The Effect of Web-Based Videos on Help Seeking Intentions and Stigma

Siobhán Kavanagh

N00063737

Supervised by Dr. Nicola Porter

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Declaration

I declare that this submission is my own work. Where I have read, consulted and used work of others I have acknowledged this in text.

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Acknowledgments

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Abstract

Intentions to seek help are strongly influenced by stigma (Rickwood, Deane, Wilson, & Ciarrochi, 2005). If self-stigma or public-stigma are high, help seeking intentions become inhibited (Rickwood et al., 2005). A Health Service Executive (HSE; 2007) report found 62% of Irish adults experience stigma. Current research calls for the development of interventions to increase help seeking intentions (McGorry, Tanti, Stokes, Hickie, Carnell, Littlefield, & Moran, 2007) and decrease stigma (Jorm, 2000). The current study investigated the effect of web-based videos on psychology students' attitudes toward help seeking and stigma.

Participants (n=61) completed the Perceptions of Stigmatization by Others for Seeking Help (Vogel, Wade & Ascheman, 2009), the Self Stigma Of Seeking Help (Vogel, Wade & Haake, 2006) and the Attitudes Toward Seeking Professional Psychological Help- Short Form (Fischer & Farina, 1995). The scales were administered pre-intervention, post-intervention and at two week follow-up. Results indicated a significant effect of time on each scales scores, indicating that the web-based videos did have an effect on participant's levels of public stigma, self-stigma and attitudes towards seeking help.

1. Introduction

Mental ill health is associated with a reduced ability to function and a reduced sense of well being (O'Connor, 2006). The prevalence of mental ill health among persons who have consulted medical professionals is estimated at 24% (Government of Ireland, 2006). Copty (2004) investigated mental health in primary care in the South Western Area Health Board by sending questionnaires to all the General Practitioners (GP's) in the area. Of the 64% (n = 231) who responded, 25% of patients had presented with mental health concerns.

Conversely, GP's reported referring only 5% of cases to mental health specialists (Copty, 2004). A report by the Health Service Executive (HSE, 2007) found that 62% of Irish adults would not want other people to know if they experienced mental ill health. Mental ill health can have serious effects on relationships, work and school/college. For example, Vanheusden, van der Ende, Mulder, van Lenthe, Verhulst and Mackenbach (2009) found that mental ill health led to a decrease in educational abilities.

This paper will explore sources of help and barriers to help seeking. It will examine the role of stigma in help seeking, with specific reference to medical professionals. Interventions will be discussed, with specific reference to education and web-based interventions, which are of particular relevance to the current study.

1.1 Sources of Help

Sources of help can be formal (where someone will attend a professional, for example, a counsellor) or informal (where someone will seek counsel with a non-professional, for example a relative or peer; Rickwood, Deane, Wilson and Ciarrochi, 2005). Fortune, Sinclair and Hawthorn (2007, 2008) stated that formal sources could include a telephone help-line, a teacher or superior in the workplace, a GP or doctor, a Psychologist or Psychiatrist, a drop in centre or support services. In contrast, informal sources could include family, friends, websites, books and leaflets (Fortune at al., 2007, 2008).

Fortune et al. (2007) investigated the opinions of 15-16 year olds (n= 2954) in the United Kingdom regarding prevention of self-harm. Self-report questionnaires were administered. Fortune et al. (2007) found that participants were more likely to seek an informal source of

help over a formal source of help. Friends or family who noticed someone close needing help were more likely to seek a formal source of help on the person's behalf. Fortune et al. (2008) then researched the barriers to help seeking and the sources of help utilised by 15-16 year olds (n= 5293) in the United Kingdom through a school based survey. The results supported the previous research.

1.2 Barriers to Help Seeking

Fortune, Sinclair and Hawthorn (2007; 2008) identified the barriers to help seeking to be a fear of stigma, doubts surrounding trust and confidentiality, a fear of rumours, a lack of awareness and education, a feeling that it would create more problems and a difficulty communicating about the problems to other people.

In contrast, Vanheusden et al. (2009) identified that the barriers to help seeking include personality characteristics, the perception of how helpful the treatment can be, whether or not adverse consequences are deemed to be likely as a result of the mental ill health and a lack of knowledge about the signs and symptoms associated with mental ill health.

Isometsa, Heikkinen, Marttunen, Henriksson, Aro and Lonnqvist (1995) examined the psychological autopsy reports of suicides that had occurred in Finland in a one year period where a health professional had been contacted up to 28 days prior to the suicide (n = 571). Twenty-two percent of cases had raised their issues with a health professional, and 18% committed suicide on the day that a health professional was visited.

The Government of Ireland (2006) states that such behaviour has been found in more recent studies, indicating that the reason for going to a health professional was related to mental distress. However, the barrier to help seeking in such instances seems to be unsuccessful communication.

Furthermore, Copty (2004) found that 68% of GP's surveyed had training specifically for mental health. Citizens Information (2010), in the section regarding mental health, stated that "Your family doctor is usually the first person to approach in relation to mental health concerns" (Citizens Information, 2010, para 1).

The Government of Ireland (2006) has identified that it is not sufficient to train medical professionals regarding how to identify symptoms of mental ill health. Support, education

and training regarding how to discuss with someone when they may have mental ill health is essential, to ensure that the support required from the medical professional is deliverable. Corrigan (2004) states that the most common reason for not seeking help is the stigma associated with mental illness; stigma is a major barrier to help seeking.

1.3 Stigma and Help Seeking

Vogel, Wade and Hackler (2007) investigated the relationship between public-stigma, selfstigma, help seeking intentions and willingness to seek help in a sample of undergraduate psychology students (n=676). Results indicated that levels of public-stigma predicted help seeking intentions and the willingness to seek help. Self-stigma predicted a willingness to seek help.

Rickwood et al. (2005) reviewed the current research surrounding how young people seek help for mental health problems, through a self report questionnaire or a focus group with participants aged 14-24 years (n=2721), GP's (n=49), teachers (n=18) and youth workers (n=47). Rickwood et al. (2005) found that high levels of stigma correlated with low levels of help seeking intentions.

Barney et al. (2009) examined attitudes towards stigma and help seeking through focus groups with participants who had suffered from depression (n = 23). Participants in the focus group reported encountering public-stigma, which resulted in fear related to help seeking (Barney et al., 2009). This fear of public-stigma influenced the perusal of treatment, as participants reported seeking help for depression would lead to the exposure of socially negative attitudes. Participants expressed little stigma towards help seeking from a GP, compared with help seeking from other mental health professionals. Barney et al. (2009) states one reason for this may be the fact that participants could attend a GP under a guise of different reasons, thus reducing the fear of public stigma.

However, research has shown that such fears may actually be a reality. Link, Phelan, Bresnahan, Stueve & Pescosolido (1999) completed a survey (n=1444) which found a desire for social distance from people with mental illness, despite the fact that half the respondents reported knowing someone with a mental illness. Crisp, Gelder, Rix, Meltzer and Rowlands (2000) conducted a survey (n=1737) which revealed a public perception that people with mental health difficulties may be difficult to talk to. Furthermore, Jorm (2000) stated that if the mental health literacy of the public is not improved, negative attitudes towards mental ill health will remain.

Yap, Wright and Jorm (2010) investigated whether young people's attitudes and beliefs towards help seeking were influenced by their own stigmatisation of mental ill health. The sample consisted of young people aged 12-25 years (n = 3,746). When the mental disorder was attributed to an illness, participants cited that they would be more likely to seek professional sources of help. Yap et al. (2010) reported that young people who distance themselves from peers with mental illness felt they would be less likely to seek help (professional or non professional) if they were to experience mental illness. However, research has found that mental health/medical professionals also battle with stigma and help seeking (Chew-Graham, Rogers & Yessin, 2003).

1.4 Medical Professionals

Chew-Graham et al. (2003) investigated the help seeking attitudes of medical students in an article entitled "*I wouldn't want it on my CV or their records*". Participants reported avoidance of help seeking, citing public-stigma (among the student body and the professional world) as the reason. Participants believed that should it be disclosed in the future that they had been in receipt of mental health assistance, it would be perceived as a weakness, and may affect their future careers (Chew-Graham et al., 2003). Tyssen, Rovik, Vaglum, Grenvold and Ekeberg (2004) stated that the population subset with the highest suicide rate is doctors.

Tyssen et al. (2004) completed a longitudinal study (3.6 years) investigating the relationship between self-reported mental health problems and help seeking among medical students who progressed to become graduates (n = 631). Tyssen et al. (2004) found that of the 34% of participants who reported needing help for mental health difficulties, only 64% sought help. Vogel et al. (2007) stated that the current research should provide a framework for which to develop successful interventions, for example, interventions could focus on reducing publicstigma, which would advertently affect help seeking intentions.

1.5 Interventions

Education has been identified as an effective method of combating negative attitudes towards mental ill health (Corrigan, 2004). Possible educational interventions include posters, leaflets, books and other readily available information sources (Rickwood, Deane & Wilson, 2007; Yap, Wright & Jorm, 2010). Corrigan (2004) states that through education, the public will cultivate informed attitudes and opinions of mental health. However, an issue regarding education is that effects may not persist long term (Corrigan, 2004).

Corrigan, Larson, Sells, Niessen and Watson (2006) investigated the impact of educational videos on mental ill health stereotypes pre-intervention, post-intervention and at one week follow-up (n=244). Results indicated that through education, participant's scores improved significantly. Corrigan et al. (2006) recommend that future research extend the gap between the post-intervention and the follow-up test to inform the area regarding the duration of the effects of education.

1.6 Web-based Interventions

Websites can be helpful in providing information and support. Cooper (2004) examined internet based help utilised by problem gamblers to facilitate the recovery process. Seventy per cent of participants (n = 50) who used online help facilities for problem gambling cited stigma as a reason for not seeking face-to-face help. Participants reported that browsing the website and reading comments by other users encouraged their own use of the website, resulting in participants sharing information with other users. Furthermore, participants who were exposed to the website were more likely to engage in treatment in the future (Cooper, 2004).

Rickwood et al. (2007) observed that the internet is being used increasingly by young people as a source of information and support. Christensen, Leach, Barney, Mackinnon, and Griffiths (2006) evaluated the impact of a website entitled MoodGYM, as an intervention for people who suffer from depression and found it to be highly effective. Christensen et al. (2006) reported that less help seeking was sought from family and friends, and that there was an increased use of everyday treatments following use of the website, for example, listening to music.

1.7 Current Study

The current study aimed to investigate the effect of web-based videos on attitudes towards seeking help, self-stigma and public-stigma. The scales widely utilised in the current research are the Attitudes Toward Seeking Professional Psychological Help – Short Form (Fischer & Farina, 1995), the Self Stigma of Seeking Help (Vogel, Wade & Haake, 2006) and the Perceptions of Stigmatization by Others for Seeking Help (Vogel, Wade & Ascheman, 2009). Previous research calls for the development of interventions to reduce the levels of stigma and increase help seeking intentions (Rickwood et al., 2005).

This study examined the effect of a collection of web-based videos, developed by the Irish mental health organisations, Headstrong and Reachout, who aim to increase help seeking intentions through education, which the research has found to be an effective intervention (Corrigan, 2004). The effect of the web-based videos would inform such organisations as to whether or not web-based videos are an effective method of combating stigma and increasing help seeking intentions. Psychology students were recruited to participate in this study, to allow for examination of the levels stigma and help seeking intentions in relation to future mental health professionals. This could inform the area regarding effective interventions which could reduce the stigma encountered by mental health professionals, thus increasing help seeking intentions.

1.8 Specific research question

Will watching a selection of online videos about mental health impact on participants' levels of public-stigma, levels of self-stigma and intentions to seek help?

1.9 Hypotheses

H1. There will be a difference in participants' levels of public-stigma across the three time periods (pre-intervention, post-intervention and two week follow-up).

H2. There will be a difference in participants' levels of self-stigma across the three time periods (pre-intervention, post-intervention and two week follow-up).

H3. There will be a difference in participants' attitudes towards seeking help across the three time periods (pre-intervention, post-intervention and two week follow-up).

2. Method

2.1 Participants

The participants were undergraduate psychology students, from first to fourth year. Preintervention and post-intervention, eighty-nine participants completed the three scales. At the two week follow-up, sixty-one participants completed the three scales. The data from the twenty-eight participants who did not complete the three scales at the two week follow-up was excluded from the analysis. Of the sixty-one participants, 44.26% were first year students, 16.39% were second year students, 31.15% were third year students and 8.2% were fourth year students, M = 22.47 years old (SD = 8.01), with 67.2% of participants being female.

Before the research was conducted, the proposed study was submitted to the IADT Department of Learning Sciences (DLS) ethics committee, under ethics form B. Approval was granted. Participants were briefed, completed a consent form prior to the study, and were debriefed following participation in the study, in accordance with the IADT DLS ethics committee guidelines and the ethical standards outlined by the Psychological Society of Ireland.

2.2 Research Design

This study used a repeated measures design, as participants were administered with the scales pre-intervention, post-intervention and at two weeks follow-up. Each test occasion was an independent variable. The dependent variables were the Self Stigma Of Seeking Help (SSOSH) scale, the Perceptions of Stigmatization by Others for Seeking Help (PSOSH) scale and the Attitudes Toward Seeking Professional Psychological Help – Short Form (ATSPPH-SF). All three scales were interval. However, as the overall result of each measurement scale was nominal, the data collected was quantitative (Carifio & Perla, 2007).

2. 3 Materials

Consent form 1 (see appendix A) developed for pre-intervention/post-intervention data collection, provided information on the project, outlined the participant's right to withdraw from the study at any given time, and reassured participants regarding confidentiality. This also established the age and gender of the participants, and requested participants to fill out a unique identification code, to facilitate comparison of participant data across test occasions.

Consent form 2 (see appendix B) developed for the two week follow-up data collection, provided information on the project, outlined the participant's right to withdraw from the study at any given time, and reassured participants regarding confidentiality. This also established the age and gender of the participants, and requested participants to fill out a unique identification code, to facilitate comparison of participant data across test occasions.

The Perceptions of Stigmatization by Others for Seeking help (PSOSH; Vogel, Wade & Ascheman, 2009) scale (see appendix C) informed the study regarding the effects of webbased videos on public stigma. An example of a scaled item in response to a statement included 'see you in a less favourable way.' The PSOSH is a five item scale, which has been reported to have been valid; reliability is reported at .78 (Vogel et al., 2009).

The Self Stigma of Seeking Help (SSOSH; Vogel, Wade & Haake, 2006) scale (see appendix D) informed the study regarding the effects of web-based videos on self-stigma, with higher scores reflecting higher levels of stigma. An example of a scaled item response to a statement included 'I would feel inadequate if I went to a therapist for psychological help.' The SSOSH contains ten items rated on a five point likert scale. Vogel et al. (2006) report high levels of validity, and the internal consistency has been reported at .89 (Vogel, Wade & Hackler, 2007).

The Attitudes Toward Seeking Professional Psychological Help – Short Form (ATSPPH-SF; Fischer & Farina, 1995) scale (see appendix E) informed the study regarding the effects of web-based videos on attitudes towards seeking help. An updated version of this scale was used, concurrent with Larkin (2010), which incorporated a neutral value, thus the ten items were rated on a five point likert scale, as opposed to four point likert scale. This control for statistical bias (Carifio & Perla, 2007). The wording of question 1 was revised from 'I would obtain professional help if I was [having a mental breakdown]' to 'struggling to cope

emotionally' so that the scale would include appropriate terminology. Larkin (2010) reports that the scale is valid, with an internal consistency of .84.

The four video links, which comprised the intervention aimed to reduce stigma and increase help seeking intentions. Two videos were created by Headstrong and two videos were created by Reachout, which are two Irish mental health organisations. A description of each video and the corresponding web-links are provided in table 1.

Description of video	Web-link
Jason Byrne speaks about the importance	http://www.youtube.com/watch?v=rp1mNeGquh
of mental health	o&annotation_id=annotation_67448&feature=iv
Encourages talking to the GP for mental	http://ie.reachout.com/connect/blog/visiting-
health issues	your-gp
Depicts mental ill health and promotes	http://www.headstrong.ie/content/resources-0
coping strategies, e.g. talking to a friend	
Promotes the Youth Advisory Network	http://ie.reachout.com/about/site-journeys/youth-
and explains the available online	advisory-network
resources at www.reachout.com	

Table 1: Web-based videos which comprised the intervention.

Debriefing sheet 1 (see appendix F) developed for the post-intervention data collection, advised participants where they may go to seek help, explained the aim of the study, thanked participants for their participation in the study and reminded participants that there would be a follow-up data collection in two weeks.

Debriefing sheet 2 (see appendix G) developed for the two week follow-up data collection. The debriefing sheet advised participants where they may go to seek help, explained the aim of the study, and thanked participants for their participation in the study.

2.4 Pilot Study

Data for the pilot study was collected pre-intervention and post-intervention. This indicated the time frame for the study (15 minutes to complete three scales, 15 minutes to watch the

collection of videos, 15 minutes to complete the three scales). This allowed for any issues which arose to be addressed, such as the internet loading speed (this was addressed by downloading the videos prior to data collection), and inclusion of 24-hour helpline services on the debriefing sheet. The pilot study also indicated that each item on the scales should have a likert scale below, as apposed to just one scale indicated at the top of the measurement. Therefore, participants could circle the appropriate answer, rather than write the number.

2.5 Procedure

Participants were administered with the consent form, the PSOSH, the SSOSH, and the ATSPPH-SF. Participants were asked to read and complete the consent form, if they wished to participate in the study. Participants were requested to complete the scales. Participants were then shown a collection of online videos. Immediately after watching the videos participants were administered with the PSOSH, the SSOSH and the ATSPPH-SF. Participants were asked to complete the administered scales. Then participants were administered with debriefing sheet 1, and debriefed on the study.

Two weeks later, participants were administered with the consent form, the PSOSH, the SSOSH and the ATSPPH-SF. Participants were then administered with debriefing sheet 2, and debriefed on the study. The study was conducted across all time periods in a lecture hall or room.

3. Results

3.1 Overview of Statistics

Analysis of the results was computed using SPSS. Eighty-nine participants participated in the pre-intervention and post-intervention data collection. Sixty-one participants participated in the two week follow-up data collection. The means and standard deviations of the Perceptions of Stigmatization by Others for Seeking Help (PSOSH), the Self Stigma of Seeking Help (SSOSH) and the Attitudes Toward Seeking Professional Psychological Help – Short Form (ATSPPH-SF) for the three time periods (pre-intervention, post-intervention and two week follow-up) are displayed in table 2. The higher mean scores on the PSOSH and SSOSH indicate higher levels of stigma, and the lower scores on the ATSPPH-SF indicate lower levels of help seeking intentions.

	PS	OSH	SSO	SH	ATSPI	PH-SF
Time Period	М	SD	М	SD	М	SD
Pre-intervention	8.59	3.24	25.11	6.9	36.05	4.83
Post-Intervention	7.23	2.8	22.98	6.8	36.89	4.79
Two week follow-up	7.75	3.12	24.52	7.08	36.08	5.32

Table 2. Descriptive Statistics

Note: (n=61)

Three one-way repeated measures analysis of variance (ANOVA) statistics were computed to compare the scores for each scale at time 1 (prior to the intervention), time 2 (following the intervention) and time 3 (two week follow-up), using an alpha level of .05.

3.2 Perceptions of Stigmatization by Others for Seeking Help

A one-way repeated measures ANOVA was conducted to compare scores for the Perceptions of Stigmatization by Others for Seeking Help scale at time 1 (prior to the intervention), time 2 (following the intervention) and time 3 (two week follow-up). The means and standard deviations are presented in table 2, and figure 1 below illustrates the variance in mean scores across the three time periods.

There was a significant effect for time, Wilks Lambda = .71, F (2, 59) = 12.21, p < .0005, multivariate partial eta squared = .29, indicating a large effect size (partial eta squared > .138). In the pairwise comparisons, using the Bonferonni adjustment for confidence intervals, significance was detected between time 1 and time 2 (p < .0005) and between time 1 and time 3 (p = .014), but not between time 2 and time 3 (p > .05).

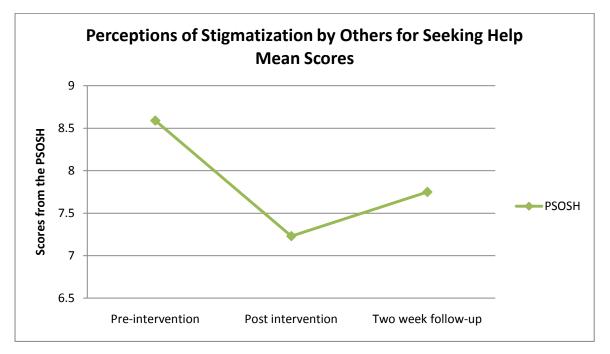


Figure 1. Illustrating of the variance in mean scores on the PSOSH across the three time periods.

3.3 Self Stigma of Seeking Help

A one-way repeated measures ANOVA was conducted to compare scores for the Self Stigma of Seeking Help scale at time 1 (prior to the intervention), time 2 (following the intervention)

and time 3 (two week follow-up). The means and standard deviations are presented in table 2, and figure 2 below illustrates the variance in mean scores across the three time periods.

There was a significant effect for time, Wilks Lambda = .71, F (2, 59) = 11.99, p < .0005, multivariate partial eta squared = .29, indicating a large effect size (partial eta squared > .138). In the pairwise comparisons, using the Bonferonni adjustment for confidence intervals, significance was detected between time 1 and time 2 (p < .0005) and between time 2 and time 3 (p = .037), but not between time 1 and time 3 (p > .05).

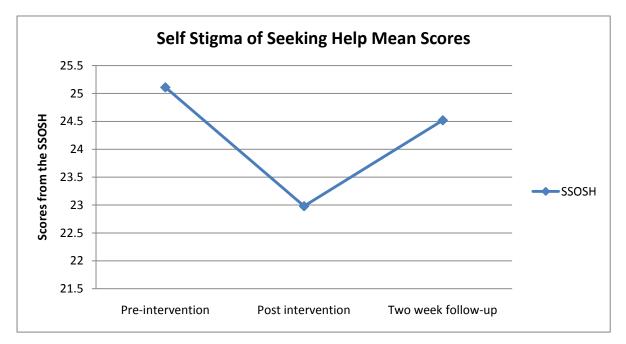


Figure 2. Illustrating the variance in mean scores on the SSOSH across the three time periods.

3.4 Attitudes Toward Seeking Professional Psychological Help – Short Form

A one-way repeated measures ANOVA was conducted to compare scores for the Attitudes Toward Seeking Professional Psychological Help – Short Form scale at time 1 (prior to the intervention), time 2 (following the intervention) and time 3 (two week follow-up). The means and standard deviations are presented in table 2, and figure 3 below illustrates the variance in mean scores across the three time periods.

There was a significant effect for time, Wilks Lambda = .894, F (2, 59) = 3.5, p = .037, multivariate partial eta squared = .11, indicating a moderate effect size (partial eta squared > .06). In the pairwise comparisons, using the Bonferonni adjustment for confidence intervals, significance was not detected between any of the time periods.

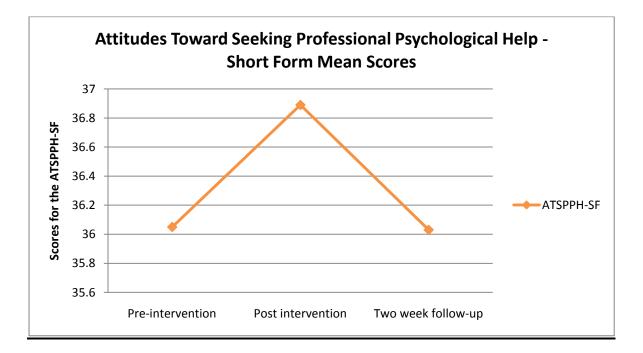


Figure 3. Illustrating the variance in mean scores on the ATSPPH-SF across the three time periods.

Thus, significance was detected for the three scales (PSOSH, SSOSH and ATSPPH-SF) across the three time periods. Examination of the pairwise contrasts indicate that the level of significance is prominent between the pre-intervention and post-intervention time periods on the PSOSH and the SSOSH, as illustrated in table 3.

Time Period	1 & 2	2 & 3	1 & 3
	Pre-intervention &	Post-intervention &	Pre-intervention &
	Post-intervention	Two week follow-up	Two week follow-up
PSOSH	p < .0005	NS	p < .05
SSOSH	P < .0005	p < .05	NS
ATSPPH-SF	NS	NS	NS

Table 3. Pairwise Comparisons

Note: NS = not significant

4. Discussion

4.1 Overview of Findings

This study investigated the effect of web-based videos on participant's levels of public stigma, self-stigma and attitudes towards help seeking, pre-intervention, post-intervention and at two week follow-up. Results indicated a significant effect of time on each scales scores, indicating that the web-based videos did have an effect on participant's levels of public stigma, self-stigma and attitudes towards seeking help. Thus, the answer to the research question was anwsered, and the hypotheses were supported. This is concurrent with previous research, which indicated that videos have an effect on stigma and attitudes towards mental health (Corrigan et al., 2006).

Preliminary analysis of the results suggest a relationship between the scales and the results, across the three time periods. On the PSOSH, the SSOSH and the ATSPPH-SF, the graph follows the same pattern; mean scores increased for help seeking intentions and decreased for stigma post-intervention, and decreased for help seeking intentions and increased for stigma at the two week follow-up. This relationship between the variables was expected, as previous research had established a relationship between levels of stigma and help seeking intentions (Rickwood et al., 2005; Vogel et al., 2007).

4.2 Post Hoc Analysis

Further analysis conducted using pairwise comparisons on the PSOSH results revealed that the levels of public stigma significantly differed on the pre-intervention, post-intervention comparison and on the pre-intervention, two week follow-up comparison. A graphical representation of the means, as seen in figure 1, allows for inference of the result indicating that scores on the PSOSH had marginally increased between the post-intervention, two week follow-up comparison. However, the difference was not statistically significant. Reasons for this may be explained by the length of time between the post-intervention data collection and the follow-up. Corrigan et al.'s (2006) study utilised a one week follow-up design. However, Corrigan stated that the one week follow-up should be extended for future research, to indicate how long the effects last. The results of the current study suggest that decline is initiated on the PSOSH at the two week follow-up. However, the effect has not declined to the pre-intervention score, suggesting a residual effect from the web-based videos, though not statistically significant.

Pairwise comparisons for self-stigma indicated that there was a significant difference for the pre-intervention, post-intervention comparison and the post-intervention, two week follow-up comparison. A graphical representation of the means, as seen in figure 2 allows for inference of the result, indicating that the scores on the SSOSH were returning to the pre-intervention score at the two week follow-up. Thus, no significant difference was detected for pre-intervention, two week follow-up. Corrigan (2004) explains that the reason for this result may owe to the effects of education on stigma not persisting long term. Thus, stigma levels declined towards the initial level, as the effect of the web-based videos deteriorated.

Pairwise comparisons for the attitudes towards help seeking indicated that no time period differed significantly from another, despite a significant difference across the three time periods being detected. It was expected to see levels of effect on the ATSPPH-SF, comparable to that of the PSOSH and SSOSH. This may be attributed to the Bonferroni adjustment, which adjusted the data for multiple comparisons, thus reducing the chance of detecting statistical significance.

A large effect size was observed for the PSOSH and the SSOSH, indicating that the level of variance on the PSOSH and the SSOSH could be explained by the web-based videos. For the ATSPPH-SF a moderate effect size was observed. The difference in effect size between the ATSPPH-SF and the scales measuring stigma was not expected as strong correlations have been found in the literature between levels of help seeking intentions and stigma (Rickwood et al., 2005; Vogel et al., 2007). Thus, it was expected that the level of effect observed would be consistent across the three scales.

4.3 Strengths and Limitations

The internal validity of the study may have been reduced, as the sample declined from eightynine participants to sixty-one participants, reducing the sample size available for analysis. However, this was an expected issue, due to the repeated-measures design of the study. A second limitation of the study was the absence of a control group. The control group would have allowed for determination of the effectiveness of the intervention, and have ruled out the possibility of repeated testing errors, or confounding variables, for example, a mental health talk in the college.

The strengths of the internal validity were that the data collection sessions were standardised, as all groups were tested in similar settings (during lecture time, in a lecture hall/room) and the testing procedure and materials were consistent across groups. Thus, a medium level of internal validity can be observed (Gliner, Morgan & Leech, 2009). Future studies should include a control group, to improve the internal validity of the study.

External validity of this study is limited. A convenient sample of Psychology students from IADT were recruited for the study. Therefore, the sample may not be an accurate representation of the psychology students in IADT, and generalizability of the results beyond this group should be applied with extreme caution.

The reliability and validity of the ATSPPH-SF may be affected, as an updated version of the scale was used, which included a neutral value on the likert scale, and the rephrasing of question 1. Whilst this eliminated the risk of statistical bias, and incorporated more appropriate terminology into the scale, the variations could affect the comparability of the results with previous findings in the literature, where the original scale was utilised.

4.4 Suggestions for Future Research

Future research should adopt random sampling methods, and aim to recruit a larger sample size, to allow for greater generalisabilty. A control group should be incorporated into the design of the study, to allow for comparison across groups. This would discern any issues surrounding the repeated testing, and allow for confident attribution of the results to the intervention.

This study examined a small sample of the Irish population, within the psychology student population in IADT. It would be important to establish if the results are comparable across the Irish psychology student population or the Irish population as a whole. This would allow for development of interventions which actively target stigma and help seeking, rather than interventions where the effects are unclear. It is important, especially in the modern economic climate to ensure that whatever interventions receive funding are actually effective, and can help to reduce the stigma surrounding help seeking, and increase help seeking intentions. The

retention of this effect also needs to be examined. If retention of the effect is limited to two weeks, for how long would the intervention have to be repeated, or for how long would participants need to be exposed to the intervention, in-order for a long-term impact to be observed?

Vogel et al., (2007) states that levels of self-stigma directly impact upon help seeking behaviour, suggesting that future research could focus on how to create an intervention that helps to reduce self-stigma, thus increasing help seeking behaviour. However, the impact of public-stigma on self-stigma must not be ignored. As public-stigma can directly affect the levels of self-stigma, efforts must be made to reduce public-stigma; future research should aim to develop interventions that target both types of stigma.

The use of web-based videos as an intervention decreased levels of self-stigma and publicstigma from pre-intervention to post-intervention. However, as the effects were not observed at the two week follow-up on the SSOSH, it would be important to revisit the group at one week follow-up, and establish the impact of the videos within a shorter time frame. The danger here could be that if researchers are looking to establish when the effect initiates decline, it would require repeated testing. However, by employing repeated testing, the internal validity of the study could be further compromised.

4.5 Conclusion

Although the hypotheses were supported, further investigation indicated that the effect of the intervention was most prominent on levels of self-stigma and public-stigma on the preintervention, post-intervention comparison. Help seeking intentions indicated a significant effect for time, however, pairwise comparisons did not show a significant effect between the time periods. Future research should aim to include a control group, to allow for direct inference of the results to the web-based videos.

References

- Barney, L. J., Griffiths, K. M., Christensen, H. & Jorm, A. F. (2009). Exploring the Nature of stigmatising beliefs about depression and help seeking: Implications for reducing Stigma. *Biomed Central Public Health*, 9 (61). Retrieved from http://www.biomedcentral.com/1471-2458/9/61.
- Carifio, J. & Perla, R. J. (2007). Ten Common Misunderstandings, Misconceptions, Persistent Myths and Urban Legends about Likert Scales and Likert Response Formats and their Antidotes. *Journal of Social Sciences*, 3 (3), 106-116.
- Chew-Graham, C. A., Rogers, A. & Yassin, N. (2003). 'I wouldn't want it on my CV or their records' : medical students experiences of help seeking for mental health problems. *Medical Education*, 37 (10), 873-880.
- Christensen, H., Leach, L. S., Barney, L., Mackinnon, A. J. & Griffths, K. M. (2006). The effect of web based depression interventions on self reported help seeking: randomised control trial. *BMC Psychiatry*, 6 (13). Doi: 10.1186/1471-244X/6/13.
- Citizens Information (2010). *Public Service Information: Provided by the Citizens Information Board.* Retrieved from: http://www.citizensinformation.ie /en/health/mental_health/mental_health_services.html
- Cooper, G. (2004). Exploring and Understanding Online Assistance for Problem Gamblers: The Pathways Disclosure Model. *International Journal of Mental health and Addiction, 1 (2), 32-38.*
- Copty, M. (2004). Mental Health in Primary Care. *South West Area Health Board and Irish College of General Practitioners*. Retrieved from http://74.125.155.132/scholar?q=cache:WmQvHETeQe4J:scholar.google.com/+Cop ty+2004+South+West+Area+Health+Board+and+Irish+College+of+General+Practit ioners.&hl=en&as_sdt=2000
- Corrigan, P. W. (2004). How Stigma Interferes with Mental Health Care. *American Psychologist*, 59 (7), 614-625.

- Corrigan, P. W., Larson, J., Sells, M., Niessen, N. & Watson, A. C. (2006). Will Filmed Presentations of Education and Contact Diminish Mental Illness Stigma? *Community Mental Health Journal*. Doi: 10.1007/s10597-006-9061-8.
- Crisp, A. H., Gelder, M.G., Rix, S., Meltzer, H. I. & Rowlands, O. J. (2000). Stigmatisation of people with mental illness. *The British Journal of Psychiatry*, *177*, 4-7.
- Denihan, A., Kirby, M., Bruce, I., Cunningham, C., Coakley, D. & Lawlor, B. A. (2000). Three year prognosis of Depression in the Community-dwelling Elderly. *British Journal of Psychiatry*, 176, 453-457
- Fischer, E. H. & Farina, A. (1995). Attitudes Toward Seeking Professional Psychological Help: A Shortened Form and Considerations for Research. [Abstract]. *Journal of College Student Development, 36*, 368-373.
- Fortune, S., Sinclair, J. & Hawthorn, K. (2007). Adolescents views on preventing self harm: A large community study. *Psychiatry and Psychiatric Epidemiology*. doi: 10.1007/s00127-007-0273-1
- Fortune, S., Sinclair, J. & Hawthorn, K. (2008). Help seeking before and after self harm: a descriptive study in school pupils in England. *Biomed Central*, 8 (369). Retrieved from http://www.biomedcentral.com/1471-2458/8/369
- Gliner, J.A., Morgan, G.A., & Leech, N.L. (2009). Research methods in applied settings: An integrated approach to design and analysis (2nd Edition). London, UK: Routledge: Taylor & Francis Group.
- Government of Ireland (2006). A Vision for Change. *Report of the Expert Group on Mental Health Policy*. Retrieved from http://www.dohc.ie/publications/vision_for_change.html
- HSE (2007). Mental Health in Ireland: Awareness and Attitudes. *Health Service Executive*. Retrieved from http://www.healthpromotion.ie/uploads/docs/HSP00612.pdf
- Isometsa E. T., Heikkinen M. E., Marttunen M. J., Henriksson M. M., Aro, H. M. & Lonnqvist, J.K. (1995). The last appointment before suicide: Is suicide intent communicated? *American Journal of Psychiatry*, 152 (6), 919-922.

- Jorm, A. F. (2000). Public Health Literacy. Public Knowledge and Beliefs about Mental Disorders. *British Journal or Psychiatry*, 177, 396-401.
- Larkin, A. (2010). An Exploration of Attitudes Toward Seeking Psychological Help. Retrieved from: https://www.tcd.ie/Psychology/other/mscapdissertations /pdf/Amanda%20Larkin%20-%20An%20exploration%20of%20attitudes%20 towards%20seeking%20psychological%20help.pdf
- Link, B.G., Phelan, J. C., Bresnahan, M., Stueve, A. & Pescosolido, B. A. (1999). Public Conceptions of Mental illness: labels, causes, dangerousness and social distance. *American Journal of Public Health*, 89 (9), 1328-1333.
- O'Connor, J. (2006). A Vision for Change. *Report of the Expert Group on Mental Health Policy*. Retrieved from http://www.dohc.ie/publications/vision_for_change.html
- Rickwood, D. J., Deane, F. P. & Wilson, C. J. (2007). When and how do young people seek professional help for mental health problems? *The Medical Journal of Australia, 187* (7). Retrieved from http://www.mja.com.au/public/issues/187_07_011007/ric10279_fm.html.
- Rickwood, D. J., Deane, F. P., Wilson, C. J. & Ciarrochi, J. (2005). Young peoples help -seeking for mental health problems. *Australian e-journal for the advancement of mental health*, 4(3 suppl), 218-251. Retrieved from http://www.reachoflouisville.com/kerry/kerry/Young%20People's%20Help%20Seek ing%20for%20Mental%20Health%20Problems.pdf
- Tyssen, R., Rovik, J. O., Vaglum, P., Grenvold, N. T. & Ekeberg, O. (2004). Help-Seeking for mental health problems among young physicians: is it the most ill that seeks help? *Social Psychiatry and Psychiatric Epidemiology, 39*, 989-993. doi: 10.1007/s00127-004-0831-8.
- Vanheusden, K., van der Ende, J., Mulder, C. L., van Lenthe, F. J., Verhulst, F. C. & Mackenbach, J. P. (2009). Beliefs about Mental Health Problems and Help-Seeking Behaviour in Dutch Young Adults. *Social Psychiatry*, 44, 239-246.
- Vogel, D. L., Wade, N. G. & Ascheman, P. L. (2009). Measuring Perceptions of Stigmatization by Others for Seeking Psychological Help: Reliability and Validity of a

New Stigma Scale With College Students. *Journal of Counselling Psychology*, 56 (2), 301-308.

- Vogel D. L., Wade N. G. & Hackler, A. H. (2007). Percieved Public Stigma and the Willingness to Seek Counselling: The Mediating Roles of Self-Stigma and Attitudes Toward Counselling. *Journal of Counselling Psychology*, 54 (1), 40-50.
- Yap, M. B. H., Wright, A. & Jorm, A. F. (2010). The influence of stigma on young people's help seeking intentions and beliefs about the helpfulness of various sources of help. *Social Psychiatry and Psychiatric Epidemiology*. doi: 10.1007/s00127-010-0300-5.

Appendix A: Consent Form 1

This study will be undertaken as my thesis for my undergraduate degree. The purpose of the study is to investigate the effect of video internet sources on attitudes towards help seeking intentions and stigma. The study aims to establish whether or not such sources are of value, i.e. do such sources achieve what they set out to achieve?

Participants are requested to participate in two data collection sessions (totalling 1 hour). The first data collection session is estimated to take approximately 45 minutes and will occur today. The second data collection session is estimated to take approximately 15 minutes and will occur in an estimated 2 weeks time. Participants are assured that all data collected will be completely anonymous, and are requested to answer the questions as honestly as they can. Participants do not have to answer any question in the study which they do not want to. If a participant does wish to withdraw from the study at any stage, please contact the researcher at mentalhealth@live.ie.

Any information that participants provide for this study will be kept confidential. By completing the identification key, all your results will be kept anonymous. Should you wish to withdraw from the study at any stage, I shall ask you the three questions. This will allow me to identify your results, and remove your data from the study.

<u>Consent</u>

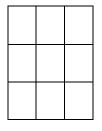
By ticking this box, participants are giving the researcher permission to use any data that is provided during the study. This acknowledges that participants have read and understood all of the aforementioned information and consent to participate in this research study.

Identification Key

First three letters of your mother's maiden name:

First three letters of the street where you first lived

First three letters of your favourite subject



Age: _____ Gender: male / female

Appendix B: Consent Form 2

This study will be undertaken as my thesis for my undergraduate degree. The purpose of the study is to investigate the effect of video internet sources on attitudes towards help seeking intentions and stigma. The study aims to establish whether or not such sources are of value, i.e. do such sources achieve what they set out to achieve?

Participants are requested to participate in the second data collection session today which is estimated to take approximately 15 minutes. Participants are assured that all data collected will be completely anonymous, and are requested to answer the questions as honestly as they can. Participants do not have to answer any question in the study which they do not want to. If a participant does wish to withdraw from the study at any stage, please contact the researcher at <u>mentalhealth@live.ie</u>.

Any information that participants provide for this study will be kept confidential. By completing the identification key, all your results will be kept anonymous. Should you wish to withdraw from the study at any stage, I shall ask you the three questions. This will allow me to identify your results, and remove your data from the study.

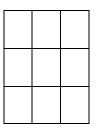
<u>Consent</u>

By ticking this box, participants are giving the researcher permission to use any data that is provided during the study. This acknowledges that participants have read and understood all of the aforementioned information and consent to participate in this research study.

Identification Key

First three letters of your mother's maiden name:

First three letters of the street where you first lived



First three letters of your favourite subject

Age: _____ Gender: male / female

Appendix C: Perceptions of Stigmatization by Others for Seeking Help (PSOSH)

Imagine you had an emotional or personal issue that you could not solve on your own. If you sought counselling services for this issue, to what degree do you believe that the people you interact with would _____.

1. React negatively to you

1. Not at all	2. A little	3. Some	4. A lot	5. A great deal

2. Think bad things of you

1. Not at all 2. A little	3. Some	4. A lot	5. A great deal
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3. See you as seriously disturbed

1. Not at all2. A little	3. Some	4. A lot	5. A great deal
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4. Think of you in a less favourable way

1. Not at all	2. A little	3. Some	4. A lot	5. A great deal
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5. Think you posed a risk to others

1. Not at all 2. A little	3. Some	4. A lot	5. A great deal
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Appendix D: Self-Stigma of Seeking Help (SSOSH)

People at times find that they face problems that they consider seeking help for. This can bring up reactions about what seeking help would mean. Please use the 5point scale to rate the degree to which each item describes how you might react in this situation.

1. I would feel inadequate if I went to a therapist for psychological help.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

2. My self-confidence would NOT be threatened if I sought professional help.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

3. Seeking psychological help would make me feel less intelligent.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

4. My self-esteem would increase if I talked to a therapist.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

5. My view of myself would not change just because I made the choice to see a

therapist.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

6. It would make me feel inferior to ask a therapist for help.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

7. I would feel okay about myself if I made the choice to seek professional help.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

8. If I went to a therapist, I would be less satisfied with myself.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

9. My self-confidence would remain the same if I sought professional help for a

problem I could not solve.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

10. I would feel worse about myself if I could not solve my own problems.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

Appendix E: Attitudes Toward Seeking Professional Psychological Help – Short Form (ATSPPH-SF)

1. I would obtain professional help if I was struggling to cope emotionally.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

2. Talking about psychological problems is a poor way to solve emotional problems.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

3. I would find relief in psychotherapy if in emotional crisis.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

4. A person coping without professional help is admirable.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

5. I would obtain psychological help if upset for a long time.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

6. I might want counselling in the future.

1. Strongly	2. Disagree	Disagree3. Agree & Disagree4. Agree		5. Strongly
Disagree		Equally		Agree

7. A person with an emotional problem is likely to solve it with professional help

1. Strongly	2. Disagree	3. Agree & Disagree4. Agree		5. Strongly
Disagree		Equally		Agree

8. Psychotherapy would not have value for me.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

9. A person should work out his/her problems without counselling.

1. Strongly	2. Disagree	3. Agree & Disagree	4. Agree	5. Strongly
Disagree		Equally		Agree

10. Emotional problems resolve by themselves.

1. Strongly	2. Disagree	3. Agree & Disagree	3. Agree & Disagree4. Agree	
Disagree		Equally		Agree

Appendix F: Debriefing Sheet 1

Thank you for your participation in this study. The study is seeking to identify whether online resources (specifically online videos) can have an effect on help seeking intentions and the associated stigmas. Your participation in this study will be requested in approximately 2 weeks time.

If you would like to contact the researcher after the study, please email Siobhán Kavanagh at <u>mentalhealth@live.ie</u>.

Here is a list of resources that you may find beneficial following participation in this study:

http://www.yourmentalhealth.ie/

http://www.headstrong.ie/

http://ie.reachout.com/

http://www.grow.ie/

http://www.iadt.ie/studentcare/

The Samaritans: 1850 60 90 90

24 hour help line

Aware: 1890 303 302

help line available: mon-wed: 10am-10pm & thur-sun: 10am-1am

The student health centre is located in the atrium building; here one of the nurses (Jean or Joan) will assist you to make an appointment with the doctor, and can be contacted at 01 239 4760

The student counsellor (Katie Hendrick) is located in the student services section of the Carriglea Building, and can be contacted on 01 239 4650

Project supervised by Dr. Nicola Porter

Email: Nicola.porter@iadt.ie

Tel: 01 2394769

Appendix G: Debriefing Sheet 2

Thank you for your participation in this study across two occasions. The study is seeking to identify whether online resources (specifically online videos) can have an effect on help seeking intentions and the associated stigmas.

If you would like to contact the researcher after the study, please email Siobhán Kavanagh at <u>mentalhealth@live.ie</u>.

Here is a list of resources that you may find beneficial following participation in this study:

http://www.yourmentalhealth.ie/

http://www.headstrong.ie/

http://ie.reachout.com/

http://www.grow.ie/

http://www.iadt.ie/studentcare/

The Samaritans: 1850 60 90 90

24 hour help line

Aware: 1890 303 302

help line available: mon-wed: 10am-10pm & thur-sun: 10am-1am

The student health centre is located in the atrium building; here one of the nurses (Jean or Joan) will assist you to make an appointment with the doctor, and can be contacted at 01 239 4760

The student counsellor (Katie Hendrick) is located in the student services section of the Carriglea Building, and can be contacted on 01 239 4650

Project supervised by Dr. Nicola Porter

Email: Nicola.porter@iadt.ie

Tel: 01 2394769

Appendix H: SPSS Output Tables for PSOSH

Multivariate Tests								
						Partial Eta		
	Value	F	Hypothesis df	Error df	Sig.	Squared		
Pillai's trace	.293	12.210 ^a	2.000	59.000	.000	.293		
Wilks' lambda	.707	12.210 ^a	2.000	59.000	.000	.293		
Hotelling's trace	.414	12.210 ^a	2.000	59.000	.000	.293		
Roy's largest root	.414	12.210 ^a	2.000	59.000	.000	.293		

Each F tests the multivariate effect of Time. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Pairwise Comparisons

Measure: PSOSH

	-	Mean Difference			95% Confidence Interval for Difference ^a	
(I)	Time (J) Time		Std. Error	Sig. ^a	Lower Bound	Upper Bound
1	2	1.361 [*]	.283	.000	.663	2.059
	3	.836*	.285	.014	.135	1.537
2	1	-1.361 [*]	.283	.000	-2.059	663
	3	525	.324	.331	-1.322	.272
3	1	836 [*]	.285	.014	-1.537	135
	2	.525	.324	.331	272	1.322

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni.

Appendix H: SPSS Output Tables for SSOSH

Multivariate Te	ests
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	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.289	11.990 ^a	2.000	59.000	.000	.289
Wilks' lambda	.711	11.990 ^a	2.000	59.000	.000	.289
Hotelling's trace	.406	11.990 ^a	2.000	59.000	.000	.289
Roy's largest root	.406	11.990 ^a	2.000	59.000	.000	.289

Each F tests the multivariate effect of Time. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Pairwise Comparisons

Measure:SSOSH

-	-	Mean Difference			95% Confidence Interval for Difference ^a	
(I) T	ïme (J) Time		Std. Error	Sig. ^a	Lower Bound	Upper Bound
1	2	2.131 [*]	.479	.000	.951	3.312
	3	.590	.728	1.000	-1.203	2.384
2	1	-2.131 [*]	.479	.000	-3.312	951
	3	-1.541 [*]	.598	.037	-3.013	069
3	1	590	.728	1.000	-2.384	1.203
	2	1.541 [*]	.598	.037	.069	3.013

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni.

Appendix J: SPSS Output Tables for ATSPPH-SF

Multivariate Tests											
						Partial Eta					
	Value	F	Hypothesis df	Error df	Sig.	Squared					
Pillai's trace	.106	3.503 ^a	2.000	59.000	.037	.106					
Wilks' lambda	.894	3.503 ^a	2.000	59.000	.037	.106					
Hotelling's trace	.119	3.503 ^a	2.000	59.000	.037	.106					
Roy's largest root	.119	3.503 ^a	2.000	59.000	.037	.106					

Each F tests the multivariate effect of Time. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Pairwise Comparisons

Measure:ATSPPH-SF

	-	Mean Difference			95% Confidence Interval for Difference ^a	
(I) Time	(J) Time	(I-J)	Std. Error	Sig. ^a	Lower Bound	Upper Bound
1	2	836	.366	.078	-1.738	.065
	3	.016	.369	1.000	893	.926
2	1	.836	.366	.078	065	1.738
	3	.852	.367	.070	050	1.755
3	1	016	.369	1.000	926	.893
	2	852	.367	.070	-1.755	.050

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.