your eyesight?” (Psychological distress)	Cronbach’s alpha. Test-retest reliability. Construct validity.

Table 2 continued

<i>Name, original authors, publication year</i>	<i>Purpose</i>	<i>Theoretical framework</i>	<i>Items</i>	<i>Domains/scales/subscales (no. of items)</i>	<i>Response format and scoring</i>	<i>Administration and example of item (domains)</i>	<i>Psychometric properties</i>
Quality of Life in Late-Stage Dementia scale – QUALID (Weiner et al., 2000)	Proxy-informant based scale designed to assess the QoL in patients with advanced dementia in long-term settings.	No theory	11	Factor of behavioral signs of discomfort (4), Factor of behavioral sign of social interaction (4), Factor of signs of negative affective mood (3)	5-point Likert scale: 1 = never to 5 = always	Structured proxy interview by professional caregiver or family member; Item No. 5 – “Appears physically uncomfortable.”	Cronbach’s alpha. Inter-rater reliability (ICC). Factor analysis. Criterion validity. Construct validity.
Quality of life instrument for the Japanese elderly with dementia (QLDJ) Yamamoto-Mitani et al., 2002)	A proxy-rated instrument to assess the QoL of the Japanese elderly with dementia.	HRQoL	24	Interacting with surroundings (8), Expressing self (10), Experiencing minimum negative behaviors (6)	4-point Likert scale: 0 = not at all applicable to 3 = very much applicable	proxy by caregiver	Cronbach’s alpha. Inter-rater reliability (ICC). Test-retest reliability. Factor analysis. Construct validity.
Quality of life questionnaire for dementia – QOL-D (Terada et al., 2002)	Disease-specific HRQoL questionnaire to assess QoL in the elderly with dementia.	WHO definition of QoL.	31	Positive affect (7), Negative affect and action (6), Ability of communication (5), Restlessness (5), Attachment with others (4), Spontaneity and activity (4)	4-point response scale: 1 = never to 4 = frequent. High score indicates better QoL.	SA or by proxy; “Irritable among others.” (Negative affect and action)	Cronbach’s alpha. Inter-rater reliability (ICC). Factor analysis. Content validity. Construct validity.
Quality of life questionnaire for elderly Japanese patients with glaucoma (Uenishi et al., 2003)	A questionnaire evaluates the QoL of elderly Japanese glaucoma patients.	No theory	31	Social and daily life (8), Psychological (8), Physiological (8), Satisfaction of daily life (7)	3-point response: 4 = yes, 2 = sometimes, 0 = no. Higher score represented worse QoL.	SA or interview; Item No. 11 – “Do you feel nervous?” (Psychological)	Cronbach’s alpha.

Table 2 continued

<i>Name, original authors, publication year</i>	<i>Purpose</i>	<i>Theoretical framework</i>	<i>Items</i>	<i>Domains/scales/subscales (no. of items)</i>	<i>Response format and scoring</i>	<i>Administration and example of item (donovan)</i>	<i>Psychometric properties</i>
Vienna List (Porzolt et al., 2004)	A proxy-rating measurement for QoL in very old and severely demented persons.	WHO definition of QoL	40	Communication (15), Aggression (4), Bodily contact (5), Mobility (6), Negative affect (10)	5-point Likert scale: 1 = never, 5 = always	by proxy; "Worries about others." (Communication)	Cronbach's alpha. Factor analysis. Discriminative, content- and criterion-related validity.
Visual Symptoms and Quality of life questionnaire – VSQ (Donovan et al., 2003)	The questionnaire assesses visual symptoms/dysfunctions and impact on vision-specific QoL for people undergoing second eye cataract extraction.	No theory.	32 full, 14 short	Symptom and visual dysfunction (18), Vision-specific quality of life (9), Vision (3), Administrative issues (2)	4-7-points response formats, that measure level of difficulties and frequency of problems with vision	SA; Item No. 3 – "How would you describe the colours that you see now?" (Symptom and visual dysfunction)	Cronbach's alpha. Test-retest analysis (ICC, linear weighted kappa). Factor analyses. Content and construct validity. Responsiveness.

SA = self-administrated

The oldest instrument (OMFAQ) was published in 1981 and twelve of the other instruments were published after the year 2000. The shortest instrument has 11 items (QUALID) and the longest has 154 items (OMFAQ). We can conclude that all analyzed instruments are multidimensional, except the A-RHDQOL, which is an individualized tool. The number of domains varies between three (e.g. AMS, QLDJ) to twelve (e.g. LEIPAD, OMFAQ). Physical, psychological and social issues are the most frequently occurring domains within the analyzed instruments. They also include economic situation, sexual function, activities of daily living, communication, etc. Only one instrument (LEIPAD) assesses cognitive function and only four incorporate domains related to health status (OMFAQ, OPQOL, QuiLL, A-RHDQOL).

Each of the instruments produces a score profile across all domains and eleven include also global judgments of QoL, namely CASP-19, LEIPAD, OPQOL, QuiLL, WHOQOL-OLD, A-RHDQoL, AMS, QUALID, QLDJ, Quality of life questionnaire for elderly Japanese patients with glaucoma, VSQ. The analyzed instruments use 3- to 7-point scale as a response format and they measure intensity, frequency, satisfaction, level of functioning, impact of difficulties on the QoL and importance of various domains for the QoL. Reported completion times ranging from 5 minutes (QUALID) to 1 hour (QOLPSV).

Majority of the generic and disease-specific questionnaires were developed with the addition of qualitative methods (e.g. interview, responses to open-ended questions, etc.) to derive items and check face validity by observing patients completing the instruments. In general, there were these steps followed: initial development work, a pilot study with psychometric testing and then modification or creating a final version of the questionnaire. Majority of the currently available language versions was translated following international standards for linguistic and cultural translation of quality of life instruments. The research versions are available from the authors on request. Some of the described instruments have a shortened or brief version (OPQOL, QuiLL, QOLPSV, VSQ). Short instruments, as the CASP-19, OPQOL-brief, QUALID, AMS, VSQ-short, can be used as a screening assessment, as part of a single assessment process, and as a monitoring tool and outcome measure.

Internal consistency reliability was verified for all instruments. Values attained for Cronbach's alpha in subscales of the instruments ranged from 0,43 (domain sexual function in LEIPAD) to 0,96 (domain Activities of daily living in NHVQoL). Lower levels of reliability value were reported also for these domains: Control ($\alpha = 0,59$; CASP-19), Social function and Life satisfaction (both $\alpha = 0,61$; LEIPAD) or Autonomy ($\alpha = 0,65$; CASP-19). Seven instruments have evidence of test-retest reliability with time interval between tests about two weeks.

Content validity is not widely reported (Haywood et al., 2004). The testing content validity of analyzed instruments occurred only in three generic and four specific tools. The content validity of the questionnaires was tested with individual cognitive interviews with the members of the focus groups that consisted of older people, patients and clinicians. These groups help to reduce validity and reliability errors in three ways: 1. they check that all relevant domains have been included, 2. they determine the dimensions that make up the domains, and 3. they ensure correct and understandable item wording (Bischoping & Dykema, 1999).

Most instruments in this review were assessed for construct validity through comparisons with other QoL instruments (e.g. SF-36, NHP or global subjective judgments of health status). Only four measures had demonstrable responsiveness to change, namely OMFAQ, QuiLL, QOLPSV, VSQ.

Each of analyzed generic instruments were developed using a QoL theory or framework. On the other hand, we found the absence of theory in the majority of specific QoL instruments for older people. Suggested a-theoretical approach to measuring the quality of life is typical not only for age-specific tools (Babincak, 2013). Theoretical framework is usually replaced by a factor-analytical approach where the structure of the measured quality of life is the result of a statistic procedure and is not based on a specific theory. Another problem is a too wide and vague theory or definition of the measured attribute. An example of this fact may be the often quoted WHO conceptualization which defines QoL as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectation, standards and concerns (WHOQOL Group, 1998). But in fact many tools based on this concept do not evaluate the position of the person in various contexts of life but the satisfaction in life or indicators of their health.

Conclusion

The review identified 16 instruments that have been evaluated for use with people over 60 years (especially for age range 65-75 years). The list includes seven generic and nine older-people-specific instruments, one of which is individualized (A-RHDQOL). The content of the questionnaire (e.g. OPQOL, CASP-19) reflects older people's own definitions and interpretations of QoL. Proxy assessment of QoL applied mainly to people with severe dementia, because a central problem for QoL assessment in people with advanced dementia is low reliability due to memory, language impairment and reduced self-awareness (Weiner, 2006). Given the multidimensional nature of the concept of quality of life, the length of time to complete a survey instrument with this age group may be greater than with a younger adult sample. Most of the presented tools can be regarded as useful, practical, differentiating, less time consuming instruments for investigation of quality of life of seniors.

We can summarize that:

1. Compared with the generic instruments we discovered the absence of theory in the majority of specific QoL instruments designed for older people, although this a-theoretical approach to measuring QoL is typical not only for these age group. As Davis et al. (2006) notes, for the researchers it is inevitable to create theoretically supported tools of measuring the quality of life and to verify postulated assumptions empirically.
2. Some of instruments contain the items that are not included in the total score, but offer information about the validity and usefulness of the ratings for the interviewer (e.g. QUALID scale).
3. Majority of the instruments provide multiple evidences of reliability and validity. The OMFAQ is highlighted as an instrument that addresses most relevant assessment domains for seniors. It is important to note, although the length of the instrument can increases respondent burden, there is good evidence of its reliability, validity and responsiveness.
4. Most of the described tools have been translated into other languages and adapted to better address cultural issues specific to a population.
5. In the group of seniors, generic and specific tools designed exclusively for the people over 60 years old may be applied, as well as generic methodologies applicable to adults in general. We found slight prevalence of specific tools in comparison to the generic ones. Physical, psychological and social issues are the most frequently occurring domains within the analyzed instruments.

Regarding the limitations of the realized overview we would like to state that the primary identification of the studies was based only on two full-text databases which do not cover the whole spectrum of publications in this area. The consequence may be the fact that other existing

tools relevant for senior age were not included in this overview. The acquired findings on the quality of life of seniors may specifically help us in care planning or in using interventions in order to improve their quality of life or to prevent the decline of its level.

References

- Babincak, P. (2013). Measurement of quality of life: overview studies analysis in selected databases. *Ceskoslovenska Psychologie*, 57(4), 358-371. Retrieved from <http://cspsych.psu.cas.cz/index2.html>
- Banerjee, S., Samsi, K., Petrie, C. D., Alvir, J., Treglia, M., Schwam, E. M., del Valle, M. (2009). What do we know about quality of life in dementia? A review of the emerging evidence on the predictive and explanatory value of disease-specific measures of health-related quality of life in people with dementia. *International Journal of Geriatric Psychiatry*, 24(1), 15-24. doi:10.1002/gps.2090
- Bischooping, K., & Dykema, J. (1999). Toward a social psychological programme for improving focus group methods of developing questionnaires. *Journal of Official Statistics*, 15(4), 495-516. Retrieved from <http://www.degruyter.com/view/j/jos>
- Bowling, A. (2009). The psychometric properties of the older people's quality of life questionnaire, compared with the CASP-19 and the WHOQOL-OLD. *Current Gerontology and Geriatrics Research*, 1-12. Retrieved from doi:10.1155/2009/29895
- Bowling, A., Hankins, M., Windle, G., Bilotta, C., & Grant, R. (2013). A short measure of quality of life in older age: the performance of the brief Older People's Quality of Life questionnaire (OPQOL-brief). *Archives of Gerontology and Geriatrics*, 56(1), 181-187. doi:10.1016/j.archger.2012.08.012
- Davis, E., Waters, E., Mackinnon, A., Reddihough, D., Graham, H. K., Mehmet-Radji, O., & Boyd, R. (2006). Paediatric quality of life instruments: a review of the impact of the conceptual framework on outcomes. *Developmental Medicine & Child Neurology*, 48(4), 311-318. doi:10.1017/S0012162206000673
- DeLeo, D., Diekstra, R. F. W., Lonnqvist, J., Trabucchi, M., Cleiren, M. H. P. D., Frisoni, G. B., ... Sampaio-Faria, J. (1998). LEIPAD, an internationally applicable instrument to assess quality of life in the elderly. *Behavioral Medicine*, 24(1), 17-27. doi:10.1080/08964289809596377
- Donovan, J. L., Brookes, S. T., Laidlaw, D. A. H., Hopper, C. D., Sparrow, J. M., & Peters, T. J. (2003). The development and validation of a questionnaire to assess visual symptoms/dysfunction and impact on quality of life in cataract patients: the Visual Symptoms and Quality of life (VSQ) Questionnaire. *Ophthalmic Epidemiology*, 10(1), 49-65. doi:10.1076/oep.10.1.49.13775
- Dreer, L. E., Mcgwin, G., Scilley, K., Meek, G. C., Dyer, A., Seker, D., & Owsley, C. (2007). Development of a nursing home vision-targeted health-related quality of life questionnaire for older adults. *Aging & Mental Health*, 11(6), 722-733. doi:10.1080/13607860701366186
- Ettema, T. P., Dröes, R-M., de Lange, J., Ooms, M. E., Mellenbergh, G. J., & Ribbe, M. W. (2005). The concept of quality of life in dementia in the different stages of the disease. *International Psychogeriatrics*, 17(3), 353-370. doi:10.1017/S104161020500207
- Evans, S., Gately, C., Huxley, P., Smith, A., & Banerjee, S. (2005). Assessment of quality of life in later life: Development and validation of QuiLL. *Quality of Life Research*, 14(5), 1291-1300. doi:10.1007/s11136-004-5532-y
- Farquhar, M. (1995). Elderly people's definitions of quality of life. *Social Science and Medicine*, 41(10), 1439-1446. doi:10.1016/0277-9536(95)00117-P
- Fillenbaum, G. G., & Smyer, M. A. (1981). The development, validity, and reliability of the OARS Multidimensional Functional Assessment Questionnaire, *Journal of Gerontology*, 36(4), 428-434. doi:10.1093/geronj/36.4.428
- French, C. T., Irwin, R. S., Fletcher, K. E., & Adams, T. M. (2002). Evaluation of a cough-specific quality-of-life questionnaire. *Chest*, 121(4), 1123-1131. doi:10.1378/chest.121.4.1123

- Grundy, E., & Bowling, A. (1999). Enhancing the quality of extended life years. Identification of the oldest old with a very good and very poor quality of life. *Ageing & Mental Health*, 3(3), 199-212. doi:10.1080/13607869956154
- Hart, H. E., Redekop, W. K., Bilo, H. J. G., Meyboom-de Jong, B., & Berg, M. (2007). Health related quality of life in patients with I diabetes mellitus: generic & disease-specific measurement. *Indian Journal of Medical Research*, 125(3), 203-216. Retrieved from <http://www.ijmr.org.in/>
- Haywood, K. L., Garratt, A. M., Schmidt, L. J., Mackintosh, A. E., & Fitzpatrick, R. (2004). *Health Status and Quality of Life in Older People: a Structured Review of Patient-reported Health Instruments* Report from the Patient-reported Health Instruments Group to the Department of Health. Retrieved from http://phi.uhce.ox.ac.uk/pdf/phig_older_people_report.pdf
- Heinemann, L. A. J., Zimmermann, T., Vermeulen, A., Thiel, C., & Hummel, W. (1999). A new 'aging males' symptoms' (AMS) rating scale. *The Aging Male*, 2(2), 105-114. doi:10.3109/13685539909003173
- Hyde, M., Wiggins, R. D., Higgs, P., & Blane, D. B. (2003). A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19). *Ageing & Mental Health*, 7(3), 186-194. doi:10.1080/1360786031000101157
- Kelley-Gillespie, N. (2009). An integrated conceptual model of quality of life for older adults based on a synthesis of the literature. *Applied Research Quality Life*, 4(3), 259-282. doi:10.1007/s11482-009-9075-9
- Leow, M. K-S., Griva, K., Choo, R., Wee, H-L., Thumboo, J., et al. (2013). Determinants of health-related quality of life (HRQoL) in the multiethnic Singapore population – a national cohort study. *PLoS ONE*, 8(6), e67138. doi:10.1371/journal.pone.0067138
- McMillan, C. V., Bradley, C., Giannoulis, M., Martin, F., & Sönksen, P. H. (2003). Preliminary development of a new individualised questionnaire measuring quality of life in older men with age-related hormonal decline: the A-RHDQoL. *Health & Quality of Life Outcomes*, 1, 1-12. Retrieved from doi:10.1186/1477-7525-1-51
- Moyle, W., & Murfield, J. E. (2013). Health-related quality of life in older people with severe dementia: challenges for measurement and management. *Expert Review of Pharmacoeconomics & Outcomes Research*, 13(1), 109-122. doi:10.1586/erp.12.84
- O'Boyle, C. A. (1997). Measuring the quality of later life. *Philosophy Transactions of the Royal Society of London*, 352(1363), 1871-1879. doi:10.1098/rstb.1997.0173
- Patrick, D. L., & Deyo, R. A. (1989). Generic and disease-specific measures in assessing health status and quality of life. *Medical Care*, 27(3 Suppl), 217-232. doi:10.1097/00005650-198903001-00018
- Porzolt, F., M. Kojer, M. Schmidl, E.R. Greimel, J. Sigle, J. Richter, & M. Eisemann (2004). A new instrument to describe indicators of well-being in old-old patients with severe dementia – The Vienna List. *Health and Quality of Life Outcomes*, 2, 10. Retrieved from doi:10.1186/1477-7525-2-10
- Power, M., Quinn, K., Schmidt, S., & the WHOQoL-OLD Group. (2005). Development of the WHOQOL-Old Module. *Quality of Life Research*, 14(10), 2197-2214. doi:10.1007/s11136-005-7380-9
- Raphael, D., Brown, I., Renwick, R., Cava, M., Weir, N., & Heathcote, K. (1995a). The quality of life of seniors living in the community: a conceptualization with implications for public health practice. *Canadian Journal of Public Health*, 86(4), 228-233. Retrieved from <http://journal.cpha.ca/index.php/cjph>
- Raphael, D., Smith, T., Brown, I., & Renwick, R. (1995b). Development and properties of the short and brief versions of the Quality of life profile: Seniors Version. *International*

- Journal of Health Sciences*, 6(4), 161-168. Retrieved from <http://www.ijhs.org.sa/index.php/journal>
- Terada, S., Ishizu, H., Fujisawa, Y., Fujita, D., Yokota, O., Nakashima, H., ... Kuroda, S. (2002). Development and evaluation of a health-related quality of life questionnaire for the elderly with dementia in Japan. *International Journal of Geriatric Psychiatry*, 17(9), 851-858. doi:10.1002/gps.711
- Uenishi, Y., Tsumura, H., Miki, T., & Shiraki, K. (2003). Quality of life of elderly Japanese patients with glaucoma. *International Journal of Nursing Practice*, 9(1), 18-25. doi:10.1046/j.1440-172X.2003.00398.x
- Weiner, M. F., Martin-Cook, K., Svetlik, D. A., Saine, K., Foster, B., & Fontaine, C. S. (2000). The Quality of Life in Late-Stage Dementia (QUALID) Scale. *Journal of the American Medical Directors Association*, 1(3), 114-116. Retrieved from <http://www.jamda.com/>
- Weiner, M. F. (2006). Measuring QOL in dementia. *International Psychogeriatrics*, 18(2), 357-358. doi: <http://dx.doi.org/10.1017/S1041610206223731>
- WHOQOL Group (1998). The World Health Organization Quality of Life assessment (WHOQOL): development and general psychometric properties. *Social Science & Medicine*, 46(12), 1569-1585. doi:10.1016/S0277-9536(98)00009-4
- Wiebe, S., Guyatt, G., Weaver, B., Matijevic, S. & Sidwell, C. (2003). Comparative responsiveness of generic and specific quality-of-life instruments. *Journal of Clinical Epidemiology*, 56(1), 52-60. doi:10.1016/S0895-4356(02)00537-1
- Yamamoto-Mitani, N., Abe, T., Okita, Y., Hayashi, K., Sugishita, C., & Kamata, K. (2002). Development of a Japanese quality of life instrument for older adults experiencing dementia (QLDJ). *International Journal of Aging and Human Development*, 55(1), 71-95. doi:10.2190/KUTN-74X3-27CX-NUMK

Contact Monika Kacmarova: monika.kacmarova@unipo.sk

A Longitudinal Case Study of the Quality of Life Trajectory: A Mother of Multiple Children with Pervasive Developmental Disorders

Miyako Kimura

St. Marianna University School of Medicine, Japan

Abstract

The purpose of this study was to explore the quality of life (QOL) trajectory of a mother of multiple children with pervasive developmental disorders (PDDs) using the lifeline method. In 2007, the first semi-structured interview was performed and the mother was asked to draw on a sheet of paper a lifeline containing a vertical axis (denoting psychological state: worst = -10 to best = +10) and a horizontal axis (denoting the time and event). At this point, the mother was in her early 40s and had three sons. In 2014, the second interview was performed, wherein the same mother was asked to report any changes/differences since the first interview. In 2015, the third interview was performed, wherein the mother confirmed the lifeline that she had drawn in the first interview and added to it based on her current perspectives. Throughout the mother's life, her psychological state was lowest (-9.5) after detecting disability in her second son for the first time. This negative experience was repeated when she detected disability in the third child, but the mother's psychological state only ranged between -8 (perspective in 2007) and -3 (perspective in 2015). Although having to face a child's having a PDD multiple times negatively influenced the mother's QOL, it did not overwhelm her. Peer support and an understanding husband were particularly important for enhancing the mother's QOL.

Keywords: lifeline, quality of life, amniocentesis, prenatal diagnosis, pervasive developmental disorders

Introduction

Having a child with a pervasive developmental disorder (PDD) greatly affects mothers' quality of life (QOL). According to the World Health Organization (2015), PDDs are a "group of disorders characterized by qualitative abnormalities in reciprocal social interactions and patterns of communication, and by a restricted, stereotyped, repetitive repertoire of interests and activities." Depending on the diagnostic criteria used (whether the Diagnostic and Statistical Manual of Mental Disorders [DSM] or International Statistical Classification of Diseases and Related Health Problems [ICD]), PDDs includes a range of disorders, including but not limited to childhood autism, atypical autism, Rett syndrome, Asperger syndrome, and PDD unspecified (World Health Organization, 2015). Recently, the DSM-5 was published and most of the aforementioned disabilities are considered under the single umbrella of autism spectrum disorder (ASD; American Psychiatric Association 2013).

Children with PDDs often show emotional and behavior problems that can have detrimental impacts on their family members. For example, emotional and behavioral problems in toddlers with PDDs/developmental delay contributed to mothers' stress, parental mental health problems, and perceived family dysfunction (Herring et al. 2006), and behavior problems in young people with ASD were strongly associated with the stress of their caregivers (e.g., parents and teachers; Lecavalier, Leone & Wiltz, 2006). In particular, the mothers of children with PDDs are more stressed than are the fathers (Herring et al. 2006). The fact that mothers experience more stress is likely related to how they tend to bear most of the burden of childrearing due to traditional gender roles (Gray 2003). Yamada et al. (2012) investigated the QOL of parents of children with PDDs in Japan, and reported that mothers of children with PDDs had lower QOL than did those of the Japanese general population, particularly in the mental domains. Furthermore, children with PDDs have negative impact on their siblings. Ross and Cuskelly (2006) reported that 40% of non-disabled siblings of children with ASD placed on the borderline or clinical range of the Child Behavior Checklist, indicating that non-disabled siblings have a higher risk of developing internalizing behavior problems.

As shown by these previous studies, parents encounter considerable difficulty in raising children with PDDs and their siblings without PDDs. However, matters become even more severe when multiple children in the same family have PDDs. Confirming this point, Kimura and Yamazaki (2013) explored the lived experiences of Japanese mothers of multiple children with intellectual disabilities (ID) including PDDs; according to these mothers, taking care of multiple children with ID involves a considerable amount of effort and causes mothers to suffer extreme physical and mental fatigue. Kimura, Yamazaki, Mochizuki, and Omiya (2010) also pointed out that mothers of children with PDDs in Japan experience extreme psychological conflict when considering future pregnancies after the birth of a child with a PDD. Some of the obstacles these mothers reported that made them hesitant to have another child were feelings of uncertainty about PDDs, perceptions of PDDs recurrence risk in future children, and severity of PDDs including behavioral problems. Therefore, having children with PDDs may threaten mothers' QOL.

QOL appears to be correlated with disability acceptance (Zhang, Hu, Xu, Zheng, & Liang, 2013). When considering parents of children with disability, there are several theories of disability acceptance. According to Olshansky (1962), parents of children with disabilities experience chronic sorrow throughout their lifetimes, although this is a natural response. In contrast, Drotar, Baskiewicz, Irvin, Kennell, and Klaus (1975) introduced stage theory, which dictates that parental reactions to having a child with disability have several stages —"shock,"

“denial,” “sadness and anger,” “adaptation,” and “reorganization.” In Japan, Nakata (1995) insisted that disability acceptance should not be parents’ goal, and that most parents lived in a spiral of both positive acceptance and denial of disability (called the “spiral model of disability acceptance”). However, these theories focused on parents’ perceptions of a single child with a disability and the influences of other important events (e.g., subsequent pregnancies, decision making about prenatal diagnosis, childbirths, and facing the disability of another child) on mothers’ acceptance were not fully accounted for. In addition, Kimura and Yamazaki (2013) mentioned that “searching for the positive experiences in parenting multiple children with ID” is a common experience among mothers of multiple children with ID (including PDDs), and most such mothers seemed to accept their children’s disabilities; however, how their experiences influenced their QOL was uncertain.

To evaluate the QOL of such a complex sample, the lifeline method would be a useful tool. The lifeline method involves drawing a “lifeline” that consists of a horizontal axis (denoting time) and a vertical axis (denoting psychological state); then, the participant is asked the reasons for the rises and falls in the lifeline via interviews (Hirano & Yamazaki, 2013). According to Taguchi, Yamazaki, Takayama, and Saito (2008), the lifeline method can be used to create chronological personal histories consisting of experiences as perceived by participants in retrospect, thus presenting an overall visual illustration of a participant’s life. In their study, the experiences of patients with recurrent breast cancer and dynamic process of their subjective QOL were displayed using lifelines and verbal expression. Similarly, Hirano and Yamazaki (2013) used the lifeline method to elucidate the illness experiences—particularly various changes in psychological state and the positive and negative factors related to those changes—in amyotrophic lateral sclerosis patients under tracheostomy invasive positive pressure ventilation. These studies clearly indicated, visually and verbally, how patients’ psychological states changed, which suggests that the lifeline method may be appropriate for exploring mothers’ QOL after the birth of a child with disability. In particular, the impact of subsequent pregnancies and childbirths after the birth of a child with PDDs, which have not yet been longitudinally explored, could be clearly illustrated.

Given that QOL is constantly changing due to the circumstances of life, a longitudinal qualitative study design seems attractive for its study. According to Calman, Brunton, and Molassiotis (2013), a longitudinal qualitative study focuses on individual participants’ narratives and life trajectories and answers qualitative questions about individuals’ lived experiences of change over time. Lawton et al. (2014) performed in-depth interviews (a baseline and a six-month follow-up) with people with type 1 diabetes, and identified important issues related to bolus advisor usage. Additionally, Whitehead (2006) investigated the reconstruction of self-identity in people experiencing chronic fatigue syndrome/myalgic encephalomyelitis using three in-depth interviews, and reported a trajectory of identity reconstruction over a variety of stages. Therefore, a longitudinal qualitative study could be the ideal design for investigating the changing process of QOL.

The purpose of the present study was to explore the QOL trajectory of a mother of multiple children with PDDs by using the lifeline method. Particularly, I focused on (1) the events that triggered declines or rises in the mother’s lifeline; (2) how having another child after the birth of a child with a PDD influenced the mother’s lifeline; and (3) how the trajectory of the lifeline changed (or did not change) depending on the mother’s perspective at each interview.

Methods

Data collection

With the cooperation of a member of an association of parents of disabled children, a mother of multiple children with PDDs was introduced to me in December 2007. Before the interview, privacy assurances (verbal explanations and in written documentation) were given to the participant, and I obtained the signed consent form. At the first interview, I performed the semi-structured interview and asked the mother to draw, on a sheet of paper, a lifeline containing a vertical axis (denoting psychological state: worst = -10 to best = +10) and a horizontal axis (denoting time and specific events). Similar to Taguchi et al. (2008), the lifeline was considered a tool to express the subjective QOL of the participant at various times in her life. At the beginning of the interview, I asked the participant, “What events have mainly influenced your psychological state both currently and in the past? Please write down these events and evaluate your psychological state during them, and then draw a line between them to illustrate how your psychological state changed.” After viewing the mother’s lifeline, I asked about each event and the participant’s experience of that event in detail. After completing the first interview, I kept in touch with the cooperator and obtained her support (e.g., information about the activities of association of parents of disabled children and parent-teacher association (PTA) in special needs school) from 2007 onwards. This cooperator also maintained a good friendship with the mother, such that she was informed about the mother’s family life. In July 2014, I contacted the cooperator again, and asked the mother to participate in follow-up interviews. I obtained confirmation that the participant had willingly consented to participate in follow-up interviews, and the second semi-structured interview was performed. In this interview, I asked the participant to report any changes/differences since the first interview. During the analysis of the second interview data, I assumed that the mother’s life had dramatically changed, and thus it would be necessary to confirm her lifeline. As such, I asked the mother to participate in a third interview, for which she gave consent. In January 2015, the final interview was performed. In the final interview, I asked the mother to confirm the lifeline that she had drawn in the first interview, and create a new lifeline from her current perspective. With the participant’s permission, each interview was tape-recorded, and observation records (memos) were taken. Each interview lasted for approximately 150–180 minutes.

Data analysis

The transcripts were created from the recorded interview data and memos. Similar to previous studies (Hirano & Yamazaki, 2013; Taguchi et al., 2008), the Lofland and Lofland (1995) method of analysis was employed. The transcript of the first interview was read several times, after which I created categories of factors related to declines and improvements in the participant’s psychological state. Since this was a case study, there was no need to compare with other participants’ data; instead, I compared the lifeline and transcript obtained from the first interview with the transcript of the second interview, looking for differences and conflicting points, from which new codes and categories were created where appropriate. In addition, I asked about the same events in more detail if they were not fully explored in the first interview, and new categories were added where appropriate. I conducted a similar process of comparison between the first and third interviews, which yielded new codes and categories. Since I was interested in the trajectory of the participant’s QOL, I investigated how the participant’s lifeline and stories had changed (or had not changed) in the third interview; however, most parts of her stories were consistent. To increase the validity of the final analysis, I obtained confirmation about the accuracy of the interpretations and lifeline from the

participant.

Ethical considerations

This study was approved by the review boards of two universities in 2007 and 2014, and before each interview and the publication of the present paper, I obtained the participant's informed consent. In presenting the mother's verbatim responses, I have given her a fictitious name.

Findings

The following findings are presented chronologically (T1–T9) and in terms of psychological state (–10 to +10), events (bold), categories (single quotation marks), direct quotes (double quotation marks), and selected interview quotations from those categories (text in italics). To avoid repetition, I mainly present the findings of the first interview and describe only what was different in the second and third interviews.

In December 2007 (i.e., the first interview), the mother, Emi, was in her early 40s and had three children (all boys). She was a homemaker and her husband was a white-collar worker. The first child had no disability and was a high school student; the second child had autism and the third child with a PDD unspecified and both were elementary school students. In July 2014 and January 2015, her first child had graduated university, while the second child had graduated from special needs school and was receiving daily welfare services for people with disabilities. The third child was a student in a special needs class in a public junior high school. Emi was still a homemaker, but her husband had taken an early retirement since the spring of 2014. At all three interviews, they were living in Tokyo, Japan.

Lifeline and experiences of mother of multiple children with PDDs

In the first interview, I asked Emi to draw a lifeline that encompassed from before the birth of her first child with a PDD (i.e., her second child) to the time of the interview; however, the start point was her decision. Without hesitation, she said “just after the birth of my first child,” for which she reported a psychological state of +4 on the lifeline sheet (T1, Figure 1).

T1: The birth of first child – T3: The birth of second child

After the birth of the first child, Emi ‘perceived ordinary happiness of having first child’ (T1, +4). However, during her second pregnancy, she ‘struggled with physical discomfort’ and reported ‘being angry with husband's unsupportive attitude,’ which rapidly decreased her lifeline (T2, –9) as follows:

During my second pregnancy, I was suffering from extreme stress. My lower abdomen felt bloated, and I couldn't stand up, so I did nothing but sleep. And my husband! It was different from my pregnancy with the first child; my husband didn't take care of me, that's why my stress was so elevated.

At the start point, Emi said, “When I gave birth to my first child, I felt an ordinary happiness” and talked about her experiences between T1 and T2. At this stage, she did not use the term “disability” and focused mainly on her own conditions and complaints about her husband. This implied that she perceived herself as living in an “ordinary” world at this stage. After the birth

of her second child, her lifeline raised because she ‘had a comfortable physical condition’ (T3, +1); however, ‘facing the difficulties of raising a second child’ gradually exhausted her mental and physical condition.

T4: Detecting disability in the second child

Before asking for a physical examination of the second child, Emi had considerable difficulty in rearing him, although she had not considered it possible that he had a disability. I asked her whether she had compared the first child (who had no disability) with the second child, but she denied doing so. She stated that because the first child had not had any disabilities, she had not even considered the possibility of the second child having one. Therefore, ‘receiving an indication of disability in the second child’ was an unexpected event for her (T4, -9.5)

I took my second child to the healthcare center for his year-and-a-half physical examination, and a public health nurse said, “Your child did not look at me even when I called him, so he might be deaf, or if not so, it’s too late.” What? Too late? I didn’t understand what she meant, but it really shocked me.

After this event, feelings of ‘having a hard time believing that the second child has a disability’ continued for roughly half of a year, during which her psychological state remained at -9.5, which was her lowest point.

I kept thinking that the child might have a disability,...[but] no, it mustn’t...A half-year passed, and when my second child was 2 years old, he was diagnosed as having an intellectual disability. What’s that? I didn’t have any knowledge about disabilities, but the doctor introduced an education/care center and told me to go.

T5: Received a definitive diagnosis for second child

Emi took her second child to an education/care center (for disabled children), after which her life changed. However, her experiences of ‘meeting mothers of children with disabilities in the education/care center’ and ‘obtaining information related to disabilities’ facilitated a rise in her lifeline (T5, 0). Even though Emi’s psychological state was neutral at this point, it was still a 9.5-point increase from T4, and she mentioned herself as being “happy.” In addition, receiving a definitive diagnosis provided Emi with feelings of ‘being able to consider how to handle the second child’s autism’ as below:

...After my child turned 3 years old, he was diagnosed with autism. Yeah, I was relieved about that. I thought, “Now, I can start considering how to handle my child.”

At this stage, she could “start” a new life as a mother of two children—one with PDDs and one without—so she stepped into a world that was different from the “ordinary” world she had known before.

T6: Changed education/care center to day-care center for the second child – Detecting disability in the third child

Emi congregated various events at this stage, and gave it a -8 in terms of psychological state. First, she talked about moving her second child from an education/care center to day-care center, which led her to begin ‘missing friends,’ thereby triggering a decline in her lifeline as

follows:

A year after I had enrolled [my second child in] the education/care center, I moved him to a day-care center, so I had to say goodbye to the other mothers. Also, my friends started to work, so there was little opportunity to meet each other...they were scattered...yeah, at that time, my psychological state was getting worse.

After moving her second child to the day-care center, Emi's daily life changed and her free time increased. During this period, she considered having a third child, because she was worried about her first child.

'Worry about the future of the first child without disability'

I suddenly decided to have another child. The reason was that the first child was so timid [laughs]. If he had another brother without disability, they could share the responsibilities of the second child's care in the future.

During her pregnancy with the third child, she again 'struggled with physical discomfort.' Moreover, she 'worried about the possibility of disability in the third child,' which led her, in order to cope with this fear, to ask her doctor to undergo amniocentesis.

'Received amniocentesis to do everything I can'

I decide to have a third child because I wanted to reduce the first child's burden, but if the third had a disability, his burden would be increased. That's why I strongly desired a prenatal diagnosis. I decided to have an abortion if the result was positive, as raising multiple children with disabilities would be impossible for me.

Researcher: What did you think about the result of the test?

Oh, it [the negative result] makes sense. But I knew the test couldn't detect various disabilities such as developmental disabilities. Yeah, but I could avoid some of the major disabilities. I could tell myself that I tried to do everything I could. I might have been accused, if the third child had had a disability of not having received a prenatal diagnosis; but I did the test, so I could excuse myself.

Researcher: Do you think that you needed the test?

Yes, if I didn't know the test, I would have been accused. In our current society, children with disabilities are a burden, a distraction, and a waste of tax money, right? The revenue from taxes is not enough, our country keeps getting deeper and deeper into debt, and so everybody thinks that we must cut waste.

According to Emi's explanations, obtaining a prenatal diagnosis was partly a defense against social disapproval of having multiple children with disabilities. These explanations also indicated how she viewed people with disabilities and their families in society. After the birth of her third child, she was relieved that everything about her third child was different from the second. This allowed her to continue 'believing that the third child did not have a disability.' However, upon detecting a disability in her third child, she reported only negative experiences:

'Having a hard time accepting the disability of the third child'

Then...the third child, at about one-and-a-half years old, I had doubted his disability... I said, uh-oh, uh-oh... When I faced my second child's disability, I had waves where I didn't

want to accept it. You'd think it'd be easier to accept the third child's disability because I had already overcome the waves, wouldn't you? But, when I faced my third child's disability, I also had waves...different waves...people may say, "What? The sibling too?" I imagined that...

She used “waves” as a metaphor to express extreme psychological states, although they also may imply obstacles. In addition, the second period of waves differed from the first because they were related to her fears of becoming known as a mother of multiple children with disabilities. Furthermore, ‘feeling sorry to place an even greater burden on the first child’ plagued Emi, because the situation had turned out exactly the opposite of how she had intended it to. However, by the third interview, when she added to her lifeline, she had a more positive perspective on this period of her life; she details this in T6’, below.

T6’: Different perspective on the events of T6 (third interview, 2015)

‘Had positive friends who had multiple children with disabilities’

Uh...let me see...now...I look back the period when I was facing the disability of my third child, and maybe it wasn't so low [pointing to the lifeline at around T6].

Researcher: You mean, it has become more positive since the first interview?

Yeah, maybe...here? [pointing to -3, T6’]. Of course, my feelings always go up and down, and I can't draw an exact line. But...yeah, it was not so low. Because, I had a lot of positive friends who had children with disabilities in parents associations, including mothers of multiple children with disabilities. I was not so bad at that time.

In 2015, at T6’, Emi’s story focused on how she ‘had positive friends who had multiple children with disabilities’ and ‘had a purpose in life,’ and her psychological state was 5 points up (–8 to –3) from the corresponding period in the first interview. Although some of her friends from the “education/care center” had scattered at the beginning of T6, and Emi was ‘missing friends,’ she had other networks and was not lonely.

T7: Taking an active part in parents’ groups

After she had prepared to “become immersed in the world of disabilities” and realized that she ‘had a place and role in parents’ groups,’ her lifeline rose substantially (T7, +9).

I was depressed for almost half a year, after the disability in my third child was discovered. However, I prepared to immerse myself in a world of disability...I had no choice... the third child was maybe three years old, and that's when the lifeline rose to its highest level. I had already begun participating in an association of parents of children with disabilities, and was becoming an activist in parent groups [laughs].

At this stage, she seemed to have accepted the disabilities of both children. She talked much about the associations of parents of children with disabilities, and emphasized the importance of admitting her children to a day-care center, which allowed her to continue her volunteer activities in parents’ groups because it ensured that her children with disabilities would be taken care of during the day.

T8 (Current perspective in 2007): Taking an active part in parents’ groups

As with the previous stage, Emi positively spoke of her current situation, and her

psychological state remained at +9 at T8. Her three children had a bad relationship, and all of them had problem behaviors, so she was ‘facing difficulties in raising three children.’ However, she still believed that she ‘had a place and role in parents’ groups’ and used the term “happy” and ‘had a positive perception of own life,’ as mentioned below.

I am a different person and have a different way of thinking now. I have passed the hardest period of my life, and compared with such experiences, I can do a lot to overcome difficulties. I am happy now, and try to stay with group members who are positive and have purpose in their own lives.

Although she had a tight schedule and had much to do for her parents’ groups, she enjoyed her current situation. However, she reacted sharply against being labeled:

Somebody told me that I had been selected [by God] as a parent of children with disability. No kidding! How do I fit the idea of a “parent of a child with disability”? These are the most irritating words for me to hear! I didn’t want to be selected. I’d like to say, “You must be a better fit than me” [laughs].

Although this conversation was not related to her psychological state, it may illustrate that she had conflicts in accepting her children’s disability itself; however, she refused to accept herself as “selected” to be a mother of children with disabilities. As already mentioned, she considered having children with disabilities to be a burden in current society, which suggests that she did not accept the status of their families in society. This was underpinned in the following interviews.

T9 (Current perspective in 2014 and 2015): Retirement of husband, graduation of the first and second children

Beginning in July 2014, I confirmed that the environment surrounding Emi had drastically changed since March 2014. The primary negative event of this period was the retirement of husband, which meant that she had to start ‘living a restricted life with husband,’ as follows:

After my husband suddenly decided to go into retirement early, he is always at home and says to me, “don’t spend money” or “don’t go out to do volunteer work such as activities in parents’ associations for disabled.” It’s so stressful! Also, he sticks his nose into our sons’ lives, which has worsened our sons’ conditions.

Unlike in the first interview, at this point, the second and third children rarely exhibited behavior problems, and ‘keeping a stable condition in multiple children with PDDs’ had relieved Emi’s burden. However, the presence of her husband had affected her peaceful everyday life, forcing her to ‘cut down on taking part in the parents’ groups’, as mentioned below. At the same time, the graduation of her second child increased her burden in this situation. In January 2015, she elaborated on this issue, which had persisted until that time.

Now, I have no remaining work for the PTA, so my schedule was blank. Also, I don’t have enough money or any opportunity to go out with members of the parents association of children with disabilities, because of my husband. I can’t think positively, and I may become depressed. My lifeline must have declined....

Indeed, at this point, her lifeline had decreased from +9 to –2. According to Emi, children with

severe ID, such as Emi's second child, are enrolled in special needs schools from elementary to high school, which usually require students' parents to participate in PTA activities. However, children with mild to moderate ID such as Emi's third child could enroll in special classes in general public schools, which do not require parents to participate much in PTA activities. Thus, after her second child graduated from special needs school, Emi had no opportunity to participate in PTA. Moreover, Emi's retired husband had restricted the family budget and prevented her from pursuing activities in parents' associations for children with disabilities. Therefore, being unable to continue her active life, her lifeline declined. It was perhaps this situation that caused Emi's to recall her life at T6' in a more positive light—namely, despite being shocked at the thought of facing the task of raising multiple children with disability, she had had a purpose, was free to live an active life, and had had a place to be herself.

Nowadays, however, she stayed at home all day with her husband and had no place where she could be herself. In addition, although the first child (who had no disability) had graduated from university and Emi reported 'being happy that the first child had found a job' at the second interview, he had quit his job and was staying at home by the third interview. She reported that her first child's job had been extremely stressful, making him unable to continue with it. However, Emi's husband pressured him to work again to start paying back the loan on their house. As such, Emi was 'worried about the mental health of the first child', and recognized that living alone and becoming independent would be better for him. On the other hand, Emi mentioned that the first child was the only one who could understand her situation in the family, and if he left home, she would become lonely, depressed, and irritated, and begin to feel that there was no room in her heart. Therefore, although she did not intend to force him to take care of their family in the future, she was unable to let him leave. This dilemma made her 'worried about an uncertain future'.

Discussion

I examined the QOL trajectory of a mother of multiple children with PDDs by using the lifeline method. Throughout Emi's lifeline, facing her children's disability had a negative impact on her QOL, but handling the disability themselves did not appear to be overwhelming for her; rather, psychological support from friends—especially peer support—seemed to have a stronger impact on her QOL. According to Shilling, Morris, Thompson-Coon, Ukoumunne, and Logan (2013), who conducted a review of ten qualitative studies, (1) shared social identity, (2) learning from the experiences of others, (3) personal growth, and (4) supporting others were identified as primary themes relating to peer support for parents of children with chronic disabilities. All of these themes were reported by Emi, who said that being actively involved in parents' networks triggered an increase in her lifeline. Jandt (2010) explored the cultural dimensions of Japan, and noted that "the Japanese do not have the same perception of self as an individual that is typical in the United States; instead, the Japanese feel most comfortable with others who empathize" (p.168). This cultural dimension might relate to Emi's perceptions of QOL, because certain values inherent to a given population in a particular culture might be associated with their perceptions of better QOL (Urzu'a, Miranda-Castillo, Caqueo-Uri'zar, & Mascayano, 2012). Therefore, sharing similar experiences and cultures within a peer group, may have been essential for Emi to feel positive and maintain QOL.

The presence of her husband at home became an obstacle to her maintaining such networks and activities, and triggered a decline in her lifeline. Yamada et al. (2012) stated that the impaired QOL of mothers of children with PDDs in Japan is significantly associated with their

own personality tendencies and the relationship between spouses; Emi's case appeared to be a typical example of such findings. Particularly, there are still numerous gender issues in Japan, as most of the burden of parenting falls on mothers. Involving fathers in parenting and activities such as PTA and parents associations for people with disabilities may help them better understand mothers' situations. To do this, approaches targeting fathers and supportive working environments for them would be required.

The lifeline method in this study did not focus solely on disability acceptance, which means that it may add a new perspective on disability acceptance studies. Specifically, in this study, having a child with a PDD for the first time had a more negative impact on a mother's psychological state than did the second time. Furthermore, after each diagnosis in her children, Emi recognized the importance of friendship with other mothers of children with disability, resulting in a corresponding increase in her QOL. However, previous disability acceptance theories have not accounted for the complexity of the reactions of mothers facing multiple children with disabilities, which I was able to do using the lifeline method. Indeed, Emi explained that facing a child's PDDs multiple times came in "waves," and the lifeline clearly illustrates these waves and their impact on her QOL. In addition, although Emi attempted to view her children's disabilities positively and play an important role in parents' groups, she consistently used negative expressions in referring to people with disabilities in society. This may illustrate that acceptance of one's own children's disabilities and acceptance of the presence of people with disabilities in society are not the same—indeed, these may sometimes even conflict.

Emi had no dilemma related to obtaining a prenatal diagnosis and decision making about having another child after giving birth to a child with a PDDs. Having other children after having a child with a PDD is not an easy decision in Japan (Kimura et al. 2010), but Emi decided to have the third child because she wanted to reduce the burden that her first child, who did not have a disability, would experience. In addition, she decided that if the result of amniocentesis were positive, she would have an abortion. Mothers who regard having disability as a burden are more likely to undergo amniocentesis (Horii, 1998); indeed, Emi appeared to have an overall negative perception of people with disabilities and their families in society. Therefore, she needed to "pose" and take a "defensive attitude" by receiving a prenatal diagnosis, which she did not regret doing, and these experiences did not affect her QOL at all.

Surprisingly, in 2015, although eight years had passed since the first interview, Emi reported almost the same life history and confirmed that the lifeline from the first interview was mostly correct. However, she did point out that one event—detecting the third child's disability—was less severe (at -3 rather than -8) from her current perspective. At T6 (a decline in lifeline from the previous event) in the first interview, Emi related that her friends were scattered and she was missing them. In the third interview, she reported the same reason for a lower QOL (T6') as the first interview, but she emphasized how important the parents' associations of children with disabilities were for her (T6'). The importance of these associations doubtlessly influenced Emi's situation in 2015, when she had lost the opportunity to have an active life, thereby leading to a decline in her lifeline again (T9, -2). This, in turn, might have resulted in her changing her perception on T6 (i.e., detecting and facing the third child's disability) by the third interview to become more positive. Because 'had a place and a role in parents' groups' may have been the most important aspect of her life, when looking back at T6', when she was still involved in the parents' groups, she perhaps viewed the period as "not so bad." Thus, one's perception of their past QOL could be changed by their current perspective; to confirm this, longitudinal qualitative research would be helpful.

The difficulties and expected role of typically developing siblings of a child with a PDD were also observed in the present study. Walton and Ingersoll (2015) noted that the relationships between children with ASD and their siblings were characterized by less aggression but also less involvement and greater avoidance compared to the relationships between typically developing siblings. Additionally, older male siblings of children with ASD had a greater risk of experiencing relationship difficulties. As young adults, typically developing siblings of children with ASD may experience a strong sense of responsibility for their sibling with autism, which could make it difficult for them to leave home and begin an independent life (Autism society, n.d.). Some of these findings accord with Emi's story. However, because I did not directly interview the typically developing first child, it is unclear what he thought about his situation and mental health condition. Emi's dilemma, in contrast, was rather clear on this point: she felt that could not leave the typically developing first child because he was the only one who could understand her as a mother of multiple children with PDDs. In addition, Emi's husband expected financial support from this first child (e.g., paying back the loan on their house), making the first child have a rather central role in the family. To ensure the QOL of the typically developing siblings, providing family support targeted at siblings (e.g., consulting about their situations, future plans) at each developmental stage would be needed in Japan.

This study had several limitations. First, because this was a single case study, the sample size was very small. Second, although this study was longitudinal, it was still a retrospective study as well as a case study, meaning it could have been affected by recall bias. Third, while the lifeline method was useful for grasping the participant's QOL visually, in this case, the drawn line was very rough and did not reflect the timeline accurately. Fourth, Emi and I were like friends, which helped to her to talk about various topics, and I obtained a considerable amount of information about her life from herself and the cooperator of this study. However, this might have resulted in rater bias. Finally, I focused on child-related events, meaning that the lifeline did not illustrate the participant's life events as a whole.

Conclusions

This study contributes to our understanding of how the QOL of a mother of multiple children with PDDs changes based on her lifeline, which may add a new perspective on disability acceptance studies. Detecting her child's disability for the first time led to a decline in the mother's lifeline to her lowest point; however, receiving a definitive diagnosis and meeting other mothers of children with disabilities triggered rises in her lifeline. Although the mother underwent amniocentesis and received a negative result during her pregnancy with the next child, this child also had a PDD. Facing the notion of having another child with disability led to another decline in the mother's lifeline, but this decline was not as low as the one before. In addition, eight years after the first interview, her perspective on this event had improved because her current situation had changed. Taking an active role in parents' groups drastically improved her lifeline, suggesting that peer support would be important for her to maintain her QOL. Similarly, given that her husband made it difficult for her to take part in such activities, her husband's understanding of her reason for participating in parents' groups would no doubt benefit her QOL. Longitudinal qualitative research appears to be a useful approach for confirming an individual's changing perceptions of the same event, and the lifeline method is able to represent the QOL trajectory visually and verbally. A comparative study (e.g., fathers' and mothers' experiences) would be recommended, and more participants are needed in future studies.

Table 1
Categories related to rises and declines in the participant's lifeline

Time	Main event	Psycho-logical-state	Categories related to rises in lifeline	Categories related to declines in lifeline
T1	The birth of first child	4	Perceived ordinary happiness of having first child	
T2	Pregnancy with the second child	-9		Struggled with physical discomfort Being angry with husband's unsupportive attitude
T3	The birth of second child	1	Had a comfortable physical condition	Facing the difficulties of raising a second child
T4	Detecting disability in the second child	-9.5		Receiving an indication of disability in the second child Having a hard time believing that the second child has a disability
T5	Received a definitive diagnosis for second child	0	Meeting mothers of children with disabilities in the education/care center Obtaining information related to disabilities Being able to consider how to handle the second child's autism	
T6	Changed education/care center to day-care center for the second child			Missing friends
	Considering having a third child			Worry about the future of the first child without disability
	Pregnancy with the third child			Struggled with physical discomfort
	Received amniocentesis	-8	Received amniocentesis to do everything I can	Worried about the possibility of disability in the third child
	Birth of third child		Believing that the third child did not have a disability	
	Detecting disability in the third child			Having a hard time accepting the disability of the third child Feeling sorry to place an even greater burden on the first child
T6'	Different perspective on the events of T6 (third interview, 2015)	-3	Had positive friends who had multiple children with disabilities Had a purpose in life	
T7	Taking an active part in parents' groups	9	Had a place and role in parents' groups	
T8	(Current perspective in 2007) Taking an active part in parents' groups	9	Had a place and role in parents' groups Had a positive perception of own life	Facing difficulties in raising three children
T9	(Current perspective in 2014 and 2015) Retirement of husband			Living a restricted life with husband
	Graduation of the second child	-2	Keeping a stable conditions of multiple children with PDDs	Cut down on taking part in the parents' groups Worries about uncertain future
	Graduation of the first child		Being happy that the first child had found a job	Worried about the mental health of the first child

Note: T6' is the participant's perspective on T6 from the third interview

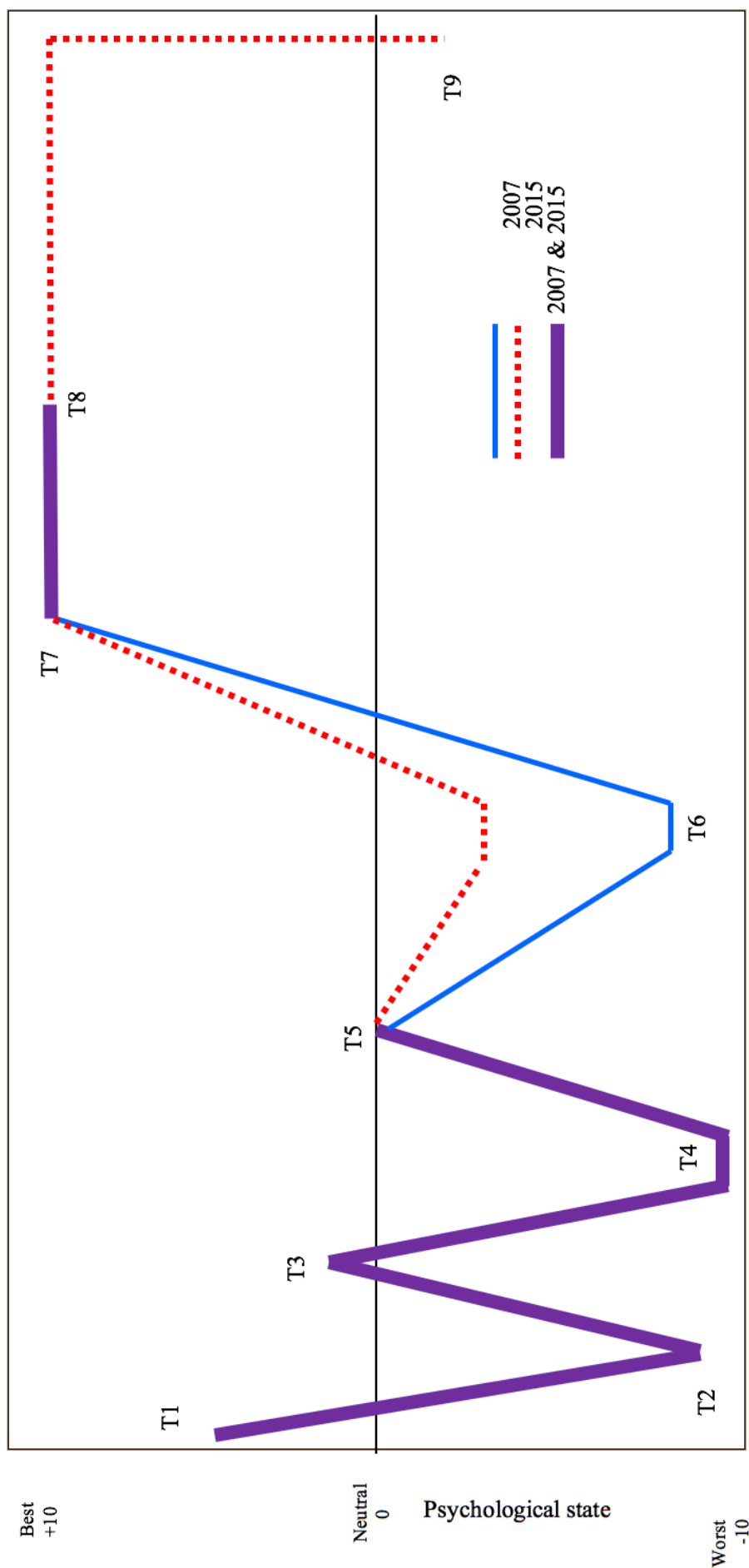


Figure 1. The lifeline of the mother of multiple children with pervasive developmental disorders

References

- American Psychiatric Association. (2013). Autism Spectrum Disorder. Retrieved from <http://www.dsm5.org/Documents/Autism%20Spectrum%20Disorder%20Fact%20Sheet.pdf>
- Autism Society. (n.d.). Siblings. Retrieved from <http://www.autism-society.org/living-with-autism/family-issues/siblings/>
- Calman, L., Brunton, L., & Molassiotis, A. (2013). Developing longitudinal qualitative designs: lessons learned and recommendations for health services research. *BMC Medical Research Methodology*, *13*, 14. doi:10.1186/1471-2288-13-14
- Drotar, D., Baskiewicz, A., Irvin, N., Kennell, J., & Klaus, M. (1975). The adaptation of parents to the birth of an' infant with a con-genital malformation: A hypothetical model. *Pediatrics*, *56*, 710–717.
- Gray, D. E. (2003). Gender and coping: the parents of children with high functioning autism. *Social Science & Medicine*, *56*, 631–642. doi:10.1016/S0277-9536(02)00059-X
- Herring, S., Gray, K., Taffe, J., Tonge, B., Sweeney, D., & Einfeld, S. (2006). Behaviour and emotional problems in toddlers with pervasive developmental disorders and developmental delay: associations with parental mental health and family functioning. *Journal of Intellectual Disability Research*, *50*, 874–882. 10.1111/j.1365-2788.2006.00904.x
- Hirano, Y., & Yamazaki, Y. (2013). The illness experience of amyotrophic lateral sclerosis (ALS) patients under tracheostomy invasive positive pressure ventilation (TPPV): Using the life-line method to study changes in psychological state and related factors. *Journal of Japan Academy of Nursing Science*, *33*, 29–39. doi.org/10.5630/jans.33.2_29
- Horii, Y. (1998). A fundamental problem of bioethics: Focusing on prenatal diagnosis. *Studies in Philosophical Anthropology*, *28*, 79–101.
- Jandt, F. E. (2010). *An introduction to intercultural communication: Identities in a global community* (6th ed.). California: Sage Publications.
- Kimura, M., & Yamazaki, Y. (2013). The lived experience of mothers of multiple children with intellectual disabilities. *Qualitative Health Research*, *23*, 1307–1319. doi: 10.1177/1049732313504828
- Kimura, M., Yamazaki, Y., Mochizuki, M., & Omiya, T. (2010). Can I have a second child? Dilemmas of mothers of children with pervasive developmental disorder: a qualitative study. *BMC Pregnancy Childbirth*, *10*, 69. doi: 10.1186/1471-2393-10-69
- Lawton, J., Kirkham, J., Rankin, D., Barnard, K., Cooper, CL., Taylor C., . . . REPOSE Group. (2014). Perceptions and experiences of using automated bolus advisors amongst people with type 1 diabetes: a longitudinal qualitative investigation. *Diabetes Research and Clinical Practice*, *106*, 443–450. doi:10.1016/j.diabres.2014.09.011
- Lecavalier, L., Leone, S., & Wiltz, J. (2006). The impact of behaviour problems on caregiver stress in young people with autism spectrum disorders. *Journal of Intellectual Disability Research*, *50*, 172–183. 10.1111/j.1365-2788.2005.00732.x
- Lofland, L., & Lofland, LH. (1995). *Analyzing social settings: A guide to qualitative observation and analysis*. Belmont, CA: Wadsworth/Thomson Learning.
- Nakata, Y. (1995). A parental response to having a child with developmental disorders: A stage model or chronic sorrow? *Waseda Psychological Reports*, *27*, 83–92.
- Olshansky, S. (1962). Chronic sorrow: A response to having a mentally defective child. *Social Casework*, *43*, 190–193.
- Ross, P., & Cuskelly, M. (2006). Adjustment, sibling problems and coping strategies of brothers and sisters of children with autistic spectrum disorder. *Journal of intellectual*

- & *developmental disability*, 31, 77–86. doi:10.1080/13668250600710864
- Shilling, V, Morris, C., Thompson-Coon, J., Ukoumunne, O., Rogers, M., & Logan, S. (2013). Peer support for parents of children with chronic disabling conditions: a systematic review of quantitative and qualitative studies. *Developmental Medicine and Child Neurology*, 55, 602–609. doi: 10.1111/dmcn.12091
- Taguchi, R., Yamazaki, Y., Takayama, T., & Saito, M. (2008). Life-lines of relapsed breast cancer patients: A study of post recurrence distress and coping strategies. *The Japanese Society of Health and Human Ecology*, 74, 217–235.
- Urzu'a, A., Miranda-Castillo, C., Caqueo-Uri'zar, A., & Mascayano, F. (2012). Do cultural values affect quality of life evaluation? *Social Indicators Research*, 16, doi: 10.1007/s11205-012-0203-9
- Walton, K. M., & Ingersoll, B. R. (2015). Psychosocial adjustment and sibling relationships in siblings of children with autism spectrum disorder: risk and protective factors. *Journal of Autism Developmental Disorders*, 45, 2764–2778. doi: 10.1007/s10803-015-2440-7.
- Whitehead, L. (2006). Toward a trajectory of identity reconstruction in chronic fatigue syndrome/myalgic encephalomyelitis: a longitudinal qualitative study. *International Journal of Nursing Studies*, 43, 1023–1031. doi:10.1016/j.ijnurstu.2006.01.003
- World Health Organization. (2015). International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10)-2015-WHO Version. Retrieved from <http://apps.who.int/classifications/icd10/browse/2015/en#/F80-F89>.
- Yamada, A., Kato, M., Suzuki, M., Suzuki, M., Watanabe, N., Akechi, T., & Furukawa, TA. (2012). Quality of life of parents raising children with pervasive developmental disorders. *BMC Psychiatry*, 12, 119. doi:10.1186/1471-244X-12-119
- Zhang, T. L., Hu, A. L., Xu, H. L., Zheng, M. C., & Liang, M. J. (2013). Patients after colostomy: relationship between quality of life and acceptance of PDDs and social support. *Chinese Medical Journal*, 126, 4124–4131.

Acknowledgement

This study was partially funded by the Japan Society for the Promotion of Science (JSPS; KAKENHI Grant Number 26380716). I would like to thank the participant and cooperator in this research.

E-mail Miyako Kimura: mkimura@marianna-u.ac.jp

Cognitive Dissonance Among Chinese Gamblers: Cultural Beliefs Versus Gambling Behavior

Robert J. Taormina
Blair K.H. Chong
University of Macau, China

Abstract

This study examined the extent to which cognitive dissonance exists among Chinese gamblers as a consequence of gambling while holding negative attitudes toward gambling, which are inherent in China's traditional cultural values. Using the behavioral variable of actual gambling and an attitudinal variable of negative beliefs about gambling, a third, practical measure of cognitive dissonance was developed. By using questionnaires completed by 200 adult Chinese respondents, these measures were examined in relation to a set of relevant independent variables frequently tested in the gambling literature. Cognitive dissonance was expected to have significant negative correlations with traditional Chinese values and family support, and a significant positive correlation with neuroticism. Cognitive dissonance was also expected to be negatively correlated with two personal outcomes, i.e. self-actualization and life satisfaction. The results supported these hypotheses, which confirmed the validity of the new measures, and that cognitive dissonance does indeed exist among Chinese gamblers. The results also found that Chinese gamblers, even though they do gamble, also hold negative attitudes toward gambling, with more cognitive dissonance strongly associated with higher levels of gambling. This provides a new perspective on studying Chinese gambling, and offers a possible strategy to help pathological gamblers, for example, by advising them that their negative beliefs about gambling reflect the positive moral values of their society's traditional culture, an approach that may be effective in reducing excessive gambling.

Keywords: Cognitive dissonance, Chinese, culture, gambling, traditional values

Introduction

Excessive gambling has been suspected to be a precursor of suicide and attempted suicide among Chinese gamblers (Hodgins, Mansley, & Thygesen, 2006). Also, in a recent study of 17 gamblers who had committed suicide, all of them (100%) had been diagnosed as pathological gamblers (Wong, Chan, Conwell, Conner, & Yip, 2010). Consequently, gambling among Chinese people can have dire consequences, and should be studied from a perspective, particularly a cognitive perspective, that may be able to reveal possible ways to reduce or overcome problems associated with gambling.

Although there has been a great deal of research on gambling among Chinese people, including that they gamble to a greater extent than other populations (Oei, Lin, & Raylu, 2008), and have higher rates of gambling addiction (Chen, Wong, Lee, Chan-Ho, & Lau, 1993), there has been almost no mention of the fact that the traditional values of Chinese society condemn gambling as immoral (Cheng, 2009). Additional evidence for the idea that gambling is deemed immoral in Chinese society can be found in research that shows Chinese gamblers under-reporting their gambling (Blaszczynski, Huyuh, Dumlao, & Farrell, 1998) because they see it as a reflection of “personal failure” and do not report it in order to “save face” (Loo, Raylu, & Oei, 2008, p. 1154).

Yet, some authors regard gambling as an acceptable behavior for the Chinese (e.g., Fong & Wong, 2009). But if gambling is accepted by Chinese society, why would the Chinese see their gambling as an admission of personal failure? And why would they think they must avoid admitting that they gamble in order to save face? Moreover, if gambling is acceptable to Chinese society, why do Chinese gamblers experience so much personal and interpersonal stress that many Chinese gamblers are driven to commit suicide (Wong et al., 2010)?

Clearly, based on the historical condemnation of gambling and on the fact that Chinese people see their gambling as a personal failure, it can only be concluded that gambling is indeed regarded as immoral by traditional Chinese culture. In other words, there is a contradiction between the traditional Chinese view of gambling and the act of gambling, which means that Chinese people who live according to traditional Chinese beliefs would be less likely to gamble. Taormina (2009) empirically tested this idea and, as expected, found a strong *negative* correlation (at $p < .001$) between gambling and living by traditional values.

Traditional values pose no problem for people who do *not* gamble; but the fact that the condemnation of gambling is part of traditional Chinese culture should create a feeling of cognitive dissonance among Chinese people who *do* gamble. Cognitive dissonance is an uncomfortable mental state that occurs when two inconsistent (or contradictory) perceptions exist together for any given person (Festinger, 1957). Thus, cognitive theory would predict that Chinese people who gamble and who are also mindful of traditional anti-gambling beliefs would experience cognitive dissonance. This study was designed to test this proposition.

Research Design

The main variable of Cognitive Dissonance was examined as a function of its two component variables, namely, Gambling Behavior and the Negative Beliefs about Gambling that are part of traditional Chinese culture. These three variables represent the dependent variables in this

study because they are the underlying focus of this research. And they are also examined in relation to three antecedent and two outcome variables.

Gambling Behavior. For clarity, gambling is defined as “the betting or wagering of valuables on events of uncertain outcome” (Devereux, 1979, as cited in Scull & Woolcock, 2005, p. 30). The literature on the detrimental effects of gambling is quite extensive. Examples include problems that occur not only for the persons who gamble, e.g., when they become criminal offenders (Rosenthal & Lorenz, 1992), but also for their families (Kalischuk, Nowatzki, Cardwell, Klein, & Solowoniuk, 2006; Kwan, 2004), spouses (Lorenz & Yaffee, 1986), and their children (Darbyshire, Oster, & Carrig, 2001). Additionally, there are numerous social costs (Thompson, Gazel, & Rickman, 1996), as well as economic costs to the society regarding excess gambling (Walker, & Barnett, 1999). As evidence, Bergh and Kühlhorn (1994) studied more than 100 pathological gamblers and found that over 50% had serious financial problems, difficulties in relationships with family and friends, and a variety of psychological problems. Although many more examples may be cited, this brief summary of problems associated with gambling provides the rationale for examining how gambler’s think. Thus, this article focuses on the critical cognitive elements of the gambling problem.

Negative Beliefs about Gambling in Chinese Society. Chinese society has long considered gambling to be improper and/or immoral. In fact, there is historical evidence that verifies this contention. For example, Cheng (2009) reported that views against gambling date back to Confucius (551-479 BC), who lived 2,500 years ago, and whose moral precepts are still central to Chinese society today. There is also evidence that Buddhism (dating to 500 BC) opposes gambling (Shonin, Gordon, & Griffiths, 2013). Cheng (2009) also identified a stone carving from the Qing Dynasty (1644-1911 AD), which specifically warned people that gambling will lead to the forfeiture of moral decency, illegal behavior, and the dissolution of families and homes, with detrimental effects on families, friends, the community, and, on the society (see Taormina, 2009). Whereas the Chinese people have a long history of negative beliefs about gambling, these beliefs were another component of the present research.

Cognitive Dissonance. This variable has never been used before in gambling research. Festinger (1957) described cognitive dissonance by saying “if a person holds two cognitions that are psychologically inconsistent, he or she would experience dissonance” (quoted in Aronson, 1992, p. 304). “Cognition” is a thought, idea, or perception; and the inconsistency refers to a situation where two perceptions do not fit together in a logical way. Of course, dissonance can occur with any two cognitions that are contradictory, thus, how dissonance works can be demonstrated with a salient example of two dissonant cognitions from everyday life: (1) a man’s girlfriend tells him that she loves only him and wants to marry him, but (2) he learns that she is still dating other men and continues to look for more boyfriends by using her iPhone to search the internet for men on her social networking sites. According to dissonance theory, such inconsistent cognitions create feelings of discomfort in the perceiver because such incongruities can be very disconcerting to a person.

At this point, a note should be made about cultural differences in cognitive dissonance. Some critics think that Chinese people do not experience dissonance. But that is a naïve misconception because they refer to a study (Peng & Nisbett, 1999) that compared American with Chinese college students in America on how much they liked proverbs with apparent contradictions, which the critics suggest create dissonance. But that study did not prove that dissonance does not exist for Chinese people because there was no actual measure of cognitive dissonance, i.e., the study only showed that Chinese students liked the proverbs more than did

the American students. Another reason is that college students are not an appropriate sample for a study on cognitive dissonance among gamblers because they do not represent gamblers or even the general population (Bond, 1988). Yet another reason is that the study only asked the students to read proverbs to which they had no emotional attachment, and which they could easily disregard and forget when they finished the paper-and-pencil test.

In contrast, Chinese people who gamble experience personal negative consequences of their behavior. That is, their gambling leads to loss of money and often to excessive debt that results in family problems, e.g., inability to pay rent that they must live with on a daily basis (Yip, Yang, Ip, Law, & Watson, 2007). They also have constant reminders of their culture's censure against gambling because they see evidence of it every day, particularly in the reminders of the underlying Confucian culture because Confucius condemned gambling (Lau, 1983), and when they see the ever-present statues of Buddha, who pronounced the "six evil consequences of indulging in gambling" (Access to Insight, 1985), and when family members confront them on their gambling because it disrupts the family's harmony, happiness, and living conditions (Leung, Wong, Lau, & Yeung, 2010).

Returning to the cognitive dissonance that exists for Chinese people who gamble, the two perceptions are: (a) the person engages in gambling behavior; and (b) the person is aware of traditional Chinese morality, which is deeply ingrained in Chinese society and which views gambling as immoral. Evidence of the traditional beliefs can be found in various places. For example, Cheng (2009) reported that there are anti-gambling stone monoliths in China that are over a thousand years old, and that the Qin Dynasty (221-206 BC) outlawed gambling, with severe punishments against gambling that included torture and even death. Furthermore, in Mainland China, where gambling is still illegal, Papineau (2005) reported that there have been campaigns that denounce and attempt to eradicate gambling. Yet, there are Chinese people who gamble. Consequently, even though the idea of cognitive dissonance has not been previously researched in the gambling literature, it is inevitable that cognitive dissonance, according to the theory, would have to exist among Chinese gamblers.

H (1a) *The more people gamble, the more cognitive dissonance they will experience.*

H (1b) *The more negative beliefs about gambling that Chinese people have, the more cognitive dissonance they will experience.*

Antecedent Variables

Although this study was not longitudinal, a conceptual approach was used that employed Gambling Behavior, Negative Beliefs about Gambling, and Cognitive Dissonance as dependent variables, and used three variables as antecedents (theoretical precursors). They also were used to test the validity of the new gambling measures because two of these are often found in the literature as correlates of gambling, i.e., Neuroticism and Family Emotional Support. The third, Traditional Chinese Values, was also used for this purpose. The rationales for these variables and their hypotheses are given in their descriptive paragraphs, below.

Neuroticism. This variable was included for two reasons. One was to test the convergent validity of the gambling measure, that is, previous literature has found Neuroticism to be positively related to gambling. For example, Dube, Freeston, and Ladouceur (1996) assessed several variables to distinguish between potential and probable pathological gamblers, and reported that "worry" (a critical component of Neuroticism) was positively and significantly associated with pathological gambling. Steel and Blaszczynski (1996) used three personality measures, and found Neuroticism to be one of the predictors of gambling behavior. Therefore,

Neuroticism was used to confirm the validity of the gambling behavior measure used in this study. The other reason for using this variable was to assess its relationship with the new variable of Cognitive Dissonance.

To clarify these ideas, it should be remembered that “worry” is an integral aspect of the Big-5 personality construct of Neuroticism (and only the worry aspect is being assessed in this study). Furthermore, from past research on pathological gambling behavior, it may be surmised that having a neurotic personality could drive a person to gamble. Support for this idea comes from Bagby, Vachon, Bulmash, Toneatto, Quilty, and Costa (2007) whose research led them to suggest that “pathological gambling... results from maladaptive efforts to regulate affect or dampen the effects of high neuroticism” (p. 878), namely, that neuroticism lays the foundation in a person’s personality that leads one to gamble.

Therefore, whereas worry is characteristic of neuroticism, a measure of worry should be positively related to gambling. Concomitantly, as gambling is one of the two cognitions in cognitive dissonance, worry should also be positively correlated with cognitive dissonance.

H (2) *The more neuroticism (i.e., worry) that people have, the more they will (a) gamble, and (b) feel cognitive dissonance.*

Family Emotional Support. Attachment theory forms a basis for understanding how family support could relate to gambling. Ainsworth (1989) argued that supportive emotional attachment leads to more social competence and emotional adjustment. Likewise, Bowlby (1982) proposed that children who are raised by caring, supportive parents will develop higher levels of self-esteem and be more outgoing and competent in their social lives, which would help them develop a well-integrated (non-neurotic) personality.

Conversely, a lack of family support could lead to risky behavior, including gambling, and there is research support for this idea. Slutske, Caspi, Moffitt, and Poulton (2005) claimed that gamblers tend to have negative emotionality, which may develop as a result of low family support and attachment; and Pietrzak and Petry (2005) found that gambling was associated with poor social adjustment. Also, Hardoon, Gupta, and Derevensky (2004) found gambling to be related to poor family support. Furthermore, Taormina (2009) tested these ideas and found a significant negative relationship between family emotional support and gambling behavior. The same relationship is expected here.

While it may be argued that gambling behavior could result in lower family support, the idea suggested here is in line with attachment theory, which is developmental. That is, a lack of family emotional support in one’s early life could result in adult behaviors later in life, such as gambling, that are not socially approved. In other words, attachment theory provides the logical rationale for gambling to occur in the first place. On the other hand, however, although gambling may cause family members to shun the gambler, that idea alone does not provide a reason for the gambling to begin.

With regard to family support and cognitive dissonance, if a supportive family reduces the probability that one will gamble, then the lower level of gambling would preclude the likelihood and/or the extent of experiencing cognitive dissonance.

H (3) *The more family emotional support that people have, (a) the less they will gamble, and (b) the less they will experience cognitive dissonance.*

Chinese Values. A study conducted in China (Chinese Culture Connection, 1987) identified four factors of traditional Chinese values, one being “Confucian dynamism,” and the other three also related to Confucian philosophy, i.e., moral discipline, human heartedness, and the integration of social mores. Many of the elements of these factors can be understood to be oriented toward social harmony, such as non-competitiveness, reciprocation, saving face, patience, and kindness toward others. These factors foster peaceful coexistence, but gambling puts people in a contentious situation; so it is not surprising that Confucius has been quoted as saying that gambling is immoral (Lau, 1983). Furthermore, in a modern study of attitudes toward gambling, Kwan (2004) found that Chinese people have a moral antagonism toward gambling, with 57% of the respondents agreeing with the statement “I am morally against gambling.” Thus, both tradition and research suggest that Chinese values are negatively related to gambling.

H(4) *The more that people live according to traditional Chinese values, (a) the less they will gamble, and (b) the less they will experience cognitive dissonance.*

Outcome Variables

The final two variables in this study, namely, Life Satisfaction and Self-Actualization, are related to feelings of personal achievement and are used as theoretical outcome variables.

Life Satisfaction. Diener’s (1984) theory of life satisfaction states that happiness with one’s standard of living, job, and family, leads to feelings of life satisfaction. Thus, gamblers should have low life satisfaction because gambling leads to financial loss, which decreases one’s standard of living, jeopardize one’s job, and disrupts family relationships (Wong & So, 2003). Also, Grant and Kim (2005) found pathological gamblers had lower life satisfaction.

H (5): *The more people gamble, the less life satisfaction they will have.*

Regarding cognitive dissonance and life satisfaction, Festinger’s (1957) theory states that whenever two inconsistent perceptions co-occur, psychological distress results. Shaffer and Hendrick (1974) tested this idea using opposite constructs (dogmatism and tolerance of ambiguity) to create cognitive inconsistency and found that participants experienced mental discomfort in the cognitive dissonance condition. As traditional values are lifetime beliefs, and if gambling is done over some time period, the dissonance that is engendered could result in long-term psychological discomfort, and, thus, life dissatisfaction.

H (6): *The more cognitive dissonance gamblers have, the less life satisfaction they will have.*

Self-Actualization. In his theory of motivational needs, Maslow (1943) explained that the highest level of satisfaction a person can achieve in life is Self-Actualization, which is characterized as the ability to fully use one’s personal potential and to experience life fully. To reach this level, according to the theory, a person must first satisfy the other four needs, i.e., physiological, safety, belongingness, and esteem (in that order). For gamblers, however, there is a factor that makes it difficult to satisfy even the lower level needs. That is, the odds are always against the gambler, meaning that they will have financial losses (Walker, 1992), which often place gamblers in debt. As noted by Taormina (2009), the historic censure against gambling was based on the fact that debt disrupts people’s lives because, without money, they cannot satisfy their basic needs, and they will have family arguments, lose friends, and lose esteem from others. Thus, if they cannot satisfy the lower level needs, which is necessary to satisfy the highest level need, gamblers will have difficulty self-actualizing. The logic is the

same for Cognitive Dissonance, which makes it difficult to fully realize one's potential.

H (7): *The more people gamble, the less self-actualization they will have.*

H (8): *The more cognitive dissonance people have, the less self-actualization they will have.*

Method

Respondents

The respondents were 200 adult Macau residents (91 female, 107 male) aged 18 to 67 years ($M = 32.74$, $SD = 10.77$). On marital status, 124 were single, 74 married, and 2 were "other." For education, 32 completed primary school, 100 secondary school, 6 a 2-year college diploma, 56 a bachelor degree, and 6 a master degree or above. For monthly income (in MOP, the local currency), 53 earned below 5,000; 46 earned 5,000-9,999; 63 earned 10,000-14,999; 28 earned 15,000-19,999; 7 earned 20,000-24,999; and 3 earned 25,000 or more. On gambling behavior, the mean score was 1.69 ($SD = 0.65$) on a 5-point frequency measure.

Measures

Measuring Cognitive Dissonance

To measure cognitive dissonance among Chinese gamblers, two variables were needed to compute these values. One was gambling behavior, and the other was a measure to assess traditional Chinese beliefs that reflect gambling as an improper behavior. The two component variables are explained first, followed by a discussion of the Cognitive Dissonance variable, which includes a description of how it was computed.

Gambling Behavior. Actual gambling behavior was the essential element of this research, and was measured by the Gambling Behavior Scale (Taormina, 2009). The scale has 10 items, and asks how often the person had bet money on different types of gambling. The items (games) were "Social gambling with family," "Social gambling with friends," "Mark six lottery betting," "Football betting," "Basketball betting," "Macau casino table games," "Casino slot machines," "Other slot machine venues" (i.e., slot machines that are not located in the casinos), "Dog racing," and "Horse racing." The question was "In the past 12 months, how often have you bet money on these games?" Answers were on a 5-point scale ranging from 1 (never) to 5 (very often), and the responses were averaged.

Negative Beliefs about Gambling. Several sources of Chinese writings (e.g., Confucius, 2007; Qiu, 1984; So, 2002) were consulted to locate famous long-standing sayings and proverbs that reflect negative beliefs about gambling. A total of five statements were selected for use as items for this scale. These were: "Greediness will result in poverty," "Gambling ten times will result in nine losses," "You will win a candy but lose a factory," "Not gambling is winning," and "Losing is all because of an early win." The Chinese wording for these items portrays gambling as an undesirable behavior. Responses were on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), and the responses were averaged.

Cognitive Dissonance. Measuring cognitive dissonance can be difficult because it is a mental state that cannot be directly assessed. This is because two disparate conditions must occur simultaneously, which means that cognitive dissonance must be measured with two variables; and the variables must be examined in a way that would reveal the disparity. These two variables were: (a) the degree to which the person agreed with traditional cultural views against gambling, and (b) how much that person actually engaged in gambling. If dissonance exists, it would be

among individuals who have high scores on both their gambling behavior as well as on how much they see gambling as an undesirable behavior. As the two 5-point scales require a score of 4 or 5 on both scales to indicate high levels of each, adding them would only produce three values (i.e., 8, 9, or 10) to indicate high levels of dissonance. But having only a 3-point scale would constrain the statistics that could be used with the measure. Therefore, the dissonance scale needed to be expanded to allow more sophisticated analyses.

Thus, cognitive dissonance was operationalized for each person by *multiplying* the person's gambling behavior score times that person's score on the measure indicating agreement with statements reflecting *negative* beliefs about gambling. A low score indicates little difference, while a high score indicates that they gamble a great deal while also having strong negative beliefs about gambling; thus, the higher the value, the greater the dissonance. Whereas the Gambling Behavior scale ranged from 1 to 5 and the Negative Beliefs about Gambling scale ranged from 1 to 5, the Cognitive Dissonance scale ranged from 1, the minimum value (no dissonance), to 25, the maximum value (extremely high dissonance).

Chinese Values. This was measured by Taormina's (2009) 12-item Chinese Values scale. Sample items from this scale were "Having a sense of shame," "Personal steadiness," and "Moderation." Respondents were asked to what extent they live their lives by these values, and responses were on a scale from 1 (never) to 5 (always). The Cronbach alpha reliability for this scale was .87.

Family Emotional Support. This measure was from Procidano and Heller's (1983) Family Emotional Support Scale; only the 10 items relating to receiving (rather than giving) support were used. A sample item was "My family gives me the moral support I need," and respondents were asked how much they agreed or disagreed with the statements. Answers were on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The reliability of this scale was .89.

Neuroticism. This was a 5-item scale using items that focused on the "worry" aspect of neuroticism. Two items were from Costa and McCrae's (1992) NEO Neuroticism Domain, e.g., "I am filled with doubts about things," and three items from Peterson and Seligman's (2004) Neuroticism measure, e.g., "I am not confident that things will work out for the best." Respondents were asked how much they agreed or disagreed that the statements described them, and used the 5-point disagree-agree Likert scale. The scale reliability was .74.

Life Satisfaction. This variable was measured by Sirgy et al.'s (1998) 10-item Life Satisfaction Scale. This scale asks respondents to compare their life achievements with various situations by asking how satisfied they are with their life compared with the statements in the items. Sample items were "The life goals you set for yourself" and "The accomplishments of your friends." The responses were on a 5-point Likert scale ranging from 1 (extremely unsatisfied) to 5 (extremely satisfied). The scale reliability was .88.

Self-Actualization. This was a 10-item scale that used three items from Jones and Crandall's (1986) Self-Actualization scale and seven newly developed items. The new items were added to better represent the self-actualization concept. Sample items were "I am very happy being the person I am now" and "I am being the person I always wanted to be." Respondents were asked how much they agreed or disagreed that these statements described them, using the 5-point disagree-agree Likert scale. The scale reliability was .77.

Procedure and Ethics

Data were gathered in Macau from 100 gamblers and 100 people from the general population. For the general population, people passing along the street in densely populated areas were randomly selected. During this time, it was noticed that very few respondents indicated they engaged in much gambling, which led the researchers to add to the sites for gathering data a number of sports betting shops. Thus, for gamblers, data were gathered from bettors as they exited (legal) sports betting shops. (The researchers did not enter any of the shops, but stood outside on the public sidewalk waiting for the patrons of the shops to exit).

All potential respondents were told the nature of the research and asked if they would answer the questionnaire. No incentives of any type were offered; therefore, completion of the questionnaire was entirely voluntary, without the offer of any inducements. Those who agreed to participate were handed a questionnaire, which was collected on site when finished. Also, the ethical guidelines of the American Psychological Association were carefully followed, with respondents free to decline, advised that their identities were not being asked or used, and that their data would be kept strictly confidential.

Results

Demographic Differences

Although no hypotheses were set for the demographics, they were tested (by t-tests and ANOVAs) for differences on Gambling Behavior, Negative Beliefs about Gambling, and Cognitive Dissonance. The only significant demographic differences were for gender. Females gambled less than males ($p < .001$), had more negative beliefs about gambling than males ($p < .05$), and had less cognitive dissonance than males ($p < .001$). For the other demographics, namely, for age, marital status, education level, and monthly income, no significant differences were found on any of the three main variables.

Correlations

Correlations were run to test all the hypotheses. For Cognitive Dissonance, both Gambling Behavior and Negative Gambling Beliefs were positively and significantly correlated with Cognitive Dissonance (both $ps < .001$), which supported **H(1a)** and **H(1b)**, respectively. Neuroticism was positively correlated with Gambling ($p < .01$) and with Cognitive Dissonance ($p < .05$), supporting **H(2a)** and **H(2b)**, respectively.

Family Emotional Support was negatively correlated with Gambling ($p < .001$) and Cognitive Dissonance ($p < .005$), supporting **H(3a)** and **H(3b)**, respectively. Chinese Values was negatively correlated with Gambling ($p < .001$), supporting **H(4a)**, and with Cognitive Dissonance, yielding weak support for **H(4b)** (for further analysis, see Means Comparisons).

For the outcome variables, Gambling was negatively correlated with Life Satisfaction ($p < .005$), supporting **H(5)**. And Cognitive Dissonance was negatively correlated with Life Satisfaction ($p < .05$), supporting **H(6)**. Likewise, Gambling was negatively correlated with Self-Actualization ($p < .005$), supporting **H(7)**. And Cognitive Dissonance was negatively correlated with Life Satisfaction ($p < .05$), supporting **H(8)**.

Table 1

Means, standard deviations, and correlations between Cognitive Dissonance, Gambling Behavior, Negative Gambling Beliefs, and the theoretical test variables (N=200).

Variables	Mean	SD	Cognitive Dissonance	Gambling Behavior	Negative Gambling Beliefs
Cognitive Dissonance	6.62	2.73	---		
Gambling Behavior	1.69	0.65	.82****	---	
Negative Gambling Beliefs	3.99	0.76	.32****	-.25****	---
Chinese Values	3.66	0.49	-.09†	-.24****	.33****
Family Emotional Support	3.35	0.58	-.19***	-.26****	.14*
Neuroticism-Worry	3.07	0.63	.15*	.17**	-.05
Self-Actualization	3.26	0.49	-.12*	-.14*	.07
Life Satisfaction	3.32	0.56	-.16*	-.20***	.06

†p<.10; *p<.05; **p<.01; ***p<.005; ****p<.001.

As a further assessment of Cognitive Dissonance, scores for Negative Beliefs about Gambling were computed as a function of Gambling Behavior and graphically plotted to find respondents who were high on both variables, which would indicate high levels of Cognitive Dissonance. Based on the distributions of the scores on the two scales, high values were set at ≥ 1.70 on Gambling; and set at ≥ 4.00 for Negative Beliefs, as shown in Figure 1. The high dissonance group (N = 45) is shown in the upper-right quadrant of the figure.

To assess the overall relationship between Gambling and Cognitive Dissonance, a line chart was graphed to depict the relationship between these two variables. First, the line was drawn for all of the respondents (N = 200), which is shown in Figure 2(a).

For comparison purposes, another line was graphed for only the group of people who scored high on both gambling and negative beliefs (N = 45); this line is shown in Figure 2(b). Both charts show strongly increasing functions, with the correlation for all respondents (N = 200) being $r = .83$, and the correlation for the people who did more gambling (N = 45) being $r = .96$, which displayed less variation.

Figure 1.

Scatterplot of all respondents (N=200) on Gambling and Negative Beliefs about Gambling. Cutoffs show high gambling (score ≥ 1.70) and high negative gambling beliefs (score ≥ 4.00). Respondents who scored high on both variables are shown in the upper-right quadrant.

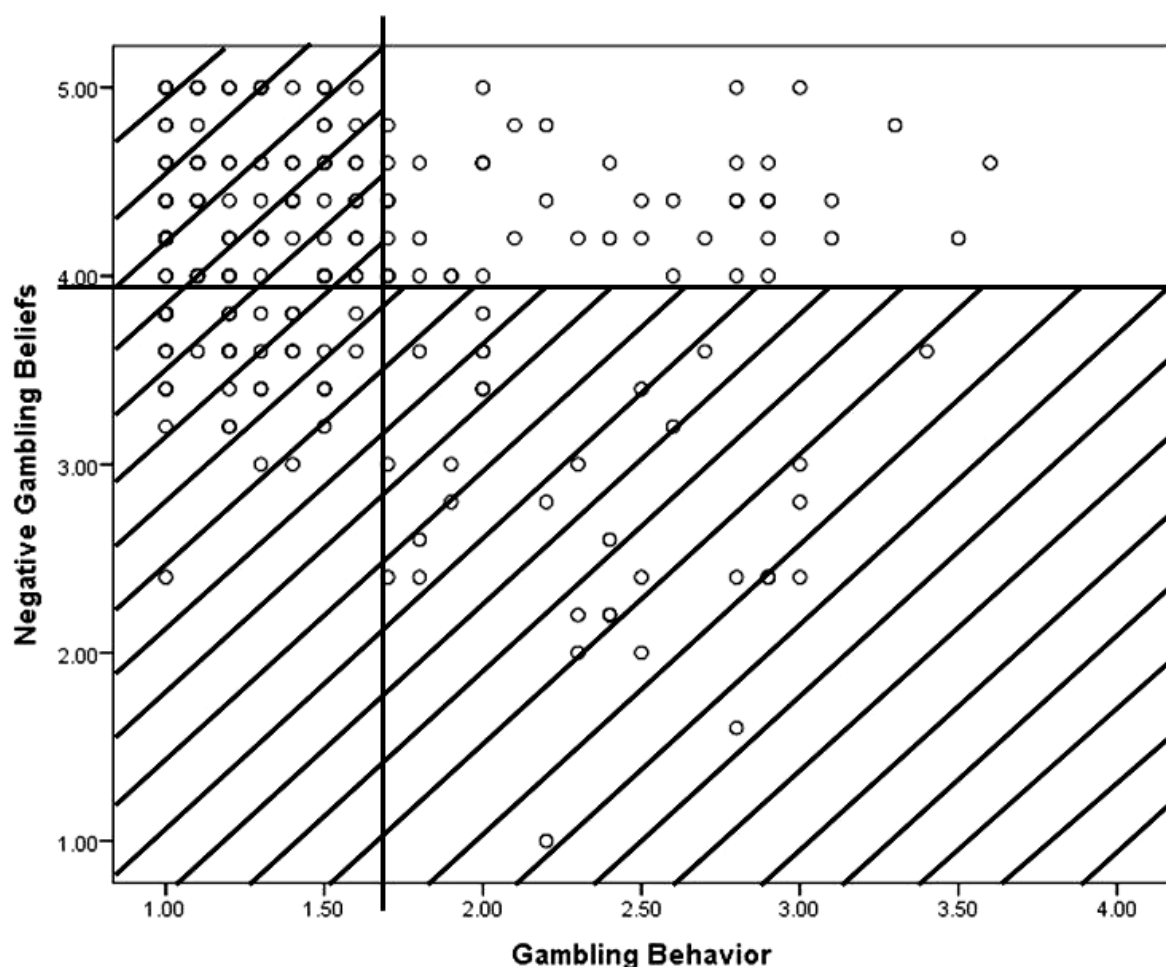
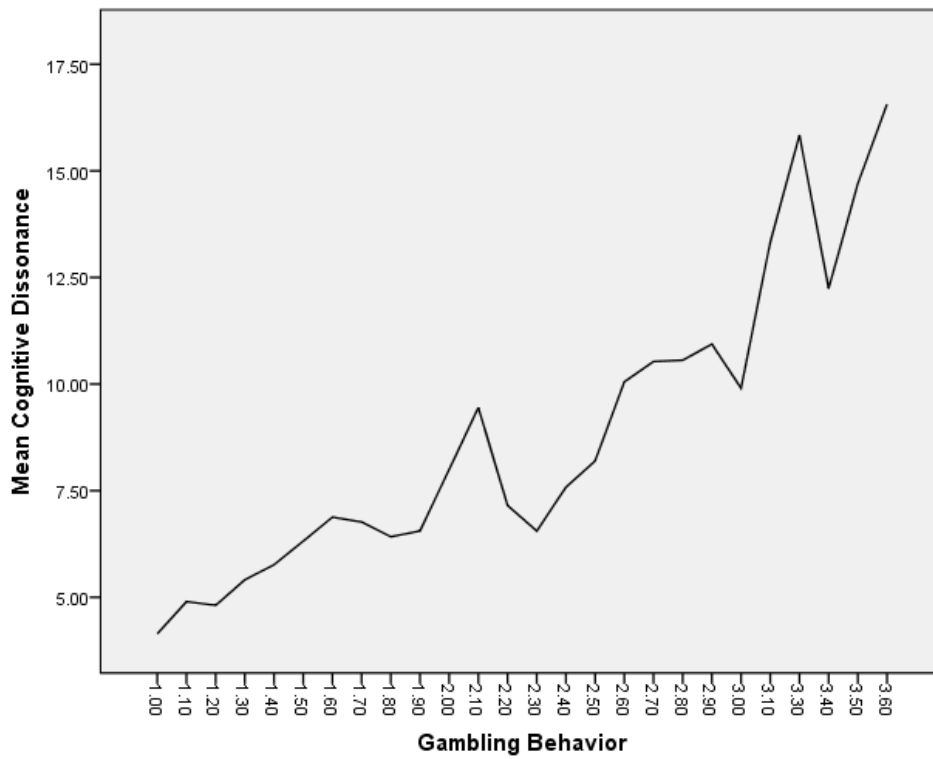
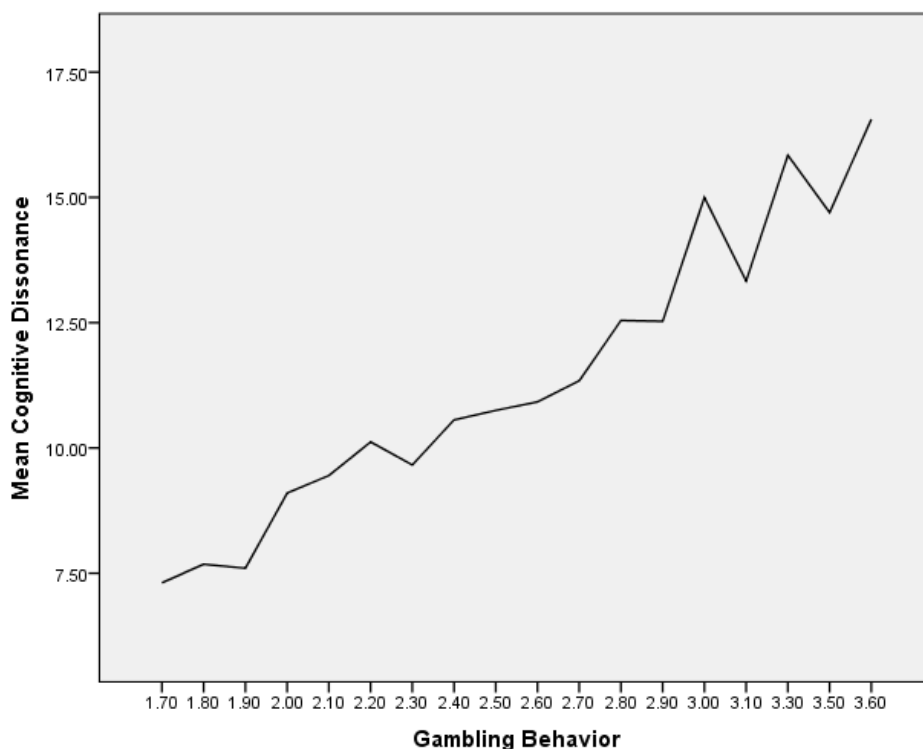


Figure 2.

(a) Cognitive Dissonance as a function of Gambling Behavior for all respondents (N=200).



(b) Cognitive Dissonance as a function of Gambling Behavior, only for the respondents high on both gambling and negative gambling beliefs; see upper-right quadrant in Figure 1 (N=45).



Means Comparisons

To determine whether there were any differences in the measured variables between the high dissonance (N=45) and low dissonance (N=155) groups, t-tests were computed for all the variables used in the study. As might be expected from the previous correlations, the High Dissonance group had significantly higher scores than the Low Dissonance group on Gambling Behavior and Negative Beliefs about Gambling; and the mean difference for Cognitive Dissonance also became highly significant (all three p values < .001).

The High Dissonance group scored significantly lower on Chinese Values and Family Emotional Support than the Low Dissonance group, which also confirmed the hypotheses for these two variables. For the Neuroticism-Worry measure, the High Dissonance group scored higher on this variable, which was in the predicted direction according to the hypothesis, but it did not reach significance.

With regard to the two outcome variables, which were used to assess success in one's personal life, the High Dissonance group scores were significantly lower than the Low Dissonance group on both Life Satisfaction and Self-Actualization, which also confirmed the hypotheses on those two variables. These results are shown in Table 2.

Table 2

Means comparisons (t-tests) between High Dissonance (N=45) and Low Dissonance (N=155) groups on all variables.

Variable	Low Dissonance Mean (SD)	High Dissonance Mean (SD)	t-value	df	Signif. p-value
Gambling Behavior	1.48 (0.53)	2.39 (0.55)	-9.97	198	.000
Negative Gambling Beliefs	3.88 (0.82)	4.37 (0.30)	-6.23	187.99	.000
Cognitive Dissonance	5.49 (1.41)	10.48 (2.64)	-12.17	51.45	.000
Chinese Values	3.71 (0.49)	3.53 (0.48)	2.07	198	.020
Family Emotional Support	3.39 (0.61)	3.20 (0.46)	1.92	198	.028
Neuroticism-Worry	3.04 (0.66)	3.15 (0.49)	-1.15	95.35	.126
Self-Actualization	3.29 (0.48)	3.14 (0.53)	1.73	198	.042
Life Satisfaction	3.36 (0.56)	3.18 (0.55)	1.96	198	.027

Notes:

Degrees of freedom (df) that are fractions indicate unequal variances between the groups. Significance levels are 1-tailed according to the logic of the hypotheses.

Discussion

The results offered strong evidence that cognitive dissonance exists among Chinese gamblers. This idea had been absent from the literature, although it had been anticipated (Taormina, 2009), and this was the critical question in this study. That is, Chinese gamblers had cognitive dissonance because (a) they gambled, while, at the same time, (b) they also held negative beliefs about gambling. Specifically, the t-tests for the High Dissonance and Low Dissonance groups on these two variables showed that the High Dissonance group had significantly higher scores than the Low Dissonance group on both Gambling Behavior and on Negative Beliefs about Gambling, and even more profound is the significantly higher level of Cognitive Dissonance for the group that gambled. All these results confirmed Festinger's (1957) theory, and support the idea that Chinese gamblers experience cognitive dissonance.

The results are also strengthened by Cheng's (2009) findings that, according to Confucian thought, which is the traditional view in Chinese culture, gambling is deemed to be an immoral behavior. These results also reflect the views of Mencius (372-289 BC), another Chinese philosopher, who considered gambling to be one of the "five unfilial acts," i.e., behaviors that are *not* acceptable in Chinese society. Furthermore, as shown by the results of the t-tests that compared the mean scores between the high and low dissonance groups, the Low Dissonance group lived according to Chinese Values to a significantly greater extent than did the High Dissonance group.

The results for Family Emotional Support strengthened this idea about traditional values in Chinese culture because it was strongly and negatively correlated with both gambling behavior and cognitive dissonance. Also, the t-test on the mean scores for Family Emotional Support found that the Low Dissonance group had significantly more support than the High Dissonance

group. These findings may have implications for counselors because families may play a dual role with regard to gambling. That is, according to Attachment Theory, early in a person's life, families who express love and emotional support would have children who grow up to be more socially competent and better adjusted.

If well-adjusted is taken to mean they are not prone to addiction, this would suggest that those children would be less likely to engage in excessive gambling. The other role of the family would relate to how family members respond when one of their members is gambling excessively. For example, while it is typical for family members to express dislike for the gambling behavior, the counselor could advise the family that such expressions should be made calmly to avoid provoking arguments. At the same time, family members could be advised to offer alternate social activities that are more enjoyable, and therefore be rewarding non-gambling behaviors.

Evidently, the picture of gambling in the mind of Chinese gamblers seems to be quite ambiguous. On one hand, they desire to gamble for the obvious reason of hoping to gain a big win at one of the games (e.g., roulette, where the payout to the gambler could be as much as 35:1, that is, the gambler could gain \$35 dollars for every \$1 bet). On the other hand, however, the "odds" of winning always favor the casino and are always against the gambler (e.g., in roulette, the odds are 35:1 *against* the gambler), and gamblers know this. For most people, this fact is the logical basis for not gambling. But there are emotional problems that ensue from excessive gambling, namely, that the loss of money is detrimental not only to the gamblers but also to their families because the losses result in debt (Yip et al., 2007) and an accompanying weakening of the integrity of their families (Leung et al., 2010). Undoubtedly, these would be some very convincing reasons that gambling was regarded so negatively by traditional society, that is, because the family is the most fundamental and important unit in Chinese society (Hwang, 1990) and gambling has the potential to undermine the very fabric of society (see Cheng, 2009).

Thus, according to Festinger's (1957) theory, the gambler should feel mentally uneasy from the two competing perceptions, i.e., the act of gambling in hope of quickly winning a large amount of money versus the knowledge that gambling is considered to be immoral by one's family (reflected in this study by the lack of Family Emotional Support) and by society (assessed by the Chinese Values measure). This disparity between gambling behavior and the negative attitudes about gambling signify cognitive dissonance for those who gamble more.

Neuroticism was another variable assessed for its relationship with both gambling and cognitive dissonance, and was used to test the validity of the new measures. First, Neuroticism had a significant positive relationship with Gambling Behavior, which coincides with findings by Blanco et al. (2001), who suggested that people high on neuroticism might have less self-control, and thus gamble more. Neuroticism also had a significant positive correlation with Cognitive Dissonance, which implies that people who are more neurotic have more difficulty dealing with the dissonant cognitions. Thus, the Neuroticism measure also supported the validity (i.e., the construct validity) of the new measures. The t-test for the two dissonance groups on Neuroticism was in the expected direction, but did not reach significance. On the other hand, it should be remembered that none of the participants in this study reported very high levels of gambling behavior, which is consistent with the results of previous studies of Macau residents (e.g., Taormina, 2009). Thus, it could be expected that the mean difference on Neuroticism would be significantly greater if people with higher levels of Gambling Behavior were included. Future research on cognitive dissonance among gamblers should try to include

a larger number of people with high levels of gambling in order to perform a more powerful test of this idea.

Additionally, the two outcome variables of Self-Actualization and Life Satisfaction were used to assess whether gambling and cognitive dissonance might influence these feelings. Gambling had a highly significant negative relationship with Life Satisfaction, suggesting that gambling may interfere with one's ability to achieve certain accomplishments in life (recall that the Life Satisfaction measure used items that reflected satisfaction with one's personal accomplishments in life, Sirgy et al., 1998). Gambling also had a significant negative relationship with Self-Actualization, which indicates that gambling could limit one's ability to live a full life. For example, as gambling leads to debt, which limits what one can have in life, one cannot live life to the fullest. The less powerful effect for Self-Actualization as compared to Life Satisfaction might be because self-actualization can be attained in a variety of ways, i.e., not only from being rich (see Maslow, 1943).

Regarding Cognitive Dissonance, similar results were obtained. That is, it had a significant negative relationship with Life Satisfaction, and the t-test revealed that the Low Dissonance group had a significantly higher level of Life Satisfaction than the High Dissonance group. These results suggest that the incongruent cognitions about one's gambling and social values may be distracting enough to reduce one's ability to achieve high levels of accomplishment in life. Likewise, Cognitive Dissonance also had a significant negative relationship with Self-Actualization, and the t-test on this showed that the Low Dissonance group had a significantly higher level of Self-Actualization than the High Dissonance group, which indicates that the dissonant perceptions may be sufficiently disturbing to the gamblers that such cognitions reduce the feeling that they are living a full life.

Conclusions

In conclusion, the finding that Chinese gamblers hold negative attitudes about gambling even though they do gamble adds a new perspective on studying, understanding, and treating Chinese gamblers. That is, by examining the cognitive dissonance of gamblers, new insights may be gained in research about the Chinese gambling phenomenon. Likewise, by considering cognitive dissonance among Chinese gamblers, a greater understanding of the dilemma they experience when gambling may be obtained.

A practical implication of this research offers a possible strategy for helping Chinese pathological gamblers. That is, by advising them that *their negative beliefs about gambling reflect the positive moral values of their traditional society*, and inspiring them to do more to live according to those values, which includes spending more time with their families, and less time gambling. Such an approach has also been suggested by Loo et al. (2008), i.e., "the development of interventions that build character strengths... may be beneficial when used together with interventions targeting problem behaviors" (p. 1164).

In other words, strengthening the patient's positive moral values might encourage them to reduce their gambling, which, in turn, would reduce their loss of money and, concomitantly, also reduce their cognitive dissonance (i.e., their feelings of discomfort). Thus, this approach may help gamblers to reduce (and possibly even stop) the excessive gambling. Furthermore, practitioners who take cognitive dissonance into account may be able to help decrease the negative effects that excessive gambling has on the gamblers' families and the gamblers

themselves, and, ideally, by implication, might even have the potential to diminish the occurrence of suicide among Chinese gamblers.

References

- Access to Insight. (1985). *Sigalovada Sutta: The Discourse to Sigala (DN 31)*. (Translated from the Pali by Narada Thera.) Sri Lanka: Buddhist Publication Society.
- Ainsworth, M. D. (1989). Attachment beyond infancy. *American Psychologist*, 44(4), 709-716.
- Aronson, E. (1992). The return of the repressed: Dissonance theory makes a comeback. *Psychology Inquiry*, 3(4), 303-311.
- Bagby, R. M., Vachon, D. D., Bulmash, E. L., Toneatto, T., Quilty, L. C., & Costa, P. T. (2007). Pathological gambling and the five-factor model of personality. *Personality and Individual Differences*, 43(4), 873-880.
- Bergh, C., & Kühlhorn, E. (1994). Social, psychological, and physical consequences of pathological gambling in Sweden. *Journal of Gambling Studies*, 10(3), 275-285.
- Blanco, C., Ibanez, A., Blanco-Jerez, C., Baca-Garcia, E., & Saiz-Ruiz, J. (2001). Plasma testosterone and pathological gambling. *Psychiatry Research*, 105(1-2), 117-121.
- Blaszczynski, A., Huynh, S., Dumlao, V.J., & Farrell, E. (1998). Problem gambling within a Chinese speaking community. *Journal of Gambling Studies*, 14(4), 359-80.
- Bond, M.H. (1988). Finding universal dimensions of individual variation in multicultural studies of values: The Rokeach and Chinese Value Surveys. *Journal of Personality and Social Psychology*, 55(6), 1009-1015.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York: Basic Books.
- Chen, C., Wong, J., Lee, N., Chan-Ho, M., & Lau, J. (1993). Shatin Community Mental Health Survey Hong Kong II. *Archives of General Psychiatry*, 50(2), 125-133.
- Cheng, T. J. (2009). *Introduction to the sociology of gambling*. Beijing: Social Sciences Academic Press.
- Chinese Culture Connection. (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychology*, 18(2), 143-164.
- Confucius (2007). *The analects of Confucius* (B. Watson, trans.). New York: Columbia University Press.
- Costa, P. T. Jr., & McCrae, R. R. (1992). *NEO-PI-R professional manual*. Odessa, FL: Psychological Assessment Resources.
- Darbyshire, P., Oster, C., & Carrig, H. (2001). Children of parent (s) who have a gambling problem: a review of the literature and commentary on research approaches. *Health & social care in the community*, 9(4), 185-193.
- Devereux, E. C. (1979). *Gambling*. New York: Macmillan.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542-575.
- Dube, D., Freeston, M. H., & Ladouceur, R. (1996). Potential and probable pathological gamblers: Where do the differences lie? *Journal of Gambling Studies*, 12(4), 419-430.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Oxford England: Row, Peterson.
- Fong, V. H., & Wong, A. I. (2009). Scale development: Necessary factors for the key success of casinos. *Journal of Macau University of Science and Technology*, 3(1), 49-59.
- Grant, J. E., & Kim, S. W. (2005). Quality of life in kleptomania and pathological gambling. *Comprehensive Psychiatry*, 46(1), 34-37.
- Hardoon, K.K., Gupta, R., & Derevensky, J.L. (2004). Psychosocial variables associated with adolescent gambling. *Psychology of Addictive Behavior*, 18(2), 170-179.
- Hodgins, D. C., Mansley, C., & Thygesen, K. (2006). Risk factors for suicide ideation and attempts among pathological gamblers. *American Journal of Addiction*, 15(4), 303-310.
- Hwang, K. K. (1990). Modernization of the Chinese family business. *International Journal of Psychology*, 25(3-6), 593-618.
- Jones, T., & Crandall, R., (1986). Validation of a short index of self-actualization. *Personality*

- and Social Psychology Bulletin*, 12(1), 63-73.
- Kalischuk, R. G., Nowatzki, N., Cardwell, K., Klein, K., & Solowoniuk, J. (2006). Problem gambling and its impact on families: A literature review. *International Gambling Studies*, 6(1), 31-60.
- Kwan, F. V. C. (2004). Gambling attitudes and gambling behavior of residents of Macao: The Monte Carlo of the Orient. *Journal of Travel Research*, 42(3), 271-278.
- Lau, D. C. (1983). *Confucius: The analects*. Hong Kong: Chinese University Press.
- Leung, K. C., Wong, I. L. K., Lau, K. M., & Yeung, S. C. (2010). Stress, health and coping resources of Chinese pathological gamblers' spouses. *Asian Journal of Gambling Issues and Public Health*, 1(1), 61-74.
- Loo, J. M., Raylu, N., & Oei, T. P. S. (2008). Gambling among the Chinese: A comprehensive review. *Clinical Psychology Review*, 28(7), 1152-1166.
- Lorenz, V. C., & Yaffee, R. A. (1986). Pathological gambling: Psychosomatic, emotional, and marital difficulties as reported by the gambler. *Journal of Gambling Behavior*, 2(1), 40-49.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396.
- Oei, T. P., Lin, J., & Raylu, N. (2008). The relationship between gambling cognitions, psychological states, and gambling: A cross-cultural study of Chinese and Caucasians in Australia. *Journal of Cross-Cultural Psychology*, 39(2), 147-161.
- Papineau, E. (2005). Pathological gambling in Montreal's Chinese community: An anthropological perspective. *Journal of Gambling Studies*, 21(2), 157-177.
- Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist*, 54(9), 741-754.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A classification and handbook*. New York: Oxford University Press.
- Pietrzak, R. H., & Petry, N. (2005). Antisocial personality disorder is associated with increased severity of gambling, medical, drug and psychiatric problems among treatment-seeking pathological gamblers. *Addiction*, 100(8), 1183-1193.
- Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and family: Three validation studies. *American Journal of Community Psychology*, 11(1), 1-23.
- Qiu, C. B. (1984). *Suyu wu qian tiao*. Shanxi: Renmin Chubanshe.
- Rosenthal, R. J., & Lorenz, V. C. (1992). The pathological gambler as criminal offender. *Clinical Forensic Psychiatry*, 15(3), 647-660.
- Scull, S., & Woolcock, G. (2005). Problem gambling in non-English speaking background communities in Queensland, Australia: A qualitative exploration. *International Gambling Studies*, 5(1), 29-44.
- Shaffer, D., & Hendrick, C. (1974). Dogmatism and tolerance for ambiguity as determinants of differential reactions to cognitive inconsistency. *Journal of Personality and Social Psychology*, 29(5), 601-608.
- Shonin, E., Gordon, W., & Griffiths, M. D. (2013). Buddhist philosophy for the treatment of problem gambling. *Journal of Behavioral Addictions*, 2(2), 63-71.
- Sirgy, M. J., Lee, D. J., Kosenko, R., Meadow, H., Rahtz, D., Cicic, M., Jin, G. X., Yarsuvat, D., Blenkhorn, D. L., & Wright, N. (1998). Does television viewership play a role in the perception of quality of life? *Journal of Advertising*, 27(1), 125-142.
- Slutske, W. S., Caspi, A., Moffitt, T., & Poulton, R. (2005). Personality and problem gambling: A prospective study of a birth cohort of young adults. *Archives of General Psychiatry*, 62(7), 769-775.
- So, S. S. H. (2002). *A glossary of common Cantonese colloquial expressions*. Hong Kong: Chinese University Press.

- Steel, Z., & Blaszczynski, A. (1996). The factorial structure of pathological gambling. *Journal of Gambling Studies*, 12(1), 3-20.
- Taormina, R. J. (2009). Social and personality correlates of gambling attitudes and behavior among Chinese residents of Macau. *Journal of Social and Personal Relationships*, 26(8), 1047-1071.
- Thompson, W. N., Gazel, R., & Rickman, D. (1996). The social costs of gambling in Wisconsin. *Wisconsin Policy Research Institute Report*, 9(6), 1-44.
- Walker, M. B. (1992). *The psychology of gambling*. New York: Pergamon.
- Walker, D. M., & Barnett, A. H. (1999). The social costs of gambling: An economic perspective. *Journal of Gambling Studies*, 15(3), 181-212.
- Wong, L. K., & So, M. T. (2003). Prevalence estimates of problem and pathological gambling in Hong Kong. *American Journal of Psychiatry*, 160(7), 1353-1354.
- Wong, P. W. C., Chan, S. C., Conwell, Y., Conner, K. R., & Yip, P. S. F. (2010). A psychological autopsy study of pathological gamblers who died by suicide. *Journal of Affective Disorders*, 120(1), 213-216.
- Yip, P. S., Yang, K. C., Ip, B. Y., Law, Y. W., & Watson, R. (2007). Financial debt and suicide in Hong Kong SAR1. *Journal of Applied Social Psychology*, 37(12), 2788-2799.

Contact Robert J. Taormina: Taormina@umac.mo

Contact Blair Kei Hong Chong: blairchong@umac.mo

Islamic Religiosity, Depression and Anxiety among Muslim Cancer Patients

Nadzirah Ahmad Basri
Kyushu University, Japan

Gan Chun Hong
The National University of Malaysia, Malaysia

Ng Lai Oon
Sunway University, Malaysia

Shuzo Kumagai
Kyushu University, Japan

Abstract

Active religious practice is central to Muslim livelihood. Among Muslims, this religious engagement is rarely studied with regards to its association in coping with critical illnesses. This study investigated the association between Islamic religiosity with depression and anxiety in Muslim cancer patients. Fifty-nine cancer patients recruited from a Malaysian public hospital and a cancer support group completed the Muslim Religiosity and Personality Inventory, Beck Depression Inventory and Beck Anxiety Inventory in July and August 2010. Islamic religiosity score, obtained from the sum of subscale scores of Islamic worldview and religious personality represents a greater understanding and practice of Islam in a comprehensive manner. Results yielded a significant negative correlation between Islamic religiosity score with both depression and anxiety. Depression was also found to be negatively associated with religious personality subscale. Older patients scored significantly higher on both Islamic worldview and religious personality whereas patients with higher education scored higher on Islamic worldview. Married patients scored significantly higher scores on religious personality than the single patients. Results provided an insight into the significant role of religious intervention which has huge potentials to improve the psychological health of cancer patients particularly Muslims in Malaysia. Research implication includes the call for professionals to meet the spiritual needs of Muslim cancer patients and incorporating religious components in their treatment, especially in palliative care.

Keywords: Religiosity, spirituality, depression, anxiety, Muslim cancer patients

Introduction and Literature Review

Cancer is among the most common of all critical illnesses leading to death. It has the most devastating economic impact of any cause of death in the world and represents the single largest drain on the global economy (John & Ross, 2010). Not only cancer is costly, it is also prevalent. The cost extends far beyond the number of lives lost and new diagnoses each year. Cancer patients, as well as their family members, friends, and caregivers too, face physical, emotional, financial, social, and spiritual challenges as a result of cancer diagnosis and treatment. Both physical and psychological health of the patients is affected, inducing stress and reducing the physical and psychological quality of life for cancer patients (Golden-Kreutz et al., 2005).

Many cancer patients also fall into depression. Researchers have found depression to be particularly high among cancer patients after receiving hospital treatment (Lue, Huang, & Chen, 2008). In patients with advanced stage of cancer, anxiety and panic attacks were common, and often were precipitated by fears about death (Alcorn et al., 2010). Given the prevalence of cancer and the psychological burden it creates for the patient and their families and friends, researchers have spent a great deal of effort trying to identify factors that may be useful for improving the psychological health of cancer patients.

A variable that has quite recently received attention in the chronic illness and mental health literature is religiosity. A meta-analysis covering 147 studies indicate an inverse association between religiosity and depressive symptoms, with a stronger association in studies involving people who were undergoing stress due to recent life events (Smith, McCullough, & Poll, 2003). Studies have also indicated the significance of religiosity and spirituality in positively influencing the psychological health of cancer patients (Alferi, Culver, Carver, Arena, & Antoni, 1999; Bowie, Curbow, Laveist, Fitzgerald, & Pargament, 2001; Koenig, 2008; McCoubrie & Davies, 2006; Lue, Huang, & Chan, 2008; Yanez et al., 2009). Among chronic pain patients too, organizational religiosity (e.g., attendances at religious services and other activities) was found to buffer depression (Strawbridge et al., 1998) and daily spiritual experiences and religious support were able to significantly predict mental health status (Rippentrop, Altmaier, Chen, Found, & Keffala, 2005; Rippentrop, Altmaier, & Burns, 2006). In general, there appears to be a positive relationship between spirituality, religion and mental health factors in the literature (George, Larsons, Koenig, & McCullough, 2000).

This may be explained by religiosity's protective effects against mental illness among individuals with chronic medical diseases. The first protective effect is through many religions' encouragement of healthy behaviours as well as through its prohibition of behaviours that place health at risk such as the use of tobacco, alcohol, risky sexual behaviour and drugs. Secondly, religion leads to active involvement in religious activities for many religious people, which broaden one's network of friends, leading to more frequent interactions, receiving more assistance, and attaining higher levels of satisfaction within the social network. Thirdly, religion benefits health by providing a sense of coherence and meaning to life (George, et al., 2000). Religion serves as a framework for making meaning out of experiences and events that individuals go through. Particularly in events which are deemed to be highly stressful, individuals tend to change the appraised meaning of events by understanding them in a different and less stressful way, or by changing the global beliefs and goals that were violated to bring them more in line with their understanding with what is currently happening. Thus religion is seen to be highly involved in the positive changes that individuals report following stressful experiences (Park, 2005).

Studies on religiosity and mental health among patients with chronic illness, particularly cancer, have been accumulating, especially in the US which is largely represented by Judeo-Christians. Moreover, research on spirituality and religiosity among cancer patients from diverse cultures and religions have been on the rise. For example, several studies have examined the role of religiosity and/or spirituality of women in dealing with breast cancer in samples representing several cultures and religions such as Taiwanese women (Chiu, 2000), African American women (Bowie et al., 2001), Catholic and Evangelical Hispanic women (Alferi et al., 1999), and Muslim women in Malaysia (Ahmad, Muhammad, & Abdullah, 2010). Overall, these investigations included both qualitative and epidemiological studies which provided deeper understanding and insights into the spiritual experiences and its influence on the psychological well-being of cancer patients. However, the results could not be simply generalized to people from other cultures and faiths, such as Islam. For example, in the literature, religious involvement are often measured in terms of affiliation or frequent attendance at religious services (Strawbridge, Shema, Cohen, Roberts, & Kaplan, 1998) whereas for the Muslims faith, religious involvement is not constrained only with worship acts, but also involves their daily interactions with other fellow human beings. The present study adds to the literature on Muslim cancer patients, aiming to investigate the relationship between Islamic religiosity with depression and anxiety among Muslim cancer patients.

Islamic religiosity

The Muslim faith taught that Islam is a way of life (*deen*), and it is defined by the following concepts: *Al-Islam*, (the five pillars, as the outward actions of the limbs), *Al-Iman* (associated with belief- the inner actions of the heart) and *Al-Ihsan*, (fearing and glorifying Allah and the best actions of the heart). Hence, a Muslim is taught to believe in the heart (*Al-Iman*), manifest their beliefs through worship and daily conducts (*Al-Islam*) and being sincere in everything they do with the consciousness that Allah is watching over them all the time (*Al-Ihsan*). If the *Al-Iman* (belief- the inner actions of the heart) is weak, it will affect *Al-Islam* (good deeds/actions) thus, *Al-Iman* necessitates the actions (“Hadith No: 2”, 2010, para. 3). A measure of these three aspects signifies a comprehensive understanding and practising of Islam. The religiosity scale used in the present study will measure these aspects that define Islamic religiosity.

Accordingly, the scales used in almost all of the studies on religiosity and spirituality in the literature are not valid to be used to measure religiosity from Islamic perspective having measured different aspects of religiosity or spirituality per se. Furthermore, researchers have been divided with the definitions of religiosity and spirituality. Some believe that terms religiosity and spirituality constitute the same meaning, whereas others define them as two separate concepts and measure them independently. For example, researchers who viewed both constructs as separate entities define religiosity as a shared system of organized beliefs and practises involving a higher power. However, spirituality was defined in a broader context; i.e., people’s understanding of their lives in terms of their ultimate meaning and value (Mystakidou, Tsilika, Parpa, Smyrnioti & Vlahos, 2007), and an aspect of the self which seeks to reconcile one’s experiences with personal beliefs (Boeving, 2000). Therefore, spirituality is seen as an outcome determined by something within an individual and not through an organized religion (Levine, 2007). Some other researchers (e.g., Meragvilia, 1999; Unterrainer, Ladenhauf, Moazed, Wallner-Liebmann, & Fink, 2010) used the terms religiosity and spirituality as if they constitute the same meaning. Another researcher, (Strawbridge et al., 1998) defined religiosity into two dimensions namely organizational (e.g., attendance at religious services

and being active in religious organizations) and non-organizational (e.g., praying and believing in the importance of religious and spiritual beliefs).

It is of note that the dichotomy between spirituality and religiosity is not accepted in the Islamic way of life as Islam views spirituality as an inner dimension of religion. The Muslims believe that religion is the prescribed religious activities which provide the roadmap to one's ultimate purpose in life; that is to live continuously in relationship with God; the essence of spirituality. It is believed that to be spiritual but not religious may make a person spiritual but without religion or a road map to reach God, he or she may be misguided. Similarly, to be religious but not spiritual may make a person religious, but without self-understanding and consciousness, he or she is considered spiritually dead (Ahmad, et al., 2010).

Therefore, this study explores the unique comprehensive aspects of religiosity as defined by Islamic religiosity. This will be measured using an Islamic religiosity scale that will measure the understanding and practising aspects of Islam. It is hypothesized that among Muslim cancer patients, a high Islamic religiosity score will lower the tendency of depression and anxiety, and a low Islamic religiosity score will increase the tendency of depression and anxiety, i.e. an inverse association is expected.

Methods

Participants and Procedures

In this cross-sectional study, participants were approached while attending oncology daycare, warded in a public hospital in Kuala Lumpur and while attending cancer support group activity held in a public university. Patients were seen individually or with their family members.

The sample comprised of 59 Muslim cancer patients, 16 (27%) of whom were male and 43 (73%) were female. The mean age for the entire sample was 49 years with a range from 15 to 65. There were 57 Malays, an Italian and a Javanese. 50 patients were married, one widowed and seven single patients with a missing data. As for their education levels, 49% (n=29) did not continue education after school, 22% (n=13) had a certificate or diploma, 20% (n=12) had a bachelor degree while 8.5% (n=5) studied up to postgraduate level.

As for the cancer stages, for stage 1, 2 and 3, there were 12 patients for each of the stages while for stage 4, there were 21 patients. Two participants had missing data.

Inclusion criteria included being Muslims, having been diagnosed with cancer, aged between 15-65 years old, able to communicate effectively with interviewer and must be able to give a written informed consent. Respondents were excluded from the study if they showed any signs of psychiatric illness or if they were on any psychoactive medication. The study was conducted between July to August 2010.

An information sheet regarding objective of the study was given to the patient; then, the researcher explained the study's purpose and informed each subject about their rights and confidentiality issues. If patients agreed to participate, they were given an informed consent form to indicate their agreement. For patients who were under 18 of age, a separate consent form was given for their guardians or parents to indicate their agreement.

Three sets of questionnaires were then distributed to the patients along with information about their basic demography. Patients who were not able to fill in the questionnaires due to physical incapability or sight problems were assisted by the researcher by reading out the questions to them.

In the cancer support program, the researcher, who was also a participant, approached individual patients, after the program and explained about the study and gave the questionnaires with a self-addressed envelope for which patients were asked to return after they filled in the questionnaires.

The time taken to complete the questionnaires was about 15-30 minutes. All of the questionnaires were self-administered scales and were in Malay language.

Ethical consideration

This study was conducted under the permission of the Ethics Committee of the hospital in which the study was conducted. Each questionnaire was accompanied by an informed consent that described the nature and purpose of the study. Respondents had given written agreement to allow their questionnaire data to be used for research purpose, and their confidentiality was ensured.

Measures

The Muslim Religiosity and Personality Inventory. The Muslim Religiosity and Personality Inventory (MRPI) is an Islamic religiosity measurement developed for Muslims in Malaysia (Krauss et al., 2006). This study uses a validated short version of the questionnaire. It has two subscales, namely Islamic Worldview with 23-items and Religious Personality with 33-items.

Islamic Worldview is rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). Higher scores on this subscale represent greater knowledge and perceptions towards the pillars of Islam. Religious Personality is rated on a 5-point scale ranging from 1 (never) to 5 (always). Higher scores on this subscale represent greater practice of the Islamic obligations. A scoring table provides the norm score as a measure of high or low scores for the two subscales relative to the population.

A total Islamic religiosity score was obtained by summing the subscale scores. Higher score on this represent greater understanding and practice of Islam in a comprehensive manner. The MRPI has been found to have high validity and reliability among Muslims in Malaysia with item analysis at alpha value of .91 and Cronbach Alpha ranging from .74 to .89 (Hamzah et al., 2007).

Beck Depression Inventory (Malay). The Beck Depression Inventory (BDI) (Beck, Steer & Brown, 1996) is a 21-item scale to assess the severity of depression in diagnosed patients and for detecting possible depression in normal populations. It consists of questions on how the subject was feeling in the past week. Each set of 4 possible answer choices range in increasing intensity.

This study uses the BDI-Malay version which has been validated among Malays in Malaysia by Mukhtar and Oei (2007). It consists of 20-items, with item 21 omitted for the reason of being unfit for the culture and religion of the Malays. The validity and reliability of the BDI-Malay has been found to be satisfactory with Cronbach Alpha ranging from .71 to .91.

Beck Anxiety Inventory (Malay). The Beck Anxiety Inventory- Second Edition (BAI-II) (Beck & Steer, 1993) is a 21-item scale that measures the severity of self-reported anxiety in adults and adolescents for the past week. The score is rated on a 4-point scale ranging from 0 (not at all) to 3 (severely; I could barely stand it). The psychometric properties study of the Malay version of the BAI-II was conducted by Mukhtar and Zulkefly (2011). BAI-Malay was found to be a reliable and valid with Cronbach Alpha ranging from .66 to .89.

Statistical Analysis

Data were analyzed using the Statistical Package for Social Science (SPSS Version 15.0). Analyses were generated using Pearson correlation to identify the relationship between Islamic religiosity with depression and anxiety. Independent t-test and ANOVA were used to analyze the demographic information of the participants.

Results

Negative Relationship between Islamic Religiosity and Depression

Analysis using Pearson correlation indicated a significant negative correlation (<0.01) between depression and MRPI subscale of Religious Personality (-.347) and with the total score of MRPI (-.350). This is presented in Table 1.

Table 1

Correlation between Muslim Religiosity Personality Inventory (MRPI) subscale and total scores and Beck Depression Inventory (BDI). (n=59)

	Islamic Worldview	Religious Personality	MRPI Total
BDI			
Pearson correlation	$r = -.161$	$r = -.347$	$r = -.350$

* $p < 0.01$

Negative relationship between Islamic Religiosity and Anxiety

Analysis using Pearson correlation indicated a significant negative correlation (<0.05) between anxiety and the total score of the MRPI (-.287).

Table 2

Correlation between Muslim Religiosity Personality Inventory (MRPI) subscale and total scores and Beck Anxiety Inventory (BAI)

	Islamic Worldview	Religious Personality	MRPI Total
BAI			
Pearson correlation	$r = -.239$	$r = -.237$	$r = -.287^*$

* $p < 0.05$

Gender and religiosity. No significant relationship was found between gender and Islamic religiosity.

Education and religiosity. Significant relationship was found between education levels and religiosity scores ($F=2.553$, $p=.025$). Means plot indicate that the higher the patients' level of education, the higher they scored in the Islamic Worldview subscale.

Age and religiosity. Age groups were found to be significantly related ($p < 0.05$) with Religious Personality subscale ($F= 4.170$, $p= .005$), Islamic Worldview subscale ($F=3.019$, $p= .026$), and MRPI overall scores ($F=6.493$, $p= .000$). Means plot comparing the means of the scores with age groups revealed that the higher the age group, the higher they scored in both the subscales of the Muslim Religiosity Personality Inventory.

Marital status and religiosity. Results revealed a significant difference between groups of marital status ($p < 0.05$) in the Religious personality subscale ($F=4.627$, $p=.014$) and the overall MRPI scores ($F=5.201$, $p=.009$). Means plot comparing the means revealed higher scores were obtained by widowed and married patients, compared to single patients.

Cancer stage and survival time with religiosity. No significant relationships were found between Islamic religiosity, cancer stage, and length of time since diagnosis.

Discussion

The present study aims to investigate the association between Islamic religiosity with depression and anxiety. It utilizes a religious scale that was developed and validated particularly for Muslims in Malaysia. Results demonstrated a significant negative relationship between Islamic religiosity with depression and anxiety among the Muslim cancer patients, hence confirming the hypothesis of this study.

Consistent with previous studies, correlational results showed that spirituality and depression had a significant negative association (Mystakidou et al., 2007; McCoubrie & Davies, 2006) in cancer patients. But they did not find a significant association between private religious practices (Mystakidou et al., 2007) and religious faith (McCoubrie & Davies, 2006) to anxiety and depression. However, in the present study, Islamic religiosity which incorporates both spirituality and religiosity resulted in significant association with both depression and anxiety.

While the results demonstrated a significant negative relationship between Islamic religiosity with depression (.007) and anxiety (.027), anxiety was somewhat lower in significance. This finding is consistent with previous studies on psychopathology which revealed a smaller relationship between anxiety and religiosity than depression (Miller & Kelley, 2005), the reason of which is unclear.

Results of the present study also demonstrated a significant association in the religious personality subscale of the MRPI with depression. The religious personality subscale is the practicing aspect of the scale, the good morality that is portrayed through everyday conduct. The religious personality subscale measures the direct relationship with God (*Al-Islam*) and relations with other human beings and creations (resulting from God-consciousness; *Al-Ihsan*) whereas the Islamic worldview subscale measures the Islamic foundation or beliefs and understanding of the six articles of faith (*Al-Iman*). The results indicate that participants that scored high in the subscale that measured *Al-Islam* and *Al-Ihsan* shower lower tendency to be depressed. It could be that such persons were too distracted with improving their relationship with God and with other beings that they do not have the time to be emotionally down and depressed.

Park (2005) noted that religion can be highly involved in the positive changes that individuals report following stressful experiences such as the cancer experience. Consistent with this view, Koenig et al. (2001) reported that chronic illness provided the pathway to develop a personal relationship with God which motivates the patient to please and serve God. Hence whatever ability a disable person still has, he may offer the ability in God's service. This "ability" need not require any physical activity-sometimes the attempt to be kind, grateful or appreciative for services rendered by others can itself be considered a service to others. This is reflected in the religious personality subscale of the MRPI which measure items such as hiding someone else's weaknesses to themselves and feeling grateful when there arises a chance for them to donate to the poor such as when a beggar approaches them for some help.

The result that high levels of Islamic religiosity are associated with lower tendency of depression and anxiety signifies the importance of Islamic religiosity in the treatment of Muslim cancer patients. A review of the literature noted that the majority of studies found that the religious intervention was associated with a more rapid reduction in symptoms of depression and anxiety (Koenig et al., 2001). This was found to be particularly true for those with higher religiosity. Razali et al., (1998) had demonstrated that their psychotherapy treatment that incorporates a religious and sociocultural component rapidly improved anxiety and depressive symptoms in patients with strong religious and cultural backgrounds. It is of note that in the present study, most participants consider their religion as a significant part of their lives.

Meanwhile, Grant et al. (2004) demonstrated that unmet spiritual needs may give rise to spiritual distress in some individuals that may worsen physical and emotional symptoms and the ability to cope with them. They called for professionals to adopt a patient-centred approach; by supporting patients in their worldview, and providing openings for expression of fear, doubt, and anxiety which may help patients in their search for meaning and prevent spiritual need amounting to disabling spiritual distress. Inevitably, professionals who were able to develop positive relationships with patients inadvertently would reduce spiritual distress in them.

It is hence recommended that the palliative care team to be composed of health care practitioners who are trained to include a religious or spiritual component in their treatment.

These include talking about meaning of life, reflection about their lives and their relationship with the Creator. Religious scale such as the MRPI is also recommended to be used by health care professionals in integrating Islamic religiosity with medicine. Besides providing physicians with a quantitative, credible method of spiritual inquiry with their patients, it also provides an avenue for integrating spiritual assessment with traditional medicine (Mystakidou et al., 2007).

The observed association of older age in Islamic religiosity is consistent with findings by Strawbridge et al. (1998) in their two dimensions of religiosity, i.e. organizational (attending services and other activities) and non-organizational religiosity (private practices such as prayer). However they also found a significant association in gender, which was not demonstrated in the present study. In addition, the present study found association in education with Islamic worldview subscale and marriage in association with religious personality subscale.

The present study explored the unique measures of Islamic religiosity compared with other religiosity scales used in previous studies. It calls for the definition of religiosity to be extended beyond the measure of attendances in worship services and prayers. This study shows the significance of selecting a religiosity measure that was specifically constructed to measure the aspects of religiosity of a particular faith for such measures vary considerably from one faith to another.

Limitations

There are several limitations to the present study. As this study is a cross-sectional one, the results could not be used to determine causality. A longitudinal study may be beneficial in assessing the change of Islamic religiosity in a Muslim cancer patient from their early diagnosis to some months or years after their diagnosis.

Another limitation is social desirability. Since MRPI is a religiosity instrument, there are bound to be some issues related to social desirability whereby individuals often describe their own behaviour inaccurately by answering questions according to what they think they should be doing (Krauss & Hamzah, 2010). It is possible that the associations among constructs in this study are simply the results of consistency in individuals' tendencies to express positive views and feelings in relation to Islamic religiosity, depression and anxiety.

In addition, a religiosity measurement can never be perfect and complete due to the fact that religiosity resides in an individual's heart. Researchers are just limited to assessing the external or manifested elements of an individual's religious practice. Hence this study has a limit in that it can only measure the manifested elements of religiosity.

Conclusions

The present study indicated the significance of Islamic religiosity in lowering the tendency of depression and anxiety in Muslim cancer patients. It also provided an understanding of the Islamic religiosity which were defined by *Al-Islam*, *Al-Iman* and *Al-Ihsan*. This pointed towards the high potential of Islamic religious intervention in contributing towards increasing the quality of life of cancer patients particularly among Muslims in Malaysia. The authors call for the health professionals to adopt a patient-spiritual centered approach that meets the spiritual needs of Muslim cancer patients.

References

- Ahmad, F., Muhammad, M., & Abdullah, A.A. (2011). Religion and Spirituality in Coping with Advanced Breast Cancer: Perspectives from Malaysian Muslim Women. *Journal of Religion and Health*, 50(1), 36-45. doi: 10.1007/s10943-010-9401-4
- Alcorn, S.R., Balboni, M.J., Prigerson, H.G., Reynolds, A., Phelps, A.C., Wright, A.A., Block, S.D., Peteet, J.R., Kachnic, L.A., & Balboni, T.A. (2010). "If God Wanted Me Yesterday, I Wouldn't Be Here Today": Religious and Spiritual Themes in Patients' Experiences of Advanced Cancer. *Journal of Palliative Medicine*, 13(5), 581-588. doi: 10.1089/jpm.2009.0343
- Alferi, S.M., Culver, J. L., Carver, C. S., Arena, P. L., & Antoni, M. H. (1999). Religiosity, Religious Coping and Distress - A Prospective Study of Catholic and Evangelical Hispanic Women in Treatment for Early-Stage Breast Cancer. *Journal of Health Psychology*, 4(3), 343-356. doi: 10.1177/135910539900400304.
- Beck, A.T., & Steer, R.A. (1993). *Beck Anxiety Inventory Manual*. San Antonio: The Psychological Corporation.
- Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Beck Depression Inventory- Second Edition-Manual*. San Antonio: The Psychological Corporation.
- Boeving, C.A. (2000). *Adjustment to Childhood Chronic Illness: Prediction of Psychological Adjustment with an Investigation into Spiritual Coping*. Master Thesis. Virginia: Faculty of the Virginia Polytechnic Institute and State University. Retrieved from: http://scholar.lib.vt.edu/theses/available/etd-12182000174313/unrestricted/cboeving_thesis.PDF
- Bowie, J., Curbow, B., Laveist, T., Fitzgerald, S., & Pargament, K. (2001). The Relationship Between Religious Coping Style and Anxiety over Breast Cancer in African American Women. *Journal of Religion and Health*, 40 (4), 411-422. doi: 10.1023/A:1012873017657
- Chiu, L. (2000). Lived Experience of Spirituality in Taiwanese Women with Breast Cancer. *Western Journal of Nursing Research*, 22 (1), 29-53.
- George, L.K., Larsons, D.B., Koenig, H.G., & McCullough, M.E. (2000). Spirituality and Health: What We Know, What We Need to Know. *Journal of Social and Clinical Psychology*, 19(1), 102-116.
- Golden-Kreutz, D.M., Thornton, L.M., Di Gregorio, S.W., Frierson, G.M., Jim, H.S., Carpenter, K.M., ...Andersen, B.L. (2005). Traumatic Stress, Perceived Global Stress, and Life Events: Prospectively Predicting Quality of Life in Breast Cancer Patients. *Health Psychology*, 24(3), 288-296.
- Grant, E., Murray, S.A., Kendall, M., Boyd, K., Tilley, S., & Ryan, D. (2004). Spiritual Issues and Needs: Perspectives from Patients with Advanced Cancer and Non-Malignant Disease. A Qualitative Study. *Palliative and Supportive Care*, 2, 371-378. doi: 10.1017/S1478951504040490 Hadith No: 2 with Commentary in English. (2010). In An-Nawawi's 40 Hadith. Retrieved from <http://ahadith.co.uk/hadithwithcommentary.php?id=442&cid=11>
- Hamzah, A., Krauss, S.E., Noah, S.M., Suandi, T., Juhari, R., Manap, J., Mastor, K.A., Mahmoud, A., & Kassan, H. (2007). *Muslim Religiosity and Personality Assessment: Prototype for Nation Building*. Selangor: Institute for Social Studies, UPM.
- John, R. & Ross, H. (2010). *The Global Economic Cost of Cancer*. American Cancer Society and Livestrong. Retrieved from

<http://www.cancer.org/acs/groups/content/@internationalaffairs/documents/document/acspc-026203.pdf>

- Koenig, H.G., Larson, D.B., & Larson, S.S. (2001). Religion and Coping with Serious Medical Illness. *The Annals of Pharmacotherapy*, 35, 352-358.
- Koenig, H.G. (2008). Research on Religion, Spirituality and Mental Health: A Review. *Canadian Journal of Psychiatry*, 54(5), 283-291.
- Krauss, S.E., & Hamzah, A. (2010). *The Muslim Religiosity-Personality Inventory (MRPI) Scoring Manual*. Serdang: Universiti Putra Malaysia.
- Krauss, S.E., Hamzah, A.H., Suandi, T., Noah, S., Juhari, R., Manap, J.H., Mastor, K.A., Kassan, H., & Mahmood, A. (2006). Exploring Regional Differences in Religiosity among Muslim Youth in Malaysia. *Review of Religious Research*, 47 (3), 238-252.
- Levine, E. G., Yoo, G., Aviv, C., Ewing, C., & Au, A. (2007). Ethnicity and Spirituality in Breast Cancer Survivors. *Journal of Cancer Survivors*, 1, 212-225. doi: 10.1007/s11764-007-0024-z.
- Lue, B.H., Huang, T.S., & Chen, H.J. (2008). Physical Distress, Emotional Status, and Quality of Life in Patients with Nasopharyngeal Cancer Complicated by Post-radiotherapy Endocrinopathy. *International Journal of Radiation Oncology, Biology, Physics*, 70 (1), 28-34. doi: <http://dx.doi.org/10.1016/j.ijrobp.2007.06.053>
- Mc Coubric, R. C. & Davies, A. N. (2006). Is There a Correlation between Spirituality and Anxiety and Depression in Patients with Advanced Cancer? *Support Care Cancer*, 14, 379-385. doi: 10.1007/s00520-005-0892-6
- Meraviglia, M.G. (1999). Critical Analysis of Spirituality and Its Empirical Indicators: Prayer and Meaning in Life. *Journal of Holistic Nursing*, 17(1), 18-33. doi: 10.1177/089801019901700103
- Miller, L., & Kelley, B.S. (2005). Relationships of Religiosity and Spirituality with Mental Health and Psychopathology. In Paloutzian, R.F., & Park, C.L. (Eds.), *Handbook of the Psychology of Religion and Spirituality* (pp.460-479). New York: Guilford Press.
- Mukhtar, F., & Oei, T.P.S. (2007). Exploratory and Confirmatory Factor Validation and Psychometric Properties of the Beck Depression Inventory for Malays (BDI- Malay) in Malaysia. *Malaysian Journal of Psychiatry*, 16, 1.
- Mukhtar, F., & Zulkefly, N. (2011). The Beck Anxiety Inventory for Malays (BAI-Malay): A Preliminary Study on Psychomotor Properties. *Malaysian Journal of Medicine and Health Sciences*, 7(1), 75-81.
- Mystakidou, K., Tsilika, E., Parpa, E., Smyrnioti, M., & Vlahos, L. (2007). Assessing Spirituality and Religiousness in Advanced Cancer Patients. *American Journal of Hospice and Palliative Medicine*, 23 (6), 457- 463. doi: 10.1177/1049909106294880
- Park, C.L. (2005). Religion and Meaning. In Paloutzian, R.F., & Park, C.L. (Eds.), *Handbook of the Psychology of Religion and Spirituality* (pp.295-314). New York: Guilford Press.
- Razali, S.M., Hasanah, C.I., Aminah, K., & Subramaniam, M. (1998). Religious-Sociocultural Psychotherapy in Patients with Anxiety and Depression. *Australian and New Zealand Journal of Psychiatry*, 32(6), 867-872 doi: 10.3109/00048679809073877
- Rezaei, M., Adib- Hajbagheri, M., Seyedfatemi, N., & Hoseini, F. (2008). Prayer in Iranian Cancer Patients Undergoing Chemotherapy. *Complementary Therapies in Clinical Practice*, 14, 90-97.
- Rippentrop, A.E., Altmaier, E.M. & Burns, C.P. (2006). The Relationship of Religiosity and Spirituality to Quality of Life among Cancer Patients. *Journal of Clinical Psychology in Medical Settings*, 13 (1), 31-37. doi: 10.1007/s10880-005-9000-9

- Rippentrop, A. E., Altmaier, E.M., Chen, J.J., Found, E.M., & Keffala, V.J. (2005). The Relationship between Religion/Spirituality and Physical Health, Mental Health, and Pain in a Chronic Pain Population. *Pain*, 116, 311-321. doi: 10.1016/j.pain.2005.05.008
- Smith, T.B., McCullough, M.E., & Poll, J. (2003). Religiousness and Depression: Evidence for a Main Effect and the Moderating Influence of Stressful Life Events. *Psychological Bulletin*, 129(4), 614-636. doi: 10.1037/0033-2909.129.4.614
- Strawbridge, W.J., Shema, S.J., Cohen, R.D., Roberts, R.E., & Kaplan, G. A. (1998). Religiosity Buffers Effects of Some Stressors on Depression but Exacerbates Others. *Journal of Gerontology: SOCIAL SCIENCES*, 53B(3), S118-S126
- Unterrainer, H.-F., Ladenhauf, K.H., Moazedi, M.L., Wallner-Liebmann, S.J., & Fink, A. (2010). Dimensions of Religious/Spiritual Well-Being and Their Relation to Personality and Psychological Well-Being. *Personality and Individual Differences*, 49, 192-197. doi: 10.1016/j.paid.2010.03.032
- Yanez, B., Edmondson, D., Stanton, A.L., Park, C.L., Kwan, L., Ganz, P.A., & Blank, T.O. (2009). Facets of Spirituality as Predictors of Adjustment to Cancer: Relative Contributions of Having Faith and Finding Meaning. *Journal of Consulting and Clinical Psychology*, 77(4), 730-7. doi: 10.1037/a0015820

Acknowledgement: This research is supported by International Islamic University Malaysia and the Ministry of Higher Education Malaysia.

Contact Nadzirah Ahmad Basri: nadzirahbasri@gmail.com

Sensation Seeking or Empathy? Physically Aggressive and Non-Aggressive Antisocial Behaviors (ASBs) Amongst University Students

Saima Eman, Roderick I. Nicolson & Mark Blades
University of Sheffield, UK

Abstract

Previous research has linked anti-social behavior (ASB) to subtypes of empathy and also to sensation seeking, but there is limited research on the relative roles of empathy subtypes and sensation seeking traits in predicting ASB subtypes. The current study therefore investigated the relationship between sensation seeking, the three subtypes of empathy (emotional reactivity, cognitive empathy and social skills) and the two subtypes of ASB (physically aggressive and non-aggressive). An online survey consisting of Demographic Variables Questionnaire, Brief Sensation Seeking Scale, Empathy Quotient and the Antisocial Behavior Measure was sent to student volunteers, leading to a total of 537 respondents. Empathy alone accounted for a relatively modest proportion of the total variance in the ASBs, with emotional reactivity being the only significant predictor. Adding sensation seeking to the regression led to a marked improvement in prediction for non-aggressive ASB and a slight but significant improvement for physically aggressive ASB. Sensation seeking, emotional reactivity and social skills (but not cognitive empathy) contributed unique variance for both ASB subtypes. The greatest variance for physically aggressive and non-aggressive ASB were accounted for by emotional reactivity and sensation seeking, respectively. The results indicate that both sensation seeking and sub-types of empathy are important in predicting ASBs. This has theoretical implications for different personality models and has practical implications for the development of preventive measures to avoid such behaviors.

Keywords: Antisocial behavior (ASB), conduct disorders, emotional reactivity, cognitive empathy, sensation seeking, assault, physically aggressive.

Introduction

Antisocial behavior (ASB) refers to violation of age appropriate norms (American Psychiatric Association, 2000). Antisocial behavior subtypes (ASBs) create disruption in societies worldwide (UNODC, 2015). The ASB subtypes used as criterion variables in this study are derived from the classification of conduct disorders in the Diagnostic and Statistical Manual of Mental disorders (DSM-IV-TR; American Psychiatric Association, 2000; Rowe, Maughan, Worthman, Costello, & Angold, 2004). The conduct disorders/ASBs in the DSM-IV-TR are classified into four subtypes which are 1-Aggression to people and animals, 2- Destruction of property, 3- Deceitfulness or theft, and 4- Serious violation of rules. They have been categorized as physically aggressive (actual or threatened ASB towards living beings such as hitting or threatening to cause physical harm, i.e. 1-Aggression to people and animals in the DSM-IV-TR), and non-aggressive behaviors (actual or threatened ASB towards others' property such as stealing or setting fire to others' property, and verbal attacks such as being rowdy in the public; i.e. 2- Destruction of property, 3- Deceitfulness or theft, and 4- Serious violation of rules in the DSM-IV-TR).

Certain socio-affective personality traits might help in predicting physically aggressive and non-aggressive ASBs. The current research examined the role of three subtypes of empathy i.e. emotional reactivity, cognitive empathy and social skills, and sensation seeking in predicting the two ASB subtypes. Empathy and sensation seeking are two opposing socio-affective traits or emotions. Empathy is an other-oriented emotion involving understanding of others' emotions, thoughts and appropriately responding to them (e.g. Beadle, 2009; Menegazzo, Cruz-Ortiz, Ortega-Maldonado, & Salanova, 2015; Roeser & Eccles, 2015; Romero-Canyas & Downey, 2013; Thompson & Gullone, 2008). In contrast, sensation seeking is a self-oriented pleasurable emotion that only benefits oneself (e.g. Azaiez, Alajjouri, Lahmar, & Chalghaf, 2014; Charnigo et al., 2013; Goossens, 2000; Janson, 1993). Sensation seeking may often be an antisocial emotion (e.g. Nower, Derevensky, & Gupta, 2004).

There is limited research to indicate the normal functioning of emotions amongst youth with respect to relative effects of sensation seeking versus empathetic emotions in predicting ASBs (Santesso & Segalowitz, 2009). Individuals who engage in high levels of ASB might also demonstrate high levels of sensation seeking and intact empathy (Martin, Smith, & Quirk, 2015). The literature does not indicate the relative effects of sensation seeking and subtypes of empathy in predicting physically aggressive and non-aggressive ASBs. We conducted this research to find out the relative effects of self-oriented emotions in the form of sensation seeking versus other-oriented emotions in the form of empathy subtypes in predicting ASBs amongst normal educated youth.

Previous researchers have shown a positive relationship between sensation seeking and physically aggressive ASBs (e.g. Cui, Colasante, Malti, Ribeaud, & Eisner, 2015; Dahlen, Martin, Ragan, & Kuhlman, 2004, 2005; Kamaluddin, Shariff, Othman, Ismail, & Mat Saat, 2015; Shukla, & Pradhan, 2015), as well as a positive relationship between sensation seeking and non-aggressive ASBs (e.g. Ball, Carroll, & Rounsaville, 1994; Carrasco, Barker, Tremblay, & Vitaro, 2006; Harden et. al., 2015; Sijtsema, Veenstra, Lindenberg, van Roon, Verhulst, Ormel, & Riese, 2010; Xu, Raine, Yu, & Krieg, 2014). The main element of sensation seeking is risk taking (Zheng, Tan, Xu, Chang, Zhang, & Shen, 2015) regardless of whether it is associated with non-aggressive ASBs such as

gambling, and cyberbullying (e.g. Kokkinos, Antoniadou, & Markos, 2014), or physically aggressive ASBs such as sexual impulsivity, injury in sports, and drug abuse (e.g. Reid, Berlin, & Kingston, 2015; Shukla & Pradhan, 2015). Thus, it is not clear whether sensation seeking is more likely to predict physically aggressive ASBs or non-aggressive ASBs. Sensation seeking is a typical marker of adolescence (Shulman, Harden, Chein, & Steinberg, 2015) and is inversely related to subtypes of empathy such as emotional reactivity, cognitive empathy and social skills subtypes of empathy (Kokkinos et al., 2014; Silmere, 2008). However, in some researches (e.g. Beyers, Toumbourou, Catalano, Arthur, & Hawkins, 2004; Rezayi, 2014), sensation seeking was positively related to empathy.

There are different subtypes of empathy (Lawrence, Shaw, Baker, Baron-Cohen, & David, 2004). The present study used three subtypes of empathy as predictors. These were emotional reactivity, cognitive empathy and social skills (Lawrence et al., 2004). Emotional reactivity refers to emotional reaction in response to other people's emotions, such as others' joy or distress. Cognitive empathy refers to understanding others' thoughts, and awareness of others' state of mind. Social skills refer to understanding and managing social situations, for example understanding social expectations or dealing with relationships (e.g. Bons et al., 2013; Lawrence et al., 2004).

The correlation between empathy and ASBs might differ depending upon the subtypes, definitions, and levels of empathy and ASBs of the participants (e.g. Feilhauer & Cima, 2013; Jones, Happé, Gilbert, Burnett, & Viding, 2010). Most studies (e.g. Kokkinos et al., 2014; Taubner, White, Zimmermann, Fonagy, & Nolte, 2013; Ttofi, Bowes, Farrington, & Lösel, 2014) have found an inverse relationship between the subtypes of empathy and the subtypes of ASBs.

Previous researchers have considered the relationship of affective/emotional and cognitive empathy subtypes to physically aggressive and non-aggressive ASBs (e.g. Brockmyer, 2015; Jolliffe & Farrington, 2004; Lunsford, 2014; van Langen, Wissink, van Vugt, Van der Stouwe, & Stams, 2014; Viding, Simmonds, Petrides, & Frederickson, 2009; Yeo, Ang, Loh, Fu, & Karre, 2011). They have found that emotional reactivity is more likely to inversely predict physically aggressive ASBs while cognitive empathy and social skills are more likely to inversely predict non-aggressive ASBs such as cyberbullying, an indirect form of aggression (e.g. Espelage, Rose, & Polanin, 2015; Schultze-Krumbholz & Scheithauer, 2015; Yeo et al., 2011). Although low social skills are associated with ASBs (e.g. Buck, 2013; Ttofi et al., 2014) and problematic behaviours (e.g. Qi & Kaiser, 2003), some studies (e.g. Carpenter, & Nangle, 2006) also contradict the inverse relationship between social skills and subtypes of ASBs. There is limited evidence regarding the correlation of social skills to physically aggressive and non-aggressive ASBs.

The relationship between cognitive empathy and ASBs (e.g. Almeida, Seixas, Ferreira-Santos, Vieira, Paiva et. al., 2015; Jolliffe & Farrington, 2004; van Leeuwen, Rodgers, Gibbs, & Chabrol, 2014), emotional empathy/emotional reactivity and ASBs (e.g. Dadds et al., 2009; Domes, Hollerbach, Vohs, Mokros, & Habermeyer, 2013; Hosker-Field, 2011; Milojević & Dimitrijevic, 2014; van Heerebeek, 2010), and social skills and ASBs (e.g. Carpenter, & Nangle, 2006) has been inconsistent. Low social skills are more likely to predict non-aggressive ASBs but they have been inversely related to both subtypes of ASBs (e.g. Ttofi et al., 2014). Literature has

shown mixed results (e.g. Ang & Goh, 2010; Lonigro, Laghi, Baiocco, & Baumgartner, 2013; Mayberry & Espelage, 2007) regarding the relationship between subtypes of empathy and subtypes of ASBs, so it is not clear which subtypes of empathy predict which subtypes of ASBs.

A recent study (McTernan, Love, & Rettinger, 2014) showed that cognitive empathy and sensation seeking personality traits were differentially related to the subtypes of ASBs. Low cognitive empathy was more likely to predict non-aggressive ASB, while high sensation seeking and emotional reactivity were more likely to predict physically aggressive ASB. Unfortunately, the authors (McTernan et al., 2014) used a different definition for emotional reactivity, physically aggressive and non-aggressive ASBs than that used in the current study. They have mentioned ASBs in terms of different cheating behaviors. Emotional reactivity has been used for the term impulsivity. Physically aggressive ASB have been defined in terms of relationship cheating and cheating in sports whereby the victim is known and it is direct form of transgressive behavior. Non-aggressive ASB have been defined in terms of social contract violations, which involve rule-breaking ASB, and the victim is not obvious and thus is an indirect transgressive behavior. Given that sensation seeking and the sub-types of empathy separately predict sub-types of ASB, and that sensation seeking correlates negatively with the subtypes of empathy it is therefore important to undertake a programmatic analysis of their relative contributions to the sub-types of ASB.

It is difficult to assume, whether sensation seeking or empathy would be the strongest predictor of ASBs as well as which subtype of empathy would be strongest predictor of which subtype of ASB. Since most of the research (e.g. Aaltola, 2013; de Kemp, Overbeek, de Wied, Engels, & Scholte, 2007; Eisenberg, Eggum, & Di Giunta, 2010; Jolliffe & Farrington, 2006, 2007, 2011; Mauraage et al., 2011; Shechtman, 2002) shows lack of emotional empathy in relation to ASBs, we might expect that low emotional reactivity would be the strongest predictor of both physically aggressive and non-aggressive ASBs. Since sensation seeking is inversely related to empathy (Kokkinos et al., 2014) high sensation seeking might also emerge as one of the strongest predictors of both physically aggressive and non-aggressive ASBs.

Therefore, the present research examined the relative strengths of the subtypes of empathy and sensation seeking in predicting physically aggressive and non-aggressive ASBs. The role of demographic variables in relation to sensation seeking and subtypes of empathy was also observed. In this context, male students are likely to engage in greater ASBs (e.g. Bachman, Dillaway, & Lachs, 1998; Eme, 2013; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001), particularly physically aggressive ASBs (Demissie, Asfaw, Abebe, & Kiros, 2015; Chung-Do, Goebert, Hamagani, Chang, & Hishinuma, 2015; Ibabe & Bentler, 2015), high sensation seeking and low empathy (e.g. Berg et al., 2015; Ball, Farnill, & Wangeman, 1984; Shulman et al., 2015)

Students belonging to the same culture are likely to display more empathy as compared to foreign students (e.g. Rosenthal, Russell, & Thomson, 2007).

Aims of this study

The first aim of the current study was to examine the correlations between the subtypes of empathy (i.e., emotional reactivity, cognitive empathy and social skills), sensation seeking and physically aggressive and non-aggressive ASBs while controlling for age amongst university students. The second aim was to find out if emotional reactivity predicted physically aggressive ASBs while cognitive empathy and social skills predicted non-aggressive ASBs (American Psychiatric Association, 2000; Rowe et al., 2004). The third aim was to examine the hierarchy of sensation seeking (Zuckerman, Eysenck, & Eysenck, 1978) along with subtypes of empathy in predicting subtypes of ASBs. The fourth aim was to determine the competitive effects of these socio-affective personality traits in predicting ASB subtypes. The hypotheses are described below.

H₁: Cognitive empathy, emotional reactivity and social skills would be inversely and sensation seeking would be positively related to physically aggressive and non-aggressive ASBs. **H₂:** Low emotional reactivity would predict physically aggressive ASBs while low cognitive empathy and social skills would predict non-aggressive ASBs. **H₃:** High sensation seeking and low emotional reactivity would predict physically aggressive ASBs while high sensation seeking and low cognitive empathy would predict non-aggressive ASBs. **H₄:** Low emotional reactivity and high sensation seeking would be the most significant predictors of physically aggressive non-aggressive ASBs.

Method

Measures

a. Demographic Variables Questionnaire. The demographic variables consisted of gender (1=Male, 2=female), age, student status (i.e. 1=Home/British, 2=European Union (EU), and 3=Non-European status/nationality) and faculty/school/division (i.e., 1=Arts and Humanities; 2=Engineering; 3=Medicine, Dentistry, and Health; 4=Science; and 5=Social Science) of the participants. Each faculty consists of different departments. The information regarding the department of participants was not obtained.

b. Brief Sensation Seeking Scale (BSSS). Sensation seeking has been operationally defined in terms of seeking novel, different, exciting and complex experiences and the readiness to take physical and social risks in pursuit of such experiences. The BSSS consisted of 8 items, which measured sensation seeking on a scale of 1-5 where 1 stood for 'Strongly Disagree' and 5 stood for 'Strongly Agree'. The scale included items such as, "I like to do frightening things" and "I would like to explore strange places" (Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002).

c. The Cambridge Behaviours Scale (EQ). The Cambridge behaviours scale (Baron-Cohen & Wheelwright, 2004) known as the Empathy Quotient (EQ) had 40 items. The validity and reliability of this scale had been established (Lawrence et al., 2004). Empathy on the EQ was operationally defined in terms of the total score on the EQ. The score on each item could vary from 1-4 where 1 stood for 'Strongly Agree' and 4 stood for 'Strongly Disagree' on negatively worded items such as "I find it hard to know what to do in a social situation"; "Seeing people cry doesn't really upset me" and reverse scoring for positively worded items such as "I am good at predicting how

someone will feel”; “I really enjoy caring for other people”. Therefore, increase in the score would reflect increase in the level of empathy.

The subscales of empathy were taken from the three-factor structure presented in confirmatory factor analyses in previous studies with 5 items in each subscale (Gouveia, Milfont, Gouveia, Neto, & Galvão, 2012; Muncer & Ling, 2006). The three subscales were emotional reactivity (e.g. “Seeing people cry doesn’t really upset me”), cognitive empathy (e.g. “I am good at predicting how someone will feel”) and social skills (e.g. “I find it hard to know what to do in a social situation”). In the present study the emotional reactivity subscale consisted of item numbers 3, 16, 19, 33 & 39; the cognitive empathy subscale consisted of item numbers 14, 15, 29, 34, & 35; the social skills subscale consisted of item numbers 2, 4, 7, 8, & 21 (Baron-Cohen & Wheelwright, 2004; see Results for reliability coefficients).

d. *The Antisocial Behavior (ASB) Measure.* This consisted of 22 items taken from the Edinburgh Study of Youth Transitions and Crime survey (Smith & McVie, 2003). The respondent had to indicate his/her involvement in certain ASB such as “Stolen something from a shop or store”. Each item on the ASB Measure was scored on a scale of 1-5 where 1 stood for ‘Never’ and 5 stood for ‘Very Often’.

A conceptual classification of ASBs was used to distinguish two subscales, one for physically aggressive and one for non-aggressive ASBs. Reliability analysis was used to confirm this conceptual classification. The physically aggressive ASB subscale consisted of 7 items (item numbers 9, 10, 11, 14, 17, 18, & 19) representing actual or threatened ASB aimed at living things. This subscale consisted of items such as “Hit, spat, threw stones at someone you know” and “Threatened to hurt someone you know. The non-aggressive ASB subscale consisted of 10 items (item numbers 2, 3, 4, 5, 6, 12, 15, 16, 20, & 22) representing actual or threatened ASB towards non-living things such as damage to others’ personal belongings or public property (See Results section for reliability coefficients). The non-aggressive ASB subscale included items such as “Deliberately damaged or destroyed property that did not belong to you” and “Stolen something from a shop or store”.

Participants

The sample included 537 student volunteers from University of Sheffield, UK aged 18-25 years with 72% female students. Seventy-two per cent (n=389) identified themselves as home students (i.e., British), 9% (n=49) as EU students and 18% (n=99) identified themselves as Non-Europeans; 23% (n=125) were from Faculty of Arts and Humanities, 13% (n=70) from Engineering, 16% (n=83) from Medicine, Dentistry and Health, 27% (n=143) from Science, and 21% (n=114) were from Social Sciences.

Procedure

The ethics committee of Psychology department, University of Sheffield approved this research project. An online survey on Qualtrics software with self-report measures as mentioned above was developed. This survey was sent to the students of University of Sheffield through a university email distribution list consisting of an invitation to the study and a link to the survey. To attract participants, a prize draw of £50 was offered. The data were analyzed using SPSS IBM 21.

Results

Data screening

The demographic variables, the Brief Sensation Seeking Scale (Zuckerman et al., 1978), Empathy Quotient (Baron-Cohen & Wheelwright, 2004), and the Antisocial Behaviours Measure (Smith & McVie, 2003) were tested for normality. The Shapiro-Wilk normality tests for all the variables in this study were significant ($p < .001$) except for the mean score of sensation seeking ($p = .066$). Therefore, the data were non-normal. However, the standardized residuals were normal.

Reliability analyses

The reliability analyses were conducted on the subscales of empathy (See Method section). The three-factor structure consisting of cognitive empathy, emotional reactivity and social skills used in the current study was taken from confirmatory factor analysis in previous studies (Berthoz, Wessa, Kedia, & Wicker, 2008; Gouveia et al., 2012; Muncer & Ling, 2006). The reliability analysis indicated a Cronbach's coefficient alpha reliability of 0.82 (N=5) for cognitive empathy, 0.75 (N= 5) for social skills, and 0.59 (N=5) for emotional reactivity. The reliability analysis for sensation seeking was 0.79 (N=8 items).

As a result of item deletion process, the items "13-Hit, kicked or punched a brother or sister on purpose", "21-Carried a knife or other weapon with you for protection or in case it was needed in a fight" were deleted from the physically aggressive ASB subscale and the items "1-Travelled on a bus or train without paying enough money", "7-Ignored someone you know on purpose, or left them out of things" and "8-Said nasty things about someone you know, slagged them off or called them names" were deleted from the non-aggressive ASB subscale.

The reliability analysis for the subscales of the ASB Measure (see Method section and Appendix) indicated an alpha coefficient of 0.77 (N=7) for physically aggressive ASB, and 0.76 (N= 10) for non-aggressive ASB.

Correlational Analyses

Spearman rank correlational tests were conducted to test if subtypes of empathy have an inverse relationship with subtypes of ASBs. Table 1 shows the results. All three subtypes of empathy had a significant negative correlation with both subtypes of ASBs. Sensation seeking had a significant positive correlation with ASBs and a comparatively higher correlation with non-aggressive ASBs. Sensation seeking was also significantly related to social skills. Gender had a significant correlation with sensation seeking, subtypes of empathy and ASBs. Student status had significant relations with age, emotional reactivity, social skills, physically aggressive ASB and age. Age and faculty/school/division did not have a significant correlation with any of the variables.

Table 1

Correlations between subtypes of empathy, sensation seeking and subtypes of ASBs.
(N= 537)

Measure	1	2	3	4	5	6	7	8	9	10
1. Emotional reactivity	-									
2. Cognitive empathy	.37**	-								
3. Social Skills	.33**	.46**	-							
4. Sensation seeking	-.07	.07	.11*	-						
5. Physically aggressive ASB	-.19**	-.09*	-.16**	.15**	-					
6. Non-aggressive ASB	-.20**	-.09*	-.12**	.23**	.47**	-				
7. Gender	.35**	.14**	.16**	-	-	-.20**	-			
8. Age	-.03	.03	.02	-.06	-.03	-.003	.07	-		
9. Faculty	.05	-.03	-.01	.01	-.07	-.02	.07	-.02	-	
10. Student Status	-.14**	-.08	-	-.05		-.02	-.06			.03
			.20**		.12**			.25**		

Note. Correlation was significant at the 0.01 level (2-tailed).**

Correlation was significant at the 0.05 level (2-tailed).*

Regression Analyses

In order to probe the relative effects of empathy and sensation seeking, hierarchical regression analyses were performed for each subtypes of ASB with three subtypes of empathy, and sensation seeking.

Table 2 displays the results of a hierarchical regression investigating the relative roles of empathy subtypes and sensation seeking in predicting subtypes of ASBs while controlling for gender, faculty, age, and student status as covariates.

Table 2

Hierarchical regression showing subtypes of empathy and sensation seeking in predicting subtypes of ASB (N=537).

Variable		Physically aggressive					Sig. (p)	
		B	SE(B)	β	t			
Step 1	Gender	-.085	.023	-.161	-3.730	.000	R²=.035	
	Faculty	-.004	.007	-.026	-.598	.550		
	Age	-.001	.005	.005	-.108	.914		
	Student Status	.025	.013	.082	1.846	.065		
Step 2	Gender	-.051	.024	-.096	-2.114	.035	R²=.070	
	Faculty	-.003	.007	-.021	-.495	.621		
	Age	-.001	.005	-.007	-.162	.871		
	Student Status	.016	.013	.054	1.208	.228		
	Cognitive Empathy	-.002	.022	-.004	-.076	.939		
	Social Skills	-.030	.020	-.078	-1.555	.121		
	Emotional Reactivity	-.074	.023	-.159	-3.254	.001		
Step 3	Gender	-.043	.024	-.081	-1.786	.075	R²=.084	
	Faculty	-.004	.007	-.024	-.572	.568		
	Age	-.00005	.005	.000	-.011	.991		
	Student Status	.017	.013	.058	1.302	.194		
	Cognitive Empathy	-.005	.022	-.011	-.217	.828		
	Social Skills	-.037	.020	-.093	-1.870	.062		
	Emotional Reactivity	-.068	.023	-.146	-2.997	.003		
Sensation Seeking	.038	.013	.121	2.821	.005			
Variable		Non-Aggressive					Sig. (p)	
		B	SE(B)	β	t			
Step 1	Gender	-.086	.019	-.193	-4.478	.000	R²=.037	

	Faculty	.001	.006	.011	.256	.798	
	Age	.002	.004	.020	.458	.647	
	Student Status	-.003	.001	-.010	-.225	.822	
Step 2	Gender	-.061	.020	-.137	-3.020	.003	R²=.065
	Faculty	.002	.006	.015	.357	.721	
	Age	.002	.004	.019	.440	.660	
	Student Status	-.010	.011	-.037	-.838	.402	
	Cognitive Empathy	.001	.019	.004	.075	.940	
	Social Skills	-.030	.017	-.090	-1.794	.073	
	Emotional Reactivity	-.051	.019	-.130	-2.665	.008	
Step 3	Gender	-.050	.020	-.112	-2.503	.013	R²=.104
	Faculty	.001	.006	.010	.239	.811	
	Age	.003	.004	.030	.707	.480	
	Student Status	-.008	.011	-.031	-.708	.479	
	Cognitive Empathy	-.003	.018	-.008	-.162	.871	
	Social Skills	-.038	.016	-.116	-2.335	.019	
	Emotional Reactivity	-.043	.019	-.109	-2.259	.024	
	Sensation Seeking	.053	.011	.203	4.799	.000	

Note. $p < .001$, $p < .05$

Table 2 shows that only emotional reactivity as an empathy subtype negatively predicted physically aggressive and non-aggressive ASBs with a greater variance in the case of physically aggressive ASBs. Gender negatively predicted physically aggressive ASBs and non-aggressive ASBs with a greater variance in the case of non-aggressive ASBs. When sensation seeking was added into the hierarchical regression model, low emotional reactivity and high sensation seeking became significant predictors, whereas gender became a non-significant predictor of physically aggressive ASBs. In contrast, high sensation seeking, low emotional reactivity, low social skills, and gender emerged as significant predictors of non-aggressive ASBs. Sensation seeking predicted non-aggressive ASBs with a greater variance as compared to physically aggressive ASBs.

Finally, stepwise regression was conducted to explore the competitive effects of the empathy subtypes and sensation seeking in predicting the ASB subtypes controlling for gender, faculty, age, and student status as covariates.

Table 3

Stepwise regression showing subtypes of empathy and sensation seeking traits in predicting subtypes of ASB (N=537).

Variable		Physically aggressive					Sig. (p)	
		B	SE(B)	β	t			
Step 1	Gender	-.085	.023	-.161	-3.730	.000	R²=.035	
	Faculty	-.004	.007	-.026	-.598	.550		
	Age	-.001	.005	-.005	-.108	.914		
	Student Status	.025	.013	.082	1.846	.065		
Step 2	Gender	-.052	.024	-.098	-2.176	.030	R²=.065	
	Faculty	-.003	.007	-.021	-.493	.622		
	Age	-.001	.005	-.011	-.255	.799		
	Student Status	.020	.013	.065	1.484	.138		
	Emotional Reactivity	-.086	.021	-.184	-4.060	.000		
Step 3	Gender	-.046	.024	-.086	-1.900	.058	R²=.076	
	Faculty	-.004	.007	-.023	-.557	.578		
	Age	-.001	.005	-.006	-.143	.887		
	Student Status	.021	.013	.071	1.617	.106		
	Emotional Reactivity	-.084	.021	-.179	-3.969	.000		
	Sensation Seeking	.033	.013	.107	2.519	.012		
Step 4	Gender	-.043	.024	-.081	-1.795	.073	R²=.084	
	Faculty	-.004	.007	-.024	-.566	.572		
	Age	-.00007	.005	-.001	-.014	.989		
	Student Status	.017	.013	.057	1.295	.196		
	Emotional Reactivity	-.069	.022	-.148	-3.155	.002		
	Sensation Seeking	.038	.013	.120	2.816	.005		
	Social Skills	-.038	.018	-.098	-2.160	.031		
Variable		Non-aggressive					Sig. (p)	
		B	SE(B)	β	t			
Step 1	Gender	-.086	.019	-.193	-4.478	.000	R²=.037	
	Faculty	.001	.006	.011	.256	.798		
	Age	.002	.004	.020	.458	.647		
	Student Status	-.003	.011	-.010	-.225	.822		
Step 2	Gender	-.075	.019	-.168	-3.928	.000	R²=.073	
	Faculty	.001	.006	.007	.155	.877		
	Age	.003	.004	.029	.664	.507		
	Student Status	.000	.011	-.001	-.017	.986		
	Sensation Seeking	.051	.011	.193	4.537	.000		
Step 3	Gender	-.064	.019	-.144	-3.376	.001	R²=.094	
	Faculty	.001	.006	.007	.175	.861		
	Age	.004	.004	.036	.831	.406		
	Student Status	-.007	.011	-.026	-.603	.547		
	Sensation Seeking	.056	.011	.211	4.997	.000		

	Social Skills	-.050	.014	-.152	-3.527	.000	
Step 4	Gender	-.050	.020	-.112	-2.512	.012	$R^2=.104$
	Faculty	.001	.006	.010	.244	.807	
	Age	.003	.004	.030	.706	.481	
	Student Status	-.008	.011	-.031	-.717	.474	
	Sensation Seeking	.053	.011	.203	4.801	.000	
	Social Skills	-.039	.015	-.120	-2.670	.008	
	Emotional Reactivity	-.044	.018	-.111	-2.378	.018	

Note. * $p < .001$, $p < .05$

Table 3 shows that low emotional reactivity was the most significant predictor of physically aggressive ASBs while sensation seeking was the most significant predictor of non-aggressive ASBs.

Discussion

In summary, when the regressions were limited to the subtypes of empathy, only the emotional reactivity subtype was a significant predictor (Table 2) both for physically aggressive and non-aggressive ASBs. The percentage of variance accounted for was modest ($R^2=0.070$ and $R^2=0.065$ respectively). By contrast, when sensation seeking was added in (Table 2), sensation seeking accounted for the greatest variance, with emotional reactivity in predicting physically aggressive ASBs ($R^2=0.084$) and with emotional reactivity, social skills, and gender also contributing significantly in predicting non-aggressive ASBs ($R^2=0.104$). Percentages of variance accounted for were increased, especially for non-aggressive ASBs ($R^2=0.084$ and $R^2=0.104$ respectively).

The first hypothesis **H₁**: That cognitive empathy, emotional reactivity and social skills would be inversely and sensation seeking would be positively related to physically aggressive and non-aggressive ASBs was supported (Table 1). The second hypothesis **H₂**: That low emotional reactivity would predict physically aggressive ASBs while low cognitive empathy and social skills would predict non-aggressive ASBs was partially supported (Table 2). The third hypothesis **H₃**: That high sensation seeking and low emotional reactivity would predict physically aggressive ASBs while high sensation seeking and low cognitive empathy would predict non-aggressive ASBs was partially supported (Table 2). The fourth hypothesis **H₄**: That low emotional reactivity and high sensation seeking would be the most significant predictors of physically aggressive non-aggressive ASBs was partially supported (Table 3).

Relationship between subtypes of empathy, sensation seeking, subtypes of ASBs and demographic variables (Table 1, first hypothesis)

The Spearman rank correlations showed that subtypes of empathy i.e. emotional reactivity, cognitive empathy and social skills, had an independent inverse correlation with physically aggressive and non-aggressive ASBs. This corresponds to previous findings, which have also shown an inverse relationship between subtypes of empathy and subtypes of ASBs (e.g. Kokkinos et al., 2014; Shechtman, 2002; Vitaro, Brendgen, & Barker, 2006).

We note that these findings indicate that the direction of relationship was inverse for all three subtypes of empathy in relation to both physically aggressive and non-aggressive ASBs. Emotional reactivity had a higher correlation to both physically aggressive and non-aggressive ASBs followed by social skills and cognitive empathy. Therefore, emotional reactivity was the most important subtype of empathy and cognitive empathy was the least important subtype of empathy in relation to subtypes of ASBs. This corresponds to previous findings (e.g. Aaltola, 2013; de Kemp, Overbeek, de Wied, Engels, & Scholte, 2007; Jolliffe & Farrington, 2006, 2007, 2011; Maurage et al., 2011; Shechtman, 2002).

The current results contradicted previous findings, which have indicated a positive correlation or no correlation of empathy subtype to ASB subtypes (e.g. Ang & Goh, 2010; Mayberry & Espelage, 2007; Milojević & Dimitrijevic, 2014). Those studies may have found different results from the current study because they had different definitions for aggressive ASBs and different sample characteristics. In Mayberry and Espelage (2007), aggressive ASBs were referred to proactive and reactive aggression subtypes and non-aggressive ASBs were referred to uninvolved youth. In [Milojević and Dimitrijevic](#) (2014) the sample was juvenile offenders rather than students. In Ang and Goh (2010) there was no difference in cognitive empathy between groups with high and low levels of cyber-bullying for female participants.

Research showing the involvement of sensation seeking in non-aggressive ASBs (e.g. Ball et al., 1994; Carrasco et. al., 2006; Harden et. al., 2015; Sijtsema, et. al., 2010; Xu et. al., 2014) and physically aggressive ASBs (e.g. Cui et. al., 2015; Dahlen et. al., 2004, 2005; Shukla, & Pradhan, 2015) was supported. The current research demonstrated that sensation seeking had a higher positive correlation with non-aggressive ASBs than with physically aggressive ASBs.

Apart from the first hypothesis, some interesting correlations were observed. The finding that sensation seeking was positively related to social skills has been supported in some studies (e.g. Beyers et. al., 2004; Rezayi, 2014). However, social skills have also been related to low sensation seeking (Silmere, 2008). Being a male was related to high sensation seeking, low emotional reactivity, low cognitive empathy, low social skills and high physically aggressive and non-aggressive ASBs thus supporting the literature (e.g. Berg et. al., 2015; Ball et al., 1984; Shulman et al., 2015). Being an overseas student, i.e., European/non-European was related to increase in age, low emotional reactivity, low social skills, and high physically aggressive ASB. Although, there is evidence regarding low social skills amongst international students (e.g. Rosenthal et al., 2007), there is no explicit evidence regarding existence of low empathy subtypes and high ASB amongst overseas students.

Subtypes of empathy as predictors of subtypes of ASBs in the hierarchical regression model controlling for gender, faculty, age, and student status (Table 2, second hypothesis)

Previous researchers (Kokkinos et al., 2014) have found an inverse relationship between emotional reactivity and cyber-bullying which is a different type of non-aggressive ASBs. The present study showed that emotional reactivity was inversely related to both physically aggressive (ASBs targeted against people/animals) and non-aggressive behaviours (ASB targeted against objects, or people indirectly through destruction of property). These findings corroborated previous literature (e.g. Aaltola,

2013; Shechtman, 2002) which also showed an inverse relation of affective empathy to subtypes of ASBs. Amongst all the subtypes of empathy, only emotional reactivity inversely predicted both physically aggressive and non-aggressive behaviours.

As predicted, cognitive empathy and social skills did not predict non-aggressive ASBs. Low cognitive empathy is generally related to ASBs (e.g. Buck, 2013). Furthermore, cognitive empathy has been also associated with non-aggressive ASBs such as cyberbullying, an indirect form of aggression (e.g. Schultze-Krumbholz & Scheithauer, 2015). However, the relationship between cognitive empathy and ASBs has been inconsistent (e.g. Almeida, et al., 2015; Jolliffe & Farrington, 2004; van Leeuwen et al., 2014). Therefore, no conclusion can be drawn about the relationship between cognitive empathy and ASBs. Low social skills are more likely to predict non-aggressive ASBs (e.g. Espelage et al., 2015; Yeo et al., 2011) but they have been inversely related to both subtypes of ASBs (e.g. Ttofi et al., 2014). However, social skills did not emerge as a predictor of ASB subtypes in the hierarchical regression of all subtypes of empathy in the present study.

In contrast, the present study showed that emotional reactivity was more likely to predict physically aggressive ASBs as compared to non-aggressive ASBs. Viding et al. (2009) suggest that physically aggressive ASBs in the form of direct bullying (i.e. hitting, kicking, etc) are generally linked to low empathy. Another study found a relationship between low emotional arousal and preference for violent video games (Brockmyer, 2015). However, past research does not indicate if emotional reactivity as a subtype of empathy is more likely to predict physically aggressive ASBs than predict non-aggressive ASBs. From the present study it may be inferred that low levels of emotional reactivity predicts ASB among normal educated individuals.

The current findings contradicted studies which did not find any relationship or a positive relationship of affective empathy to physically aggressive and non-aggressive ASBs (e.g. Dadds et al., 2009; Domes, Hollerbach, Vohs, Mokros, & Habermeyer, 2013; Hosker-Field, 2011; Milojević & Dimitrijevic, 2014; van Heerebeek, 2010). The reason for this contradiction may be attributed to the different definitions of subtypes of empathy and different definitions of subtypes of ASBs used in past studies, as well as the different demographic characteristics of the participants in the literature (e.g. Feilhauer & Cima, 2013; Jones et al., 2010).

Another interesting finding was gender as a predictor of ASBs in addition to low emotional reactivity as a predictor. Maleness has been consistently related to ASBs (e.g. Bachman et al., 1998; Eme, 2013; Nansel et al., 2001). The characteristic of being a male predicted ASBs particularly non-aggressive ASBs. However, male individuals are more likely to be involved in physically aggressive ASBs (Demissie et al., 2015; Chung-Do et al., 2015; Ibabe & Bentler, 2015).

Sensation seeking and subtypes of empathy as predictors of subtypes of ASBs in the hierarchical regression model controlling for gender, faculty, age, and student status (Table 2, third hypothesis)

Hierarchical regression revealed different pathways towards physically aggressive and non-aggressive ASBs. Low emotional reactivity emerged as the significant predictor followed by high sensation seeking in physically aggressive ASBs. This finding

supported previous research (e.g. McTernan et al., 2014), which showed the involvement of high sensation in physical aggression. High sensation seeking followed by low emotional reactivity, low social skills, and gender (maleness) predicted non-aggressive ASBs. Improvement in social skills has shown to reduce ASBs (O’Handley, Radley, & Cavell, 2015).

Earlier studies have identified emotional reactivity and sensation seeking as predictors of physically aggressive ASBs, and cognitive empathy as a predictor of non-aggressive ASBs (e.g. McTernan et al., 2014; Pouw, Rieffe, Oosterveld, Huskens, & Stockmann, 2013; Pursoo, 2013; Yeo et al., 2011). In the present study, both high sensation seeking and low emotional reactivity also emerged as significant predictors of non-aggressive ASBs. Thus this is a novel finding because high sensation seeking and emotional reactivity are more likely to predict physically aggressive ASBs (e.g. McTernan et al., 2014). We suggest that sensation seeking and emotional reactivity emerged as significant predictors of non-aggressive ASBs because non-aggressive ASBs in this study were defined in terms of violent behaviours such as fire-setting, breaking into a car to steal something or display of rowdy public behaviours.

Past studies have not demonstrated the competing effects of sensation seeking traits with subtypes of empathy in predicting both physically aggressive and non-aggressive ASBs while controlling for gender, faculty, age, and student status. The present study not only revealed the competing effects of sensation seeking with subtypes of empathy but also revealed that the addition of sensation seeking changed the relationship between subtypes of empathy and subtypes of ASBs with respect to social skills. Social skills were not significant in the absence of sensation seeking traits (Table 2). However, social skills became a significant predictor of non-aggressive ASBs in the regression model with sensation seeking traits. This might have occurred due to a relationship between sensation seeking and social skills, which was beyond the scope of this study.

The finding that low social skills predicted non-aggressive ASBs while low emotional reactivity predicted physically aggressive ASBs was in line with previous studies (see Table 2; e.g. Jolliffe & Farrington, 2004; Lunsford, 2014; van Langen et al., 2014; Xu et al., 2014; Yeo et al., 2011). Although low social skills are associated with ASBs (e.g. Buck, 2013; Ttofi et al., 2014) and problematic behaviours (e.g. Qi & Kaiser, 2003), some studies (e.g. Carpenter, & Nangle, 2006) also contradict the inverse relationship between social skills and subtypes of ASBs. There is limited evidence regarding the specific relationship of social skills to physically aggressive and non-aggressive ASBs. Therefore, the finding that low social skills also predicted physically aggressive ASBs is a new finding.

Stepwise regression showing sensation seeking and subtypes of empathy as predictors of subtypes of ASBs in the hierarchical regression model controlling for gender, faculty, age, and student status (Table 3, Fourth hypothesis)

Step-wise regression revealed that low emotional reactivity followed by high sensation seeking and low social skills significantly predicted physically aggressive ASBs, but high sensation seeking social skills, gender and emotional reactivity significantly predicted non-aggressive ASBs. The fourth hypothesis that low emotional reactivity and high sensation seeking would be the most significant predictors of physically aggressive non-aggressive ASBs was partially supported because both emotional

reactivity and sensation seeking did not emerge as the strongest predictors of both physically aggressive and non-aggressive ASBs.

Low emotional reactivity emerged as the most significant predictor of physically aggressive ASBs and high sensation seeking emerged as the most significant predictor of non-aggressive ASBs, thus indicating different pathways towards subtypes of physically aggressive and non-aggressive ASB.

Conclusion and Implications

This study demonstrated the competing effects of empathy subtypes (i.e. emotional reactivity, cognitive empathy, and social skills) in predicting physically aggressive (involving direct actual or threatened aggression against living beings) and non-aggressive ASBs (involving indirect actual or threatened aggression against people through stealing or damaging their property, or public rowdiness). All the empathy subtypes were inversely associated with physically aggressive and non-aggressive ASBs. Emotional reactivity was a significant inverse predictor of both ASB subtypes. Social skills emerged as significant inverse predictor of ASB subtypes when both high sensation seeking and low emotional reactivity predicted both ASB subtypes.

Emotional reactivity and sensation seeking emerged as the significant predictors of both ASB subtypes. Low emotional reactivity primarily predicted physically aggressive ASBs and high sensation seeking primarily predicted non-aggressive ASBs thus revealing different pathways towards physically aggressive and non-aggressive ASBs.

This is a novel study because the current classification of physically aggressive and non-aggressive ASBs has not been examined in relation to subtypes of empathy and sensation seeking. Furthermore, this study not only examined the competing effects of subtypes of empathy, but also the competing effects of two opposing socio-affective emotions (i.e. empathy and sensation seeking) in physically aggressive and non-aggressive ASBs among normal educated youth. There has been a lack of research on emotional reactivity as an empathy subtype.

As low emotional reactivity was the main predictor of physically aggressive ASBs and high sensation seeking was the main predictor of non-aggressive ASBs, we might suggest that physically aggressive ASBs are driven by deficient emotions in response to others' pain whereas non-aggressive ASBs are driven by heightened pleasure seeking emotions. Different interventions might be needed for youth involved in physically aggressive and non-aggressive ASBs subtypes. This finding suggests that emotional reactivity, as a form of empathy is necessary to prevent physically aggressive ASBs. The idea of an empathy museum (e.g., Gittins & Vuk, 2014) might enable people to develop emotional reactivity. Through sharing of emotional stories verbally, in the form of pictures, videos, and artifacts, people belonging to different racial, religious, political groups might be able to develop emotional reactivity for each other. Furthermore, emotional empathy training (Erera, 1997) might prevent the frequency of physically aggressive ASBs. On the other hand, sensation-seeking tendencies might be channeled into positive social activities such as challenging as well as rewarding academic and extra curricular activities (Li, Olson, & Frieze, 2013) to prevent non-aggressive ASBs among youth. Zuckerman (2014) suggests that sensation seekers might benefit from marital counseling. Hence this research might help in considering

the development, and testing of interventions designed to tackle these subtypes of ASBs amongst youth.

The current findings may lead towards future studies, which could explore other socio-affective, environmental and neural correlates and causal mechanisms underlying low emotional reactivity and sensation seeking in physically aggressive and non-aggressive ASBs. The variance for non-aggressive ASBs was greater than the variance for physically aggressive ASBs. Given the combined greater variance of sensation seeking, social skills, and gender in non-aggressive ASBs and that gender was a significant predictor of non-aggressive ASBs instead of physically aggressive ASBs, we might surmise that sensation seeking, social skills, and the male gender made a large contribution to non-aggressive ASBs (See Table 3). Males were more likely to engage in ASBs particularly non-aggressive ASBs. Future research might explore gender as a moderator or a correlate of other socio-affective personality traits in relation to physically aggressive and non-aggressive ASB subtypes.

The research would contribute towards understanding of the normal functioning of socio-affective traits in relation to ASBs. Consequently, the research can assist in the development of personality models amongst normal educated youth to predict crimes against living things and crimes against others' possessions.

References

- Aaltola, E. (2014). Affective empathy as core moral agency: Psychopathy, autism and reason revisited. *Philosophical Explorations*, 17(1), 76-92. doi: 10.1080/13869795.2013.825004
- Almeida, P. R., Seixas, M. J., Ferreira-Santos, F., Vieira, J. B., Paiva, T. O., Moreira, P. S., & Costa, P. (2015). Empathic, moral and antisocial outcomes associated with distinct components of psychopathy in healthy individuals: A Triarchic model approach. *Personality and Individual Differences*, 85, 205-211.
- American Psychiatric Association. (2000). American Psychiatric Association (Ed.). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR®*. American Psychiatric Pub.
- Ang, R. P., & Goh, D. H. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry & Human Development*, 41(4), 387-397. doi: 10.1007/s10578-010-0176-3
- Azaiez, F., Alajjouri, M. H. I., Lahmar, S., & Chalghaf, N. (2014). Bigorexia, perfectionism and overtraining among Tunisian team sport players. *International Journal of Humanities and Social Science Invention*, 3(6), 9-16.
- Bachman, R., Dillaway, H., & Lachs, M. S. (1998). Violence against the elderly: A comparative analysis of robbery and assault across age and gender groups. *Research on Aging*, 20(2), 183-198.
- Ball, S. A., Carroll, K. M., & Rounsaville, B. J. (1994). Sensation seeking, substance-abuse, and psychopathology in treatment-seeking and community cocaine abusers. *Journal of Consulting and Clinical Psychology*, 62(5), 1053-1057. doi: 10.1037/0022-006x.62.5.1053
- Ball, I. L., Farnill, D., & Wangeman, J. F. (1984). Sex and age differences in sensation seeking: Some national comparisons. *British Journal of Psychology*, 75(2), 257-265.
- Baron-Cohen, S. & Wheelwright, S. (2004). The Empathy Quotient: An investigation of adults with asperger syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34(2), 163-175. doi: 10.1023/b:jadd.0000022607.19833.00
- Beadle, J. N. (2009). *The neuroanatomical basis of empathy: Is empathy impaired following damage to the ventromedial prefrontal cortex?* (Doctoral thesis). University of Iowa, Iowa, USA. Retrieved from <http://ir.uiowa.edu/etd/781/>
- Berg, K., Blatt, B., Lopreiato, J., Jung, J., Schaeffer, A., Heil, D., Owens, T., Carter-Nolan, P. L., Berg, D., Veloski, J., Darby, E., & Hojat, M.R. (2015). Standardized patient assessment of medical student empathy: Ethnicity and gender effects in a multi-institutional study. *Academic Medicine*, 90(1), 105-111.
- Berthoz, S., Wessa, M., Kedia, G., Wicker, B., & Grèzes, J. (2008). Cross-cultural validation of the empathy quotient in a French-speaking sample. *Canadian Journal of Psychiatry*, 53(7), 469-477.
- Beyers, J. M., Toumbourou, J. W., Catalano, R. F., Arthur, M. W., & Hawkins, J. D. (2004). A cross-national comparison of risk and protective factors for adolescent substance use: The United States and Australia. *Journal of Adolescent Health*, 35(1), 3-16.
- Bons, D., Broek, E., Scheepers, F., Herpers, P., Rommelse, N., & Buitelaar, J. K.

- (2013). Motor, emotional, and cognitive empathy in children and adolescents with autism spectrum disorder and conduct disorder. *Journal of Abnormal Child Psychology*, 41(3), 425-443. doi: 10.1007/s10802-012-9689-5
- Brockmyer, J. F. (2015). Playing violent video games and desensitization to violence. *Child and Adolescent Psychiatric Clinics of North America*, 24(1), 65-77.
- Buck, K. (2013). *Naturally-occurring declines in antisocial behaviours from ages 4 to 12: Relations with parental sensitivity and psychological processes in children*. (Doctoral thesis). The University of Texas at Austin, USA. Retrieved from <http://hdl.handle.net/2152/21736>
- Carpenter, E. M., & Nangle, D. W. (2006). Caught between stages: Relational aggression emerging as a developmental advance in at-risk preschoolers. *Journal of Research in Childhood Education*, 21(2), 177-188.
- Carrasco, M., Barker, E. D., Tremblay, R. E., & Vitaro, F. (2006). Eysenck's personality dimensions as predictors of male adolescent trajectories of physical aggression, theft and vandalism. *Personality and Individual Differences*, 41(7), 1309-1320.
- Charnigo, R., Noar, S. M., Garnett, C., Crosby, R., Palmgreen, P., & Zimmerman, R. S. (2013). Sensation seeking and impulsivity: Combined associations with risky sexual behavior in a large sample of young adults. *Journal of Sex Research*, 50(5), 480-488. doi: 10.1080/00224499.2011.652264
- Chung-Do, J. J., Goebert, D. A., Hamagani, F., Chang, J. Y., & Hishinuma, E. S. (2015, in press). Understanding the role of school connectedness and its association with violent attitudes and behaviors among an ethnically diverse sample of youth. *Journal of Interpersonal Violence*. doi: 10.1177/0886260515588923
- Cui, L., Colasante, T., Malti, T., Ribeaud, D., & Eisner, M. P. (2015). Dual trajectories of reactive and proactive aggression from mid-childhood to early adolescence: Relations to sensation seeking, risk taking, and moral reasoning. *Journal of Abnormal Child Psychology*, 1-13.
- Dadds, M. R., Hawes, D.J., Frost, Aaron D.J., Vassallo, S., Bunn, P., Hunter, K., & Merz, S. (2009). Learning to 'talk the talk': The relationship of psychopathic traits to deficits in empathy across childhood. *Journal of Child Psychology and Psychiatry*, 50(5), 599-606. doi: 10.1111/j.1469-7610.2008.02058.x
- Dahlen, E. R., Martin, R. C., Ragan, K., & Kuhlman, M. M. (2004). Boredom proneness in anger and aggression: Effects of impulsiveness and sensation seeking. *Personality and Individual Differences*, 37(8), 1615-1627. doi: 10.1016/j.paid.2004.02.016
- Dahlen, E. R., Martin, R. C., Ragan, K., & Kuhlman, M. M. (2005). Driving anger, sensation seeking, impulsiveness, and boredom proneness in the prediction of unsafe driving. *Accident Analysis and Prevention*, 37(2), 341-348. doi: 10.1016/j.aap.2004.10.006
- de Kemp, R. A., Overbeek, G., de Wied, M., Engels, R. C., & Scholte, R. H. (2007). Early adolescent empathy, parental support, and antisocial behavior. *The Journal of Genetic Psychology*, 168(1), 5-18. doi: 10.3200/gntp.168.1.5-18
- Demissie, K., Asfaw, S., Abebe, L., & Kiros, G. (2015). Sexual behaviors and associated factors among antiretroviral treatment attendees in Ethiopia. *HIV/AIDS (Auckland, NZ)*, 7, 183.
- Domes, G., Hollerbach, P., Vohs, K., Mokros, A., & Habermeyer, E. (2013). Emotional empathy and psychopathy in offenders: An experimental study. *Journal of Personality Disorders*, 27(1), 67-84. doi:

10.1521/pedi.2013.27.1.67

- Eisenberg, N., Eggum, N. D., & Di Giunta, L. (2010). Empathy-related responding: Associations with prosocial behavior, aggression, and intergroup relations. *Social Issues and Policy Review*, 4(1), 143-180.
- Eme, R. (2013). MAOA and male antisocial behavior: A review. *Aggression and Violent Behavior*, 18(3), 395-398.
- Erera, P. I. (1997). Empathy training for helping professionals: Model and evaluation. *Journal of Social Work Education*, 33(2), 245-260.
- Espelage, D. L., Rose, C. A., & Polanin, J. R. (2015). Social-emotional learning program to reduce bullying, fighting, and victimization among middle school students with disabilities. *Remedial and Special Education*, 36 (5), 299-311. doi: 10.1177/074193251456456
- Feilhauer, J., & Cima, M. (2013). Youth psychopathy: Differential correlates of callous-unemotional traits, narcissism, and impulsivity. *Forensic Science International*, 224(1), 1-7. doi: 10.1016/j.forsciint.2012.10.016
- Gittins, B., & Vuk, J. (2014). The empathy revolution [Book Review]. *Eureka Street*, 24(2), 1.
- Goossens, C. (2000). Tourism information and pleasure motivation. *Annals of Tourism Research*, 27(2), 301-321.
- Gouveia, V. V., Milfont, T. L., Gouveia, R. S., Neto, J. R., & Galvão, L. (2012). Brazilian-Portuguese Empathy Quotient: Evidences of its construct validity and reliability. *The Spanish Journal of Psychology*, 15(02), 777-782. doi: 10.5209/rev_SJOP.2012.v15.n2.38889
- Harden, K. P., Patterson, M. W., Briley, D. A., Engelhardt, L. E., Kretsch, N., Mann, F. D., ... & Tucker-Drob, E. M. (2015, in press). Developmental changes in genetic and environmental influences on rule-breaking and aggression: Age and pubertal development. *Journal of Child Psychology and Psychiatry*, 1-10. doi: 10.1111/jcpp.12419
- Hosker-Field, A. M. (2011). *Psychopathy and aggression: Examining the role of empathy*. (Doctoral dissertation), Brock University, Ontario, Canada. Retrieved from <http://hdl.handle.net/10464/4254>
- Hoyle, R. H., Stephenson, M. T., Palmgreen, P., Lorch, E. P., & Donohew, R. L. (2002). Reliability and validity of a brief measure of sensation seeking. *Personality and Individual Differences*, 32(3), 401-414.
- Ibabe, I., & Bentler, P. M. (2015). The contribution of family relationships to child-to-parent violence. *Journal of Family Violence*, 1-11.
- Janson, U. (1993). Normal and deviant behavior in blind children with ROP. *Acta Ophthalmologica*, 71(S210), 20-26.
- Jolliffe, D., & Farrington, D. P. (2004). Empathy and offending: A systematic review and meta-analysis. *Aggression and Violent Behaviours*, 9(5), 441-476. doi: 10.1016/j.avb.2003.03.001
- Jolliffe, D., & Farrington, D. P. (2006). Examining the relationship between low empathy and bullying. *Aggressive Behavior*, 32(6), 540-550. doi: 10.1002/ab.20154
- Jolliffe, D., & Farrington, D. P. (2007). Examining the relationship between low empathy and self-reported offending. *Legal and Criminological Psychology*, 12, 265-286. doi: 10.1348/135532506X147413
- Jolliffe, D., & Farrington, D. P. (2011). Is low empathy related to bullying after controlling for individual and social background variables? *Journal of Adolescence*, 34(1), 59-71. doi:

- <http://dx.doi.org/10.1016/j.adolescence.2010.02.001>
- Jones, A. P., Happé, F. G., Gilbert, F., Burnett, S., & Viding, E. (2010). Feeling, caring, knowing: Different types of empathy deficit in boys with psychopathic tendencies and autism spectrum disorder. *Journal of Child Psychology and Psychiatry*, 51(11), 1188-1197. doi: 10.1111/j.1469-7610.2010.02280.x
- Kamaluddin, M. R., Shariff, N. S., Othman, A., Ismail, K., & Mat Saat, G. A. (2015, in press). Linking psychological traits with criminal behaviour: A review. *ASEAN Journal of Psychiatry*, 16(2). Retrieved from <http://aseanjournalofpsychiatry.org/index.php/aseanjournalofpsychiatry/article/view/269>
- Kokkinos, C.M., Antoniadou, N., & Markos, A. (2014). Cyber-bullying: An investigation of the psychological profile of university student participants. *Journal of Applied Developmental Psychology*, 35(3), 204 - 214. doi: <http://dx.doi.org/10.1016/j.appdev.2014.04.001>
- Lawrence, E. J., Shaw, P., Baker, D., Baron-Cohen, S., & David, A. S. (2004). Measuring empathy: Reliability and validity of the Empathy Quotient. *Psychological Medicine*, 34(5), 911-919. doi: 10.1017/s0033291703001624
- Li, M., Olson, J. E., & Frieze, I. H. (2013, Fall). Students' study abroad plans: The influence of motivational and personality factors. *Frontiers: The Interdisciplinary Journal of Study Abroad*, XXIII, 73-89. Retrieved from <http://www.frontiersjournal.com/documents/FrontiersXXIII-Fall2013LIOLSENFRIEZE.pdf>
- Lonigro, A., Laghi, F., Baiocco, R., & Baumgartner, E. (2014). Mind reading skills and empathy: Evidence for nice and nasty ToM behaviours in school-aged children. *Journal of Child and Family Studies*, 23(3), 581-590. doi: 10.1007/s10826-013-9722-5
- Lunsford, L. M. (2014). *Female Relational Aggression: A Case Study Investigation of the Transitioning Out Process*. (Doctoral dissertation), Liberty University, Virginia, United States. Retrieved from <http://digitalcommons.liberty.edu/doctoral/867/>
- Martin, S. M., Smith, F., & Quirk, S. W. (2015). Discriminating coercive from sadomasochistic sexuality. *Archives of Sexual Behaviours*, 1-11. doi:10.1007/s10508-015-0595-0
- Maurage, P., Grynberg, D., Noel, X., Joassin, F., Philippot, P., Hanak, C., . . . Campanella, S. (2011). Dissociation between affective and cognitive empathy in alcoholism: A specific deficit for the emotional dimension. *Alcoholism-Clinical and Experimental Research*, 35(9), 1662-1668. doi: 10.1111/j.1530-0277.2011.01512.x
- Mayberry, M. L., & Espelage, D. L. (2007). Associations among empathy, social competence, & reactive/proactive aggression subtypes. *Journal of Youth and Adolescence*, 36(6), 787-798. doi: 10.1007/s10964-006-9113-y
- McTernan, M., Love, P., & Rettinger, D. (2014). The Influence of Personality on the Decision to Cheat. *Ethics & Behaviours*, 24(1), 53-72. doi: 10.1080/10508422.2013.819783
- Menegazzo, J. S., Cruz-Ortiz, V., Ortega-Maldonado, A., & Salanova, M. (2015). Positive institutions and their relationship with transformational leadership, empathy and team performance. *Multidisciplinary Journal for Education, Social and Technological Sciences*, 2(2), 38-64.

- Milojević, S. Z., & Dimitrijevic, A. (2014). Empathic capacity of delinquent convicted minors. *Psihologija*, 47(1), 65-79. Retrieved from <http://aseestant.ceon.rs/index.php/psi/article/view/3454>
- Muncer, S.J., & Ling, J. (2006). Psychometric analysis of the empathy quotient (EQ) scale. *Personality and Individual Differences*, 40(6), 1111-1119. doi: <http://dx.doi.org/10.1016/j.paid.2005.09.020>
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Jama*, 285(16), 2094-2100.
- Nower, L., Derevensky, J. L., & Gupta, R. (2004). The relationship of impulsivity, sensation seeking, coping, and substance use in youth gamblers. *Psychology of Addictive Behaviours*, 18(1), 49-55. doi: 10.1037/0893-164x.18.1.49
- O'Handley, R. D., Radley, K. C., & Cavell, H. J. (2015). Utilization of superheroes social skills to reduce disruptive and aggressive behavior. *Preventing School Failure: Alternative Education for Children and Youth*, 1-9. doi: 10.1080/1045988X.2015.1038775
- Pouw, L. B., Rieffe, C., Oosterveld, P., Huskens, B., & Stockmann, L. (2013). Reactive/proactive aggression and affective/cognitive empathy in children with ASD. *Research in Developmental Disabilities*, 34(4), 1256-1266. doi: 10.1016/j.ridd.2012.12.022
- Pursoo, T. (2013). *Predicting Reactive and Proactive Relational Aggression in Early Adolescence as a Function of Individual Differences in Machiavellianism, Empathy, and Emotion Regulation* (Doctoral dissertation), University of Ottawa, Ottawa, Canada.
- Qi, C. H., & Kaiser, A. P. (2003). Behavior problems of preschool children from low-income families review of the literature. *Topics in Early Childhood Special Education*, 23(4), 188-216.
- Reid, R. C., Berlin, H. A., & Kingston, D. A. (2015). Sexual impulsivity in hypersexual men. *Current Behavioral Neuroscience Reports*, 2(1), 1-8.
- Rezayi, S. (2014). Sensation seeking and social skills in children with autism disorder and down-syndrome. *Practice in Clinical Psychology*, 2(2), 112-117.
- Roeser, R. W., & Eccles, J. S. (2015). Mindfulness and compassion in human development: Introduction to the special section. *Developmental Psychology*, 51(1), 1.
- Romero-Canyas, R., & Downey, G. (2013). What I see when I think it's about me: people low in rejection-sensitivity downplay cues of rejection in self-relevant interpersonal situations. *Emotion*, 13(1), 104-117. doi: 10.1037/a0029786
- Rosenthal, D. A., Russell, J., & Thomson, G. (2007). Social connectedness among international students at an Australian university. *Social Indicators Research*, 84(1), 71-82.
- Rowe, R., Maughan, B., Worthman, C. M., Costello, E. J., & Angold, A. (2004). Testosterone, antisocial behavior, and social dominance in boys: Pubertal development and biosocial interaction. *Biological Psychiatry*, 55(5), 546-552. doi: 10.1016/j.biopsych.2003.10.010
- Santesso, D. L., & Segalowitz, S. J. (2009). The error-related negativity is related to risk taking and empathy in young men. *Psychophysiology*, 46(1), 143-152.
- Schultze-Krumbholz, A., & Scheithauer, H. (2015). Cyberbullying. In T.P. Gullotta et. al. (Eds.), *Handbook of adolescent behavioral problems: Evidence-based approaches to prevention and treatment* (pp. 415-428). New York, NY: Springer.

- Shechtman, Z. (2002). Cognitive and affective empathy in aggressive boys: Implications for counseling. *International Journal for the Advancement of Counselling*, 24(4), 211-222.
- Shukla, P., & Pradhan, M. (2015). Risk beliefs and sensation seeking as correlate of HIV risk behaviour across gender and locale. *Indian Journal of Health and Wellbeing*, 6(6), 541.
- Shulman, E. P., Harden, K. P., Chein, J. M., & Steinberg, L. (2015). Sex differences in the developmental trajectories of impulse control and sensation-seeking from early adolescence to early adulthood. *Journal of Youth and Adolescence*, 44(1), 1-17.
- Sijtsema, J. J., Veenstra, R., Lindenberg, S., van Roon, A. M., Verhulst, F. C., Ormel, J., & Riese, H. (2010). Mediation of sensation seeking and behavioral inhibition on the relationship between heart rate and antisocial behaviours: The TRAILS study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(5), 493-502.
- Silmere, H. (2008). *Psychosocial risk and protective factors for adolescent problem drinking in Estonia*. (Doctoral Dissertation). Saint Louis, Missouri, Midwestern United States: ProQuest LLC.
- Smith, D. J., & McVie, S. (2003). Theory and method in the Edinburgh study of youth transitions and crime. *British Journal of Criminology*, 43(1), 169-195. doi: 10.1093/bjc/43.1.169
- Taubner, S., White, L. O., Zimmermann, J., Fonagy, P., & Nolte, T. (2013). Attachment-related mentalization moderates the relationship between psychopathic traits and proactive aggression in adolescence. *Journal of Abnormal Child Psychology*, 41(6), 929-938.
- Thompson, K. L., & Gullone, E. (2008). Prosocial and antisocial behaviors in adolescents: An investigation into associations with attachment and empathy. *Anthrozoös*, 21(2), 123-137. doi: 10.2752/175303708x305774
- Ttofi, M. M., Bowes, L., Farrington, D. P., & Lösel, F. (2014). Protective factors interrupting the continuity from school bullying to later internalizing and externalizing problems: A systematic review of prospective longitudinal studies. *Journal of School Violence*, 13(1), 5-38. doi: 10.1080/15388220.2013.857345
- van Heerebeek, E. C. M. (2010). *The Relationship between cognitive and affective empathy and indirect and direct aggression in dutch adolescents*. (Masters thesis). Utrecht University, Utrecht, Netherlands. Retrieved from <http://dspace.library.uu.nl/handle/1874/188513>
- Van Langen, M. A., Wissink, I. B., Van Vugt, E. S., Van der Stouwe, T., & Stams, G. J. J. M. (2014). The relation between empathy and offending: A meta-analysis. *Aggression and Violent Behavior*, 19(2), 179-189. doi: <http://dx.doi.org/10.1016/j.avb.2014.02.003>
- van Leeuwen, N., Rodgers, R. F., Gibbs, J. C., & Chabrol, H. (2014). Callous-unemotional traits and antisocial behavior among adolescents: The role of self-serving cognitions. *Journal of Abnormal Child Psychology*, 42(2), 229-237.
- Viding, E., Simmonds, E., Petrides, K. V., & Frederickson, N. (2009). The contribution of callous-unemotional traits and conduct problems to bullying in early adolescence. *Journal of Child Psychology and Psychiatry*, 50(4), 471-481.
- Vitaro, F., Brendgen, M., & Barker, E. D. (2006). Subtypes of aggressive behaviours: A developmental perspective. *International Journal of Behavioral*

- Development*, 30(1), 12-19. doi: 10.1177/0165025406059968
- Xu, Y., Raine, A., Yu, L., & Krieg, A. (2014). Resting heart rate, vagal tone, and reactive and proactive aggression in Chinese children. *Journal of Abnormal Child Psychology*, 42(3), 501-514. doi: 10.1007/s10802-013-9792-2
- Yeo, L. S., Ang, R. P., Loh, S., Fu, K. J., & Karre, J. K. (2011). The role of affective and cognitive empathy in physical, verbal, and indirect aggression of a Singaporean sample of boys. *The Journal of Psychology*, 145(4), 313-330.
- Zheng, Y., Tan, F., Xu, J., Chang, Y., Zhang, Y., & Shen, H. (2015). Diminished P300 to physical risk in sensation seeking. *Biological Psychology*, 107, 44-51.
- Zuckerman, M. (2014). Experience: Sex, drugs, alcohol, smoking and eating. In *Sensation Seeking (Psychology Revivals): Beyond the Optimal Level of Arousal* (p. 296). London and New York: Psychology Press.
- Zuckerman, M., Eysenck, S. B., & Eysenck, H. J. (1978). Sensation seeking in England and America: Cross-cultural, age, and sex comparisons. *Journal of Consulting and Clinical Psychology*, 46(1), 139.

Acknowledgements: Association of Commonwealth Universities

Contact Saima Eman: saima.eman@sheffield.ac.uk

Living with Suffering: Buddhist Wisdom Illustrated by a Widow

Fung Kei Cheng

Hong Kong

Abstract

Available literature, largely based on Western theories, investigates suffering from spousal loss, which can threaten an individual's physical health and psychological well-being; however, limited studies examine how Buddhists overcome this difficulty. This case study, by in-depth semi-structured interviews, explores the lived experience of a Buddhist surviving spouse who underwent the sudden loss of her husband. Qualitative data were analysed by interpretative phenomenological analysis, with the aid of ATLAS.ti 7, a software package. In order to enhance the trustworthiness, peer analysis (inter-rater reliability=92%) and member-checking were adopted. Findings revealed that the bereaved Buddhist was living with feelings of guilt, but when she applied Buddhist wisdom, including the teachings of impermanence and cause-and-effect, hopes of a reunion in future lives due to the cycle of birth and death, living in the present moment, self-awareness, and strengthening capabilities to deal with afflictions, this widow could let the sense of guilt peacefully coexist with her being. Her living with suffering hints at tackling distress through a deeper understanding of the formation of the phenomenal world, and mind management, implying that Buddhist philosophy not only offers alternative views to interpret the continual relationship between survivors and the deceased, but also inspires helping professionals to extend the horizons of their therapeutic services.

Keywords: cause-and-effect, cycle of death and rebirth, grief and bereavement, impermanence, karma, **Mahāyāna**, spousal loss

Introduction

Grief, caused by the indelible loss of a beloved one, and indicating a permanent “loss of relationship” (Nesse, 2005, p. 202), is one of the life’s major difficulties (Büchi et al., 2007; Malkinson, 2010), in particular, sudden spousal loss (Kübler-Ross & Kessler, 2005; Khosravan, Salehi, Ahmadi, Sharif, & Zamani, 2010). The death of a spouse is rated as the highest stressful life event (Holmes & Rahe, 1967), yielding disruptive impacts on physical health (Eisma, 2015; Ong, Fuller-Rowell, Bonanno, & Almeida, 2011), and it is accompanied by various levels of emotional disorder symptoms (Bowlby, 1980; Chan et al., 2012; Chan et al., 2011; Hensley & Clayton, 2013; Iglewicz, Seay, Vigeant, Jouhal, & Zisook, 2013; Karam, Tabet, & Itani, 2013; Pies, 2013); for instance, anxiety and depression, especially in the female population (DiGiacomo, Lewis, Nolan, Phillips, & Davidson, 2013; Mohamed, Elati, & Zaki, 2015), whose daily functions are affected (Lund, Caserta, Utz, & De Vries, 2010; Richardson, 2010; Shear, 2015).

Although grief and mourning vary from person to person (Hensley, 2008), these bereaved individuals usually undergo four phases of mourning (Bowlby, 1980): numbness, searching for the deceased, disorganisation, and re-organisation in order to cope with this adversity by “reducing, mastering, and tolerating” (Stroebe, 2010, p. 274) the loss, thus achieving healthy mourning (Hoppes & Segal, 2010). Grief, as part of the healing process (Cholette & Gephart, 2012), engenders disparate psychological reactions, including making sense of the loss (Neimeyer, 2000), personal growth (Carnelley, Wortman, Bolger, & Burke, 2006; Yalom & Lieberman, 1991), feelings of guilt, and continuing bonds with the deceased (Malkinson, 2010).

Forming a continuing bond (Bowlby, 1980) in order to maintain an engaged relationship for any “unfinished business” (Kübler-Ross, 1997, p. 187) following the death of a beloved one (Small, 2001) accents a coping strategy of mourning (Baker, 2001) to accept the reality of the loss (Ronen et al., 2009), and its “adaptiveness” (Field, Gal-Oz, & Bonanno, 2003, p. 111). However, there is an ongoing debate about continuing or relinquishing such bonds (Stroebe, Schut, & Stroebe, 2005), which is associated with the process and strategy of tackling loss, coping styles (Stroebe, 2010), values, and cultural influences (Ronen et al., 2009).

Religion, a method of healing wounds (Kübler-Ross, 1974; Ozorak, 1996) and reflecting cultural values, offers solace to individuals who suffer from trauma (Seirmarco et al., 2011). This helps to attain better psychological adjustment (Ross, Handal, Clark, & Wal, 2009), in particular, bereavement rituals (Nwalutu, 2012) benefiting “restoration of functioning” (Shear, 2010, p. 358). While voluminous studies investigate how to deal with bereavement in Western religions, such as Coleman, Ivani-Chalian, and Robinson (2004) for the aged, Flatt (1988) for

grief counselling, and Pond (2012) for children, there is insufficient research from the perspective of Eastern religions such as Buddhism which may have a different view on this issue.

Buddhists possess emotions of grief (Kübler-Ross, 1981) such as guilt, regret, and anger, and these can be caused by unresolved issues between the deceased and the survivor (Goss & Klass, 1997), for which caring practitioners have started studying grief and bereavement counselling based on Buddhist resources, involving Japanese, Tibetan, and early Buddhism. Despite the psychological interaction in which the survivor and the deceased hold a symmetrical power through which to benefit or hurt each other (Klass & Goss, 1999), continuing the relationship between the bereaved and the deceased remains a critically cultural concern among the Japanese, as many of their customs are rooted in Buddhism (Bowman & Richard, 2003; Klass, 2001; McConnell, 1999). Moreover, ritual healing (Kwan, 2007) as one of the major tasks of Buddhist priests (Kawamura, 2000; Nakasone, 2000) (for instance, funeral and ancestor rituals) (Klass, 1996) is connected to blessing the deceased and leading the dead to a positive next life. In contrast, Tibetan Buddhism aims to transcend grief (Goss & Klass, 1997), and “deconstruct egocentric grasping” (Goss & Klass, 1997, p. 392) for self-soothing.

By comparing Buddhist psychology, and applying it to grief counselling in Western models, aided by a case illustration and a reflection on group intervention, one study discussed the concept of non-dualism (Kaori & Park, 2009) which might potentially be integrated into grief counselling. Additionally, Chen (2000) formulates a grief counselling model, supported by a passage about spousal loss in *Āgama*, one of the important collections of Theravāda, a Buddhist denomination. The model involves bereavement events, reactions of grief, the counselling process, and effectiveness, as explained by the four noble truths: suffering, cause of suffering, ceasing of suffering, and path of ceasing of suffering respectively. Although this attempt provides an alternative discussion for grief counselling, its focus on textual analysis restricts it to a literary theoretical discourse, without support from personal narratives of the bereaved.

Since Buddhism is one of the three embedded religious faiths among the Chinese (Neuberger, 2005), further investigations into how Chinese Buddhists expunge misery towards the death of a beloved one potentially contribute to the Chinese culture, influencing a large population. The current research explores how a Chinese Buddhist relieved the feelings of guilt through Buddhist principles during the bereavement of spousal loss. This has helped the informant to be able to live with the distress, which may inspire diverse views for caring professionals who deal with clients affected by grief and bereavement to consider.

Research Design

This exploratory research was approved by the Human Research Ethics Committee for Non-

Clinical Faculties, The University of Hong Kong. It adopts a single case study, an empirical inquiry (Yin, 1989), which examines real life (Soy, 1997) through a microscopic lens (Hamel, Dufour, & Fortin, 1993), and achieves insight (Yin, 2003) through relatively new topics (Eisenhardt, 1989; Nithsdale, Davies, & Croucher, 2008; Tellis, 1997; Tsoukas, 1989). The participant, Pureté de Lotus (her dharma name), being recruited through electronic mail, fulfilled the selection criteria, which included the following: first, she is a Buddhist; second, she is a bereaved survivor; and lastly, she was emotionally stable during the interview process.

In this case study, semi-structured, in-depth interviews were conducted in Hong Kong and recorded digitally. The verbatim transcriptions were analysed using interpretative phenomenological analysis that explores the “sense of self” (Shinebourne & Smith, 2009, p. 164), subjective feelings and meaning of life of the insider (Clare, Rowlands, Bruce, Surr, & Downs, 2008; Jackson & Coyle, 2009; Smith, 1996). The analysis process was aided by ATLAS.ti 7, a computer-assisted programme. In order to enhance the research rigour, this study adopted member-checking to ensure the accuracy of transcriptions and data interpretation through an analysis map, and a co-analysis by two analysts (the principle researcher and a peer analyst) coding separately and comparing the coding results, with a inter-rater reliability of 92%. One “super-ordinate theme” (Smith, Flowers, & Larkin, 2009, p. 107) (“living with suffering”) emerged from five “emergent themes” (Smith et al., 2009, p. 91) (easing feelings of guilt, thought transformation towards life and death, mourning rites, living in the present moment and self-awareness, and developing capabilities).

Findings and Discussion: Living with Suffering

The Bereaved Buddhist

Pureté de Lotus (hereafter simply referred to as Lotus), a Chinese middle-aged social worker, has been living in Hong Kong since her husband passed away. She met her husband on a European tour, and after she married she stayed in France more than 10 years. Enjoying a simple life there, she was eager to develop her spirituality and returned to Hong Kong study Buddhism, something her husband also encouraged her to do. The couple stipulated a gradual moving arrangement, in which Lotus went to Hong Kong first and her husband would follow, taking a sabbatical leave to join her later. Lotus settled down smoothly and delighted in her studies until one day in 2009 when she received a message about her husband’s sickness. She immediately returned to France but found her husband doing well. This made her husband agree to her leaving after a few days. However, she subsequently received heart breaking news about her husband’s sudden death (due to latent aetiology) after returning to Hong Kong.

Lotus heavily blamed herself for missing her chance to be with her husband in his last days, implicating herself in not keeping her marriage vow to look after him. This made her feel

depressed, regretful, and guilty (Kübler-Ross & Kessler, 2005). Since she continued her Buddhist studies, Lotus prudently managed her guilty feelings in trying to live with suffering throughout the phases of her grief and bereavement. Being a Buddhist, she invoked such insightful reactions towards her pain and regret by using Buddhist teachings along with her coping strategies.

Buddhism

Buddhism was developed in India (Suzuki, 1938/1981b) 2,500 years ago by the Buddha, which title refers to an enlightened person (Gethin, 1998). Its aim is annihilating distress (Conze, 1953), called perfect stillness, and attaining inner happiness. **Mahāyāna, one of the contemporary mainstreams of Buddhism, expounds on the suffering yielded by misperception of the phenomenal world, and on freedom of affliction through mind management (Suzuki, 1938/1981a).** Mahāyāna doctrines elicit that sentient beings have to manage their emotional reactions (the metaphorical illness) towards life's challenges; collectively termed attachment and vexations (Ng, 1994), from which they transfer challenges as such to the assets of helping other people. Challenges are neutral, but uncontrollable and non-autonomous. However, sentient beings can manipulate only their emotional and psychological responses; therefore, they should not insistently try to alter their challenges, which more heavily aggravate the frustrations they experience. Instead, they should calmly see reality as it is and find ways to experience challenges positively, resulting in self transformation. Lotus underwent this process incurred through her spousal loss, as detailed below.

Living with Suffering

The metaphoric illness for Lotus refers to her emotional responses towards feelings of guilt and grief, for which she adopted the strategies of easing her feelings of guilt, thought transformation towards life and death, mourning rites, the here-and-now, and personal development. Inspired by Buddhist teachings, such as impermanence, and cause-and-effect, Lotus was able to prevail over her “illness” in a relaxed manner, by transforming her thoughts, and continuing the relationship with her late husband spiritually through mourning rites, remarking an achievement of “meaning management” (Wong, 2008, p. 66).

Easing feelings of guilt. Loss and guilty feelings always intertwine (Lamb, 1988), but guilt implicitly accepts a personal responsibility for the misfortune (Doosje & Branscombe, 1998). Lotus felt a compunction about not fulfilling her wedding pledge to stay beside her late husband when he was sick. Her absence in the last phase of his life insinuated a personal failure in loving him, and became unfinished business that she could never complete. During that time, she was unable to look after herself.

Time goes by but the hurt continues. Lotus was unwilling to return to the institute where she studied Buddhism because the place marked a mental scar underscoring the loss of her beloved husband. Within those years, her guilty feelings occasionally attacked her, provoking painful regrets. Instead of avoiding the pain (Shear, 2010), she faced the bereavement, accepted “the reality of the loss” (Carr & Jeffreys, 2011, p. 87), and frankly admitted her persistent feelings of guilt, revealing:

“[The feelings of guilt] doesn’t increase. It may have reduced a little, at least I feel so. [It] will appear, occasionally. But, ... I won’t deliberately let the feelings of guilt disappear. It’s still there. But, I can’t say it isn’t here, or lie to myself. ... I won’t feel guilty to the extent of committing suicide. ... But, I can’t say I don’t have [the guilty feelings], ...”

Lotus had not considered whether or not she could remove her feelings of guilt, but had instead learned to live with it (de Silva, 2012), coexisting with imperfection. Her disregard for negative emotions towards her guilt pulled her to re-develop herself, but this did not interrupt her daily life. Even though her feelings of guilt sometimes arose, for which she would cry and feel upset, she accepted this wound as part of her life, which drove her to manage herself better.

“I also can let go gradually. Perhaps, [I] can’t ever let it go, then I don’t let it go. ... It (the feelings of guilt) doesn’t hinder my life. You sometimes think a little bit, will feel, really not good, cry a little bit. Then, you feel this is part of your life. You temporarily let it be. I think I don’t know how to let go. This is true. ... Even I say I have to let it go, but you still feel something is not good. There is still a scar. ... Perhaps, it is difficult to ask myself not to feel guilty when [I] feel guilty. Therefore, it is better to do something positive.”

Her acceptance of these guilty feelings made Lotus reduce her resistance to face the distress. When she admitted her misfortune, she was able to manage the feelings, which released her from the emotional reactions towards her guilt through Buddhist wisdom. The reasons for this achievement were related to thought transformation and emotional ventilation through mourning rites.

Thought transformation towards life and death. Having experienced her spousal loss, Lotus viewed life and death differently based on Buddhist philosophy, such as impermanence, and cause-and-effect, through which she could cope with bereavement.

Life is impermanent, and powerlessly controlled (Long, 1975), for which Lotus had a strong feeling of uncertainty, which explains that all beings are transient and temporal, including herself. She realised her non-autonomy. Despite capriciousness occurring across life that

never be predicted, Lotus learned to attain an ordinary mindset in order to accept the consequences as long as she had done her utmost to carry out her own plans. Hence, she was worry-free and lived with success and failure, or gratification and frustration.

Furthermore, Lotus interpreted her situation as being that her marriage had originated from her previous lives in which her husband owed her and thus loved her in this life for compensation, or vice versa, eliciting her understanding of cause-and-effect and the cycle of death and rebirth:

“[It] may be a previous cause. ... This is the cycle of cause-and-effect. Maybe, he did something bad to me in the past, and so I do something bad to him now. ... Perhaps, he owed me in our previous lives, and so he had to repay me in this life. [He] owed me something. This is the mutual benefit between cause and effect. ... Was it that he treated me badly in the past, or I treated him badly? What was it like to be bad or not bad?”

Lotus also perceived cause-and-effect as an opportunity in which the loss prepared them for their reunion in a future life (Conant, 1996) caused by the cycle of death and rebirth, which energised her to look after herself and do something good for her late husband in order to take advantage of this opportunity, accounting for it like this:

“Perhaps, it’s paving a path and planting a cause for the next life. I need to do more for him in my next life. ... I think I need to cultivate some good causes. ... I hope to plant more positive seeds, and hope that they will help us meet in the future. That is, we believe we have future lives, the cycle of birth and death, recycling. I also hope to meet him.”

These notions of interdependence and inter-affinity reveal that life and death are unnecessarily antagonistic but may hint at something ahead. With insight into the unity of life and death (death is the inception of the next life), Lotus gradually alleviated her grief and optimistically began creating favourable conditions for her desire to meet her husband again in a future life, relating:

“Accepting the interconnection of life and death ... [There is] no coming, no going. Which is the cause? Which is the consequence? That is, they are intertwined. I won’t grieve so much for my husband’s leaving. Perhaps, there is a cause missing somewhere. Another factor will create better conditions elsewhere.”

Lotus positively interpreted impermanence and cause-and-effect, according to the Buddhist connotations, embracing the opportunities to continue their marriage in a future life striving to take care of herself better.

Mourning rites. Mourning rites offer mourners the opportunity to alleviate complex emotions after the loss of a loved one and then reintegrate into the community (Bowker, 1997). Using a variety of “mourning aids” (Weinbach, 1989, p. 58), Lotus sensed her inner feelings related to continuing her bonds with the deceased through this ritualistic performance (Aguilar & Wood, 1976). She treasured a spiritual connection with her late husband more than the physical liaison, valuing that spiritual connection as long-lasting without geographical constraints, thus delineating:

“Our relationship also has its beautiful side. It’s also perfectly halted at an appropriate time. I’m not saying it’s an end. We stopped at some point in time, and I also feel there is still a certain spiritual connection between us. That is, apart from love, the connection is spiritual.”

The spiritual connection was realised through tracing her late husband’s past experiences with which Lotus might not be as familiar. She returned to France and visited places her husband had been to before in order to retrieve sweet memories, retain an impression of the days in which they had been united, and discover all his old stories that were new to her, as if she were in fact following him, recalling:

“We were married for a long time. We were united as one. Splitting up needs time. Recently, for the stories he told me, I paid a visit, browsed in Paris. This left me with a deep impression. ... I felt I wanted to trace his footprints ... It was some very romantic feeling – that I could fall in love with him again. ... I tried to know him again, locate his footprints. ... So I then went to places he had visited. Would he have left any revelation for me?”

Also, Lotus shared her mourning rites with her husband’s friends by gathering them to practise Tai-chi in front of his picture, displaying his friends’ works of photography, and joining a marathon, illustrating that the more open she was to the memories, the greater opportunities she had to deal with grief and bereavement (Rubin, 1998). This not only showed respect to the deceased, but also converted Lotus’s sorrow into energy; and more importantly, touched him spiritually as she could subjectively feel.

Although Lotus kept her husband’s effects for a long period of time, the possession of them maintained memories about them as a couple (Kübler-Ross & Kessler, 2005), and she finally decided to dispose of them. This process was a ritual for her, in which she struggled with the decision to burn these items. It marked an ambivalence towards spiritual and physical connections that she grasped, remembering:

“This year, I eventually burnt his stuff. ... [I brought] his old stuff to a friend’s house

to burn it. ... Reluctant, reluctant! When burning, [I] felt this one piece can't be burnt, so [I] kept it again. It would be pity if it were burnt! ... It is also a small ritual. I feel it's good for him and me, [because of which he would have a good next life]."

Instead of being encapsulated in a "trauma membrane" (Catherall, 1986, p. 474) to avoid painful memories of the traumatic event, Lotus combated her vulnerability and transformed grief into motivation (Goss & Klass, 1997; Park & Halifax, 2011), resulting in enrichment of her life through adversities by living in the present moments and self-awareness, and by developing other capabilities. This transformation stemmed from her knowing self loving-kindness, by which she experienced Buddhist wisdom in theory, practice, and spirituality, bearing witness that religion contributes to self transformation (Ullman, 1989). She affirmed that:

"Buddhism helps me. ... I think it's a search for spiritual soothing, a search for spirituality."

Living in the present moment and self-awareness. Lotus, as a Buddhist devotee, realised the essence of Buddhist wisdom, in particular, the here-and-now, and self-awareness. Concentrating on the present moment, she neither binged on remembering her husband and the loss, nor felt anxious about her single life. Through this practice, she was able to understand impermanence more deeply, including the uncontainable reality, through which understanding she reduced her grief, and the complaints regarding her doleful experience. In addition, she strengthened her sensitivity to her emotional changes and psychological needs. Thus, she did not deny her vulnerability, but instead overcame her sense of helplessness by taking on deep breathing, chanting, reciting canons, or imaging a bodhisattva (a person who is dedicated her/himself to altruism), reiterating that:

"Learning Buddhism is to live in the present moment, to rely on oneself, to have one's own awareness. ... Sometimes I feel upset because our (she and her late husband) relationship was very good. ... When [I] am sad, I will breathe, take deep breaths, and leave sadness to the present moment. This helps me to release the pressure. ... But in helpless situations, you still need to ... chant scriptures. Sometimes, this helps a little bit. ... I recite the Heart Sutra. Do these things. Bring Kuan-yin (a bodhisattva) to mind. This is also enhancement, protection."

Developing capabilities. Lotus, as if she had been reborn through "lessons of loss" (Neimeyer, 2002, p. 940), became stronger in coping with her bereavement as well as more independent. She had to rely on herself, declaring that this loss brought her to re-develop her capability of coping with difficulties, looking after herself, and attempting new things (Bennett, Gibbons, & Suzanna, 2010), for example, riding a bicycle – something she did not know how to do before.

A significant reason for her happiness is the good journey she anticipated towards her late husband's next life (Goss & Klass, 1997):

“In the past, I relied on my husband. But now I can't rely on him, and I find someone else or myself to rely on. ... Death has brought me a lot. For instance, it has made me learn some new skills. For example, at that time, I regretted not riding a bicycle with him. ... But now I can ride a bicycle in down town, ride a mountain bike, and try many new things ...”

Advancing greater personal growth after loss and traumatic distress (Davis & McKearney, 2003; Harms & Talbot, 2007; Joseph, 2009; Pals & McAdams, 2004), often termed post-traumatic growth (Currier, Mallot, Martinez, Sandy, & Neimeyer, 2013; Tallman, Shaw, Schultz, & Altmaier, 2010), particularly in women (Büchi et al., 2009), Lotus treasured suffering and impermanence (Goss & Klass, 1997), from which she felt enlightened, attaining life meaning (Carr & Jeffreys, 2011; Goss & Klass, 1997; Katz, 2001) and consequently “resolving grief [which starts] by accepting the reality of grief” (Goss & Klass, 1997, p. 387).

Practical Implications

This case study reveals four practical implications, involving non-dualism, religious coping, reunion in a future life, and limitations and future research directions.

Non-Dualism

Dualism is a habitual thought model for sentient beings, forming either/or patterns (Cheng, 2014c); for instance, the choice to accept/reject, which compels individuals to struggle with the two extremes, thereby creating resistance, disapproval, and the tension of choosing correctly. This pressure invokes anxiety that negatively impacts mental health, especially for survivors who have experienced the loss of a loved one.

In spite of assuaging grief over time (Rubin & Schechter, 1995), working through distress is difficult (Schick, 2011). Psychological, family, and social support for the bereaved are indispensable (Carr, 2010; Davies, 2011) during this process of change (Yalom & Sophia, 1988). However, a continuing relationship with the dead is always desirable to the survivor, which may really disrupt the daily functioning of the bereaved for a longer period of time. Renouncing the “relocation of the deceased” (Stroebe et al., 2005, p. 62) is therefore proposed, through loosening the bonds in order to reduce grief while maintaining the continuation psychologically. In contrast, encouraging the bereaved to “construct new biographies of the living and the dead” (Klass & Goss, 1999, p. 552) enables the survivor to clarify hesitations (Kaplan, 2014), enrich the meaning of his/her future life (Field et al., 2003) and transform grief

into self autonomy and personal growth (Field, 2010; Khosravan et al., 2010).

In the context of the above debate, this study addresses an alternative, that is, the idea of neither intentionally maintaining nor surrendering the bonds between the bereaved and the deceased (Kaori & Park, 2009), thus relinquishing this dualistic choice (Wright, 2012). When Lotus surrendered the choice between “guilt-proneness” (Flynn & Schaumberg, 2012, p. 125) and guilt avoidance, she overcame her emotional responses to the misfortune, and learned to live with her regret. This leaves another option for counsellors who deal with clients struggling with self-blame.

Religious Coping

Previous studies indicate a positive correlation between religious coping and trauma (Gerber, Boals, & Schuettler, 2011), and mental health (Behere, Das, Yadav, & Behere, 2013; Kvande, Klöckner, Moksnes, & Espnes, 2015). However, religious coping does not necessarily present a lot of rituals, usually utilising only the funeral ceremony. Instead, personal artefacts (Riches & Dawson, 1998) and the continuation of their common social networks are also emotional props, from which Lotus re-gained a “romanticism” (Katz, 2001, p. 272) and created spiritual companionship (Baker, 2001). This study raises a cultural concern (Koca-Atabey & Öner-Özkan, 2014) and reports a variety of religious coping strategies originating from the social activities and personal interests of the deceased, also offering references for bereavement counselling.

Reunion in a Future Life

Hope substantiates victims to live on (Kübler-Ross, 1969). The hope of reunion in a future life was the result of Lotus’s “optimistic explanatory style for negative events” (Ho, Chu, & Yu, 2008, p. 473) through the teachings of impermanence, cause-and-effect, and the cycle of death and rebirth (Cheng, 2015b), so that she accepted her husband’s passing away, and learned to enjoy the present moment (Fawcett, 2013) with self-loving-kindness. This significant idea from the survivor dimension urges counsellors not only to non-judgementally listen to their clients (Wang, 2007) but also to facilitate them to live well without the deceased (Worden, 1991). However, counsellors prevent clients from mistakenly creating superstitious hope.

Limitations and Future Research Directions

This case study presents the personal experience of a Buddhist survivor, which supplies an in-depth narrative that does not aim for generalisation. However, it reveals insight into tackling self-blame through Buddhist teachings, which may invite further discussions on how to apply these ideas to non-Buddhists. Moreover, **Mahāyāna** involves twofold: first, self healing and

transformation; and second, mutually-benefiting altruism, which was previously translated as “self-benefiting altruism” (Cheng, 2014a, pp. 141-146; 2014b, pp. 359-365; 2014d, pp. 79-83; Cheng, 2015a, pp. 206-207; Cheng, 2015b, pp. 286-287; 2015c, pp. 41-42; Cheng & Tse, 2014a, p. 34). This study focuses on the areas of healing effects while future research is suggested on how Buddhist altruistic behaviour can be conducive to dealing with grief and bereavement.

Conclusion

This single case study explores how a Buddhist survivor can cope with guilt springing from spousal loss, and how this widow experienced self transformation through living with suffering from the Buddhist perspective. The participant is able to live peacefully with her regret and retain an interconnectedness with the deceased via various mourning rites, self-awareness, living in the here-and-now, and strengthening personal capabilities, resulting in converting frustration and adversities into energy and motivation, all of which give potential avenues to explore for grief and bereavement counselling. This research also proposes future directions towards application of Buddhist wisdom to non-Buddhists dealing with psychological trauma incurred by spousal loss.

References

- Aguilar, I., & Wood, V. N. (1976). Therapy through a death ritual. *Social Work, 21*(1), 49-54.
- Büchi, S., Mörgeli, H., Schnyder, U., Jenewein, J., Glaser, A., Fauchère, J.-C., Butcher, H. U., & Sensky, T. (2009). Shared or discordant grief in couples 2-6 years after the death of their pre-mature baby: Effects on suffering and posttraumatic growth. *Psychosomatics, 50*(2), 123-130.
- Büchi, S., Mörgeli, H., Schnyder, U., Jenewein, J., Hepp, U., Jina, E., Neuhaus, R., Fauchère, J.-C., Bucher, H. U., & Sensky, T. (2007). Grief and post-traumatic growth in parents 2-6 years after the death of their extremely premature baby. *Psychotherapy and Psychosomatics, 76*, 106-114. doi: 10.1159/000097969
- Baker, J. E. (2001). Mourning and the transformation of object relationships: Evidence for the persistence of internal attachments. *Psychoanalytic Psychology, 18*(1), 55-73. doi: 10.1037//0736-9735.18.1.55
- Behere, P. B., Das, A., Yadav, R., & Behere, A. P. (2013). Religion and mental health. *Indian Journal of Psychiatry, 55*, 187-194. doi: 10.4103/0019-5545.105526
- Bennett, K. M., Gibbons, K., & Suzanna, M.-S. (2010). Loss and restoration in later life: An examination of dual process model of coping with bereavement. *OMEGA: Journal of Death and Dying, 61*(4), 315-332. doi: 10.2190/OM.61.4.d
- Bowker, J. (1997). Mourning rites. *The concise Oxford dictionary of world religions*. Retrieved January 17, 2014, from <http://www.encyclopedia.com/doc/1O101-Mourningrites.html>.
- Bowlby, J. (1980). *Attachment and loss, Volume III: Loss: Sadness and depression*. London: The Hogarth Press Limited.
- Bowman, K. W., & Richard, S. A. (2003). Culture, brain death, and transplantation. *Progress in Transplantation, 13*(3), 211-217.
- Carnelley, K. B., Wortman, C. B., Bolger, N., & Burke, C. T. (2006). The time course of grief reactions to spousal loss: Evidence from a national probability sample. *Journal of Personality and Social Psychology, 91*(3), 476-492. doi: 10.1037/0022-3514.91.3.476
- Carr, D. (2010). New perspectives on the dual process model (DPM): What have we learned? What questions remain? *OMEGA: Journal of Death and Dying, 61*(4), 371-380. doi: 10.2190/OM.61.4.g
- Carr, D., & Jeffreys, J. S. (2011). Spousal bereavement in later life. In R. A. Neimeyer, D. L. Harris, H. R. Winokuer, & G. F. Thornton (Eds.), *Grief and bereavement in contemporary society: Bridging research and practice* (pp. 81-91). USA: Routledge.
- Catherall, D. R. (1986). The support system and amelioration of PTSD in Vietnam veterans. *Psychotherapy, 23*(3), 472-482.
- Chan, C. L. W., Wang, C.-W., Ho, A. H. Y., Qu, Z.-Y., Wang, X.-Y., Ran, M.-S., Mao, W.-J., Lu, B. Q.-B., Zhang, B. Q., & Zhang, X.-L. (2012). Symptoms of posttraumatic stress

- disorder and depression among bereaved and non-bereaved survivors following the 2008 Sichuan earthquake. *Journal of Anxiety Disorders*, 26, 673-679.
- Chan, C. L. W., Wang, C.-W., Qu, Z., Lu, B. Q., Ran, M.-S., Ho, A. H. Y., Yuan, Y., Zhang, B. Q., Wang, X., & Zhang, X. (2011). Posttraumatic stress disorder symptoms among adult survivors of the 2008 Sichuan earthquake in China. *Journal of Traumatic Stress*, 24(3), 295-302. doi: 10.1002/jts.20645
- Chen, Z. Y. 陳. (2000). An exploration of grief therapy from Āgama 7th text 以《增壹阿含·善聚品》第七經為主之喪親輔導個案初探. *Chung-Hwa Buddhist Journal 中華佛學研究*, 4(March), 35-58.
- Cheng, F. K. (2014a). The bodhisattva spirit: Practising self-benefiting altruism. *Fuyan Buddhist Studies*, 9, 93-168.
- Cheng, F. K. (2014b). *Conceptualising a bodhisattva-spirit-oriented counselling framework inspired by the Vimalakīrti Nirdeśa Sūtra*. (Unpublished PhD thesis), The University of Hong Kong, Hong Kong.
- Cheng, F. K. (2014c). *A goddess scattering flowers: A dramatic performance to illustrate the Mahāyāna concept of indiscrimination in the Vimalakīrti Nirdeśa Sūtra*. Paper presented at the 2014 International Conference of East Asian Buddhist Thoughts and Culture, Taipei, Taiwan.
- Cheng, F. K. (2014d). Overcoming “sentimental compassion”: How Buddhists cope with compassion fatigue. *Journal of the Oxford Centre for Buddhist Studies*, 7(November), 56-97.
- Cheng, F. K. (2015a). A qualitative study of Buddhist altruistic behaviour. *Journal of Human Behaviour in the Social Environment*, 25(3), 204-213. doi: 10.1080/10911359.2014.966220
- Cheng, F. K. (2015b). Recovery from depression through Buddhist wisdom: An idiographic case study. *Social Work in Mental Health*, 13(3), 272-297. doi: 10.1080/15332985.2014.891554
- Cheng, F. K. (2015c). Untainted compassion: Conceptualising a tripod model for mental wellness. In P. Grant (Ed.), *Compassion: Social significance, role in healthcare and psychological effects* (pp. 25-76). New York: Nova Science Publishers, Inc.
- Cheng, F. K., & Tse, S. (2014a). A bodhisattva-spirit-oriented counselling framework: Inspired by Vimalakīrti wisdom. *International Journal of Dharma Studies*, 2(6), 1-52. doi: 10.1186/s40613-014-0006-9
- Cheng, F. K., & Tse, S. (2014b). “Just eliminate the illness; Do not eliminate dharmas”: A case study on the lived experience of a Buddhist surviving spouse. Paper presented at the 4th Asian Conference on Psychology and the Behavioural Sciences, March 27-30 (pp. 41-58), Osaka, Japan.
- Cholette, M., & Gephart, S. M. (2012). A model for the dynamics of bereavement caregiving.

- International Journal of Childbirth Education*, 27(2), 14-18.
- Clare, L., Rowlands, J., Bruce, E., Surr, C., & Downs, M. (2008). The experience of living with dementia in residential care: An interpretative phenomenological analysis. *The Gerontologist*, 48(6), 711-720.
- Coleman, P. G., Ivani-Chalian, C., & Robinson, M. (2004). Religious attitudes among British older people: Stability and change in a 20-year longitudinal study. *Ageing and Society*, 24, 167-188.
- Conant, R. D. (1996). Memories of the death and life of a spouse: The role of images and sense of presence in grief. In D. Klass, P. R. Silverman, & S. L. Nickman (Eds.), *Continuing bonds: New understanding of grief* (pp. 179-198). Washington, DC: Taylor & Francis.
- Conze, E. (1953). *Buddhism: Its essence and development*. London, Oxford: Bruno Cassirer.
- Currier, J. M., Mallot, J., Martinez, T. E., Sandy, C., & Neimeyer, R. A. (2013). Bereavement, religion, and posttraumatic growth: A matched control group investigation. *Psychology of Religion and Spirituality*, 5(2), 69-77. doi: 10.1037/a0027708
- Davies, T. (2011). Bereavement care: The role of the DN? *Journal of Community Nursing*, 25(6), 12-15.
- Davis, C. G., & McKearney, J. M. (2003). How do people grow from their experience with trauma or loss? *Journal of Social and Clinical Psychology*, 22(5), 477-492.
- de Silva, P. (2012). *The lost art of sadness and the meaning of love and grief*. Paper presented at the 2nd International Association of Buddhist Universities: Buddhist psychotherapy, Thailand.
- DiGiacomo, M., Lewis, J., Nolan, M. T., Phillips, J., & Davidson, P. M. (2013). Health transitions in recently widowed older women: A mixed methods study. *BMC Health Services Research*, 13(143), 1-10.
- Doosje, B., & Branscombe, N. R. (1998). Guilty by association: When one's group has a negative history. *Journal of Personality and Social Psychology*, 75(4), 872-886.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Eisma, M. C. (2015). *Rumination following bereavement: Assessment, working mechanisms and intervention*. The Netherlands: Dutch Organization for Scientific Research.
- Fawcett, J. (2013). Bereavement and the four noble truths. *Psychiatric Annals*, 43(6), 246.
- Field, N. P. (2010). Continuing bonds, risk factors for complicated grief, and adjustment to bereavement. *Death Studies*, 34, 1-29. doi: 10.1080/07481180903372269
- Field, N. P., Gal-Oz, E., & Bonanno, G. A. (2003). Continuing bonds and adjustment at 5 years after the death of a spouse. *Journal of Consulting and Clinical Psychology*, 71(1), 110-117. doi: 10.1037/0022-006X.71.1.110
- Flatt, B. (1988). Grief counselling. *Journal of Pastoral Care*, 36(3), 133-145.

- Flynn, F. J., & Schaumberg, R. L. (2012). When feeling bad leads to feeling good: Guilt-proneness and affective organisational commitment. *Journal of Applied Psychology*, 97(1). doi: 10.1037/a0024166
- Gerber, M. M., Boals, A., & Schuettler, D. (2011). The unique contributions of positive and negative religious coping to posttraumatic growth and PTSD. *Psychology of Religion and Spirituality*, 3(4), 298-307. doi: 10.1037/a0023016
- Gethin, R. (1998). *The foundations of Buddhism*. Oxford, UK: Oxford University Press.
- Goss, R. E., & Klass, D. (1997). Tibetan Buddhism and the resolution of grief: The Bardodhodol for the dying and the grieving. *Death Studies*, 21(4), 377-395.
- Hamel, J., Dufour, S., & Fortin, D. (1993). *Case study methods*. California: Sage Publications, Inc.
- Harms, L., & Talbot, M. (2007). The aftermath of road trauma: Survivors' perceptions of trauma and growth. *Health and Social Work*, 32(2), 129-137.
- Hensley, L. (2008). Death, dying, and bereavement. In S. F. Davis & W. Buskist (Eds.), *21st century psychology: A reference handbook* (pp. 64-71). USA: SAGE Publications.
- Hensley, P. L., & Clayton, P. J. (2013). Why the bereavement exclusion was introduced in DSM-III. *Psychiatric Annals*, 43(6), 256-260.
- Ho, S. M. Y., Chu, K. W., & Yu, J. (2008). The relationship between explanatory style and posttraumatic growth after bereavement in a non-clinical sample. *Death Studies*, 32, 461-478. doi: 10.1080/07481180801974760
- Holmes, T. H., & Rahe, R. H. (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, 11, 213-218.
- Hoppes, S., & Segal, R. (2010). Reconstructing meaning through occupation after the death of a family member: Accommodation, assimilation, and continuing bonds. *The American Journal of Occupational Therapy*, 64(1), 133-141.
- Iglewicz, A., Seay, K., Vigeant, S., Jouhal, S. K., & Zisook, S. (2013). The bereavement exclusion: The truth between pathology and politics. *Psychiatric Annals*, 43(6), 261-266.
- Jackson, J., & Coyle, A. (2009). The ethical challenge of working with spiritual difference: An interpretative phenomenological analysis of practitioners' accounts. *Counselling Psychology Review*, 24(3 & 4), 86-99.
- Joseph, S. (2009). Growth following adversity: Positive psychological perspectives on posttraumatic stress. *Psychological Topics*, 18(2), 335-344.
- Kübler-Ross, E. (1969). *On death and dying*. New York: Macmillan Publishing Company.
- Kübler-Ross, E. (1974). *Questions and answers on death and dying*. USA: Macmillan Publishing Company.
- Kübler-Ross, E. (1981). *Living with death and dying*. USA: Macmillan Publishing Company.
- Kübler-Ross, E. (1997). *The wheel of life: A memoir of living and dying*. New York: Scribner.

- Kübler-Ross, E., & Kessler, D. (2005). *On grief and grieving*. New York: Scribner.
- Kaori, W., & Park, J. (2009). Integrating Buddhist psychology into grief counselling. *Death Studies*, 33, 657-683. doi: 10.1080/07481180903012006
- Kaplan, A. (2014). Recalibrating a psychoanalytic compass: Searching for flexibility in the midst of grief and loss. *Psychoanalytic Perspectives*, 11(3), 229-242. doi: 10.1080/1551806X.2014.938944
- Karam, E. G., Tabet, C. C., & Itani, L. A. (2013). The bereavement exclusion: Findings from a field study. *Psychiatric Annals*, 43(6), 267-271.
- Katz, J. (2001). Conclusion. In J. Hockey, J. Katz, & N. Small (Eds.), *Grief, mourning and death ritual* (pp. 267-273). Britain: Open University Press.
- Kawamura, L. S. (2000). Facing life and death: A Buddhist understanding of palliative care and bereavement. In J. D. Morgan (Ed.), *Meeting the needs of our clients creatively: The impact of arts and culture on caregiving* (pp. 105-122). New York: Baywood Publishing Company.
- Khosravan, S., Salehi, S., Ahmadi, F., Sharif, F., & Zamani, A. (2010). Experiences of widows with children: A qualitative study about spousal death in Iran. *Nursing and Health Sciences*, 12, 205-211. doi: 10.1111/j.1442-2018.2010.00522.x
- Klass, D. (1996). Grief in an Eastern culture: Japanese ancestor worship. In D. Klass, P. R. Silverman, & S. L. Nickman (Eds.), *Continuing bonds: New understanding of grief* (pp. 59-70). Washington, DC: Taylor & Francis.
- Klass, D. (2001). Continuing bonds in the resolution of grief in Japan and North America. *The American Behavioural Scientist*, 44(5), 742-763.
- Klass, D., & Goss, R. (1999). Spiritual bonds to the dead in cross-cultural and historical perspective: Comparative religion and modern grief. *Death Studies*, 23(6), 547-567.
- Koca-Atabey, M., & Öner-Özkan, B. (2014). Loss anxiety: An alternative explanation for the fundamental fears in human beings. *Death Studies*, 38(10), 662-671. doi: 10.1080/07481187.2013.844748
- Kvande, M. N., Klöckner, A., Moksnes, U. K., & Espnes, G. A. (2015). Do optimism and pessimism mediate the relationship between religious coping and existential well-being? Examining mechanisms in a Norwegian population sample. *The International Journal for the Psychology of Religion*, 25(2), 130-151. doi: 10.1080/10508619.2014.892350
- Kwan, S. S.-m. (2007). Clinical efficacy of ritual healing and pastoral ministry. *Pastoral Psychology*, 55, 741-749. doi: 10.1007/s11089-007-0079-9
- Lamb, D. H. (1988). Loss and grief: Psychotherapy strategies and interventions. *Psychotherapy*, 25(4), 561-569.
- Long, J. B. (1975). The death that ends death in Hinduism and Buddhism. In E. Kübler-Ross (Ed.), *Death The final stage of growth* (pp. 52-72). USA: Prentice-Hall, Inc.

- Lund, D., Caserta, M., Utz, R., & De Vries, B. (2010). Experiences and early coping of bereaved spouses/partners in an intervention based on the dual process model (DPM). *OMEGA: Journal of Death and Dying, 61*(4), 291-313. doi: 10.2190/OM.61.4.c
- Malkinson, R. (2010). Cognitive-behavioural grief therapy: The ABC model of rational-emotion behaviour therapy. *Psychological Topics, 19*(2), 289-305.
- McConnell, J. R. (1999). The ambiguity about death in Japan: An ethical implication for organ procurement. *Journal of Medical Ethics, 25*, 322-324.
- Mohamed, A. I., Elati, I. H. A., & Zaki, M. M. (2015). Knowledge and attitude of maternity nurses regarding perinatal bereavement care. *Journal of Nursing Education and Practice, 5*(2), 136-142. doi: 10.5430/jnep.v5n2p136
- Nakasone, R. Y. (2000). Buddhist issues in end-of-life decision making. In K. L. Braun, J. H. Pietsch, & P. L. Blanshette (Eds.), *Cultural issues in end-of-life decision making* (pp. 213-228). Thousand Oaks, CA: Sage.
- Neimeyer, R. A. (2000). Searching for the meaning of meaning: Grief therapy and the process of reconstruction. *Death Studies, 24*(6), 541-558.
- Neimeyer, R. A. (2002). Traumatic loss and the reconstruction of meaning. *Journal of Palliative Medicine, 5*(6), 935-942.
- Nesse, R. M. (2005). An evolutionary framework for understanding grief. In D. Carr, R. M. Nesse, & C. B. Wortman (Eds.), *Spousal Bereavement in Late Life* (pp. 195-226). New York: Springer Publishing.
- Neuberger, J. (2005). *Caring for dying people of different faiths* (3rd ed.). UK: Radcliffe Medical Press Limited.
- Ng, Y. K. 吳. (1994). *Contemporary interpretation of Indian Buddhism 印度佛學的現代詮釋*. Taipei: Wen Jin Publishing Company Limited 文津出版有限公司.
- Nithsdale, V., Davies, J., & Croucher, P. (2008). Psychosis and the experience of employment. *Journal of Occupational Rehabilitation, 18*, 175-182.
- Nwalutu, M. O. (2012). Healing bereavement through rituals: A Review of the Weppa Wanno widowhood purification practices. *Sociology Mind, 2*(3), 313-324. doi: 10.4236/sm.2012.23042
- Ong, A. D., Fuller-Rowell, T. E., Bonanno, G. A., & Almeida, D. M. (2011). Spousal loss predicts alterations in diurnal cortisol activity through prospective changes in positive emotion. *Health Psychology, 30*(2), 220-227. doi: 10.1037/a0022262
- Ozorak, E. W. (1996). The power, but not the glory: How women empower themselves through religion. *Journal for the Scientific Study of Religion, 35*(1), 17-29.
- Pals, J. L., & McAdams, D. P. (2004). The transform self: A narrative understanding of posttraumatic growth. *Psychological Inquiry, 15*, 65-69.
- Park, C. L., & Halifax, R. J. (2011). Religion and spirituality in adjusting to bereavement: Grief as burden, grief as gift. In R. A. Neimeyer, D. L. Harris, H. R. Winokuer, & G.

- F. Thornton (Eds.), *Grief and bereavement in contemporary society: Bridging research and practice* (pp. 355-364). USA: Routledge.
- Pies, R. (2013). From context to phenomenology in grief versus major depression. *Psychiatric Annals*, 43(6), 286-290.
- Pond, K. (2012). A study of childhood grief and the church's response. *Christian Education Journal*, 9(1), 43-63.
- Richardson, V. E. (2010). Length of caregiving and well-being among old widowers: Implications for the dual process model of bereavement. *OMEGA: Journal of Death and Dying*, 61(4), 333-356. doi: 10.2190/OM.61.4.e
- Riches, G., & Dawson, P. (1998). Lost children, living memories: The role of photographs in processes of grief and adjustment among bereaved parent. *Death Studies*, 22(2), 121-140.
- Ronen, R., Packman, W., Field, N. P., Davies, B., Karmer, R., & Long, J. K. (2009). The relationship between grief adjustment and continuing bonds for parents who have lost a child. *OMEGA: Journal of Death and Dying*, 60(1), 1-31. doi: 10.2190/OM.60.1.a
- Ross, K., Handal, P. J., Clark, E. M., & Wal, J. S. V. (2009). The relationship between religion and religious coping: Religious coping as a moderator between religion and adjustment. *Journal of Religion and Health*, 48, 454-467. doi: 10.1007/s10943-008-9199-5
- Rubin, S. S. (1998). Case study: Reconsidering the transference paradigm in treatment with the bereaved. *American Journal of Psychotherapy*, 52(2), 215-228.
- Rubin, S. S., & Schechter, N. (1995). Exploring the social construction of bereavement: Perceptions of adjustment and recovery in bereaved men. *American Journal of Orthopsychiatry*, 6(2), 279-289.
- Schick, K. (2011). Acting out and working through: Trauma and (in)security. *Review of International Studies*, 37, 1837-1855. doi: 10.1017/S0260210510001130
- Seirmarco, G., Neria, Y., Insel, B., Kiper, D., Doruk, A., & Litz, B. (2011). Religiosity and mental health: Changes in religious beliefs, complicated grief, posttraumatic stress disorder, and major depression following the September 11, 2001 attacks. *Psychology of Religion and Spirituality*, 4(1), 10-18. doi: 10.1037/a0023479
- Shear, M. K. (2010). Exploring the role of experiential avoidance from the perspective of attachment theory and the dual process model. *OMEGA: Journal of Death and Dying*, 61(4), 357-369. doi: 10.2190/OM.61.4.f
- Shear, M. K. (2015). Complicated grief. *The New England Journal of Medicine*, 372(2), 153-160. doi: 10.1056/NEJMcp1315618
- Shinebourne, P., & Smith, J. A. (2009). Alcohol and the self: An interpretative phenomenological analysis of the experience of addiction and its impact on the sense of self and identity. *Addiction Research and Theory*, 17(2), 152-167.

- Small, N. (2001). Theories of grief: A critical review. In J. Hockey, J. Katz, & N. Small (Eds.), *Grief, mourning and death ritual* (pp. 19-48). Britain: Open University Press.
- Smith, J. A. (1996). Beyond the divide between cognition and discourse: Using interpretative phenomenological analysis in health psychology. *Psychology and Health, 11*, 261-271.
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. London, UK: SAGE Publications Limited.
- Soy, S. K. (1997). The case study as a research method. Unpublished paper. Retrieved January 19, 2011, from <http://www.ischool.utexas.edu/~ssoy/usesusers/l391d1b.htm>.
- Stroebe, M., Schut, H., & Stroebe, W. (2005). Attachment in coping with bereavement: A theoretical integration. *Review of General Psychology, 9*(1), 48-66. doi: 10.1037/1089-2680.9.1.48
- Stroebe, M. S. (2010). The dual process model of coping with bereavement: A decade on. *OMEGA: Journal of Death and Dying, 61*(4), 273-289. doi: 10.2190/OM.61.4.b
- Suzuki, B. L. (1938/1981a). *Mahāyāna Buddhism*. London: George Allen & Unwin.
- Suzuki, D. T. (1938/1981b). Introduction. In B. L. Suzuki (Ed.), *Mahāyāna Buddhism* (pp. 1-17). London: George Allen & Unwin.
- Tallman, B., Shaw, K., Schultz, J., & Altmaier, E. (2010). Well-being and posttraumatic growth in unrelated donor marrow transplant survivors: A nine-year longitudinal study. *Rehabilitation Psychology, 55*(2), 204-210. doi: 10.1037/a0019541
- Tellis, W. (1997). Introduction to case study. *The Qualitative Report, 3* (2). July. Retrieved February 4, 2011, from <http://www.nova.edu/ssss/QR/QR3-2/tellis1.html>.
- Tsoukas, H. (1989). The validity of idiographic research explanations. *Academy of Management. The Academy of Management Review, 14*(4), 551-561.
- Ullman, C. (1989). *The transformed self: The psychology of religious conversion*. USA: Plenum Press.
- Wang, C.-C. 王. (2007). A heuristic journey to gain access to the inner world of the bereaved 由反思到洞察之路：哀傷研究者的啟發. *Chinese Annual Report of Guidance and Counselling 中華輔導學報, 22*, 71-117.
- Weinbach, R. W. (1989). Sudden death and secret survivors: Helping those who grieve alone. *Social Work, 34*(1), 57-60.
- Wong, P. T. P. (2008). Meaning management theory and death acceptance. In A. Tomer, G. T. Eliason, & P. T. P. Wong (Eds.), *Existential and spiritual issues in death attitudes* (pp. 65-87). New York: Erlbaum.
- Worden, W. J. (1991). *Grief counselling and grief therapy: A handbook for the mental health practitioner* (2nd Ed.). London: Routledge.
- Wright, B. (2012). *A Buddhist perspective on trauma: Understanding, forgiveness, and atonement*. Paper presented at the 2nd International Association of Buddhist

Universities: Buddhist psychotherapy, Thailand.

Yalom, I. D., & Lieberman, M. A. (1991). Bereavement and heightened existential awareness. *Psychiatry, 54*(4), 334-345.

Yalom, I. D., & Sophia, V. (1988). Bereavement groups: Techniques and themes. *International Journal of Group Psychotherapy, 38*(4), 419-446.

Yin, R. K. (1989). *Case study research: Design and methods*. Newbury Park, California: SAGE Publications, Inc.

Yin, R. K. (2003). *Applications of case study research* (2nd ed.). Thousand Oaks, California: SAGE Publications, Inc.

Acknowledgements: I particularly thank Pureté de Lotus, who shared her experience with me and allowed me to use her dharma name in this manuscript. I also appreciate Dr Sandra Tsang, Dr Wei Rui Xiong, and an anonymous translator for their assistance; Dr Xin Shui Wang for his comments on the earlier draft of this work; and Professor Samson Tse, who supervised this project.

Remark: This manuscript is developed from the conference paper *Cheng and Tse (2014b)* “Just eliminate the illness; Do not eliminate dharmas”: A case study on the lived experience of a Buddhist surviving spouse, which was published in the conference proceedings of the 4th Asian Conference on Psychology and the Behavioural Sciences (pp. 41-58), March 27-30, 2014, Osaka, Japan.

Email Fung Kei Cheng: oasischeng@yahoo.com

the iafor
journal of psychology &
the behavioral sciences

ISSN: 2187-0675