Proposed patterns and changes for <u>Making Content Usable for People</u> with Cognitive and Learning Disabilities

This document groups together the findings in <u>Mental Health Literature Review (Responses)</u>, so that they can easily be processed by the COGA Task Force.

This document contains a few sections. They are:

- <u>Table 1</u>: Proposed patterns and changes to patterns in Making Content Usable for People with Cognitive and Learning Disabilities
 - For example, research that could mean new patterns, or substantive changes to existing patterns, such as a new bullet point in the instructions.
- <u>Table 2</u>: Research that may result in new Issue papers, or changes to existing Issue papers, or similar key takeaways.
- <u>Table-3</u>: Research that shows the general importance of the topic.
- <u>Table-4</u>: Research that corroborates or backs up existing patterns in Making Content Usable for People with Cognitive and Learning Disabilities
- Current proposals for COGA: These are based on the tables below and are currently being discussed.
- Agreed proposals for COGA: These are proposals that have been discussed and agreed by the wider TF.

Table 1 data in Linearized Form

Table 1: Proposed patterns and changes to patterns in <u>Making Content Usable for People</u> with <u>Cognitive and Learning Disabilities</u> (note: user needs will also have to be adjusted)

Summary or label of Proposed Change	Type of changes proposed (select: New pattern Add details to existing pattern (XXX)	Content-Usable Reference What to add to content useable	Ref(Row no. of Lit- Review) / Strength of research	Scope - disability, and types of applications	Notes of literature review and analysis	Notes from discussions
High-demand For good fine-motor skills, hand-eye coordination and rapid information processing	New pattern? do not rely on fine-motor skills - OR maybe this can be merged with 4.5.1 Or 4.2.5 Or	Add to existing pattern or Merge with 4.5.1 Ensure Controls and Content Do Not Move Unexpectedly (Pattern) Or 4.2.5 Clearly Identify Controls and Their Use (Pattern)	4(Medium) 16(Very good) but not so relevant - scrolling 40(Excellent) not so relevant - scrolling	4-Mental health, general 16-Different chapters had different research 40-Schizophr enia or Schizoaffecti ve Disorder, Severe Mental Illness(SMI)	4-"[People]with mental disorders encounter a wide range of barriers when using the Web that makes it difficult for them to perceive, understand, and operate this tool along with content contained therein. Most barriers result from distracting and confusing design, complicated content and website functions, an overabundance of information, and a	Proposal 1 Status-We received consensus of task force on adding text to the two existing patterns Notes: See template for new pattern at

New pattern (and pull stuff out of the other patterns)	? or new pattern under objective 4 And add collaboration to :(todo: add the patterns High-demand For good fine-motor skills and rapid information processing. Also add it to the other objectives in the @how it helps@		high-demand for good fine-motor skills and rapid information processing. Persons affected by other conditions associated with cognitive dysfunction have also been known to experience many of these barriers as indicated by Web design guidelines. " [One of the barrier reported by studies was difficulties with fine motor coordination (eg, clicking small radio buttons, operating computer mouse, scrolling)] 16- enable pages to scroll slowly; 40-Other key point the study suggests- users prefer paging over scrolling but adding more pages may be	Suggestions for the next version of Making Content Usable And copy pattern 4.5.1 Ensure Controls and Content Do Not Move Unexpectedly And add suggestion for adding to patterns on scrolling
			more inconvenient as user may get lost in deep hierarchy. The design lesson may be that the best designs, in terms of quantitative effectiveness and user preferences, will	

					minimize the need to scroll and will, at the same time, use a shallow navigational structure that relies on paging.	
Limit the topics covered to one topic per page? And limited by app Part of Chunking	New or Add?	4.2.1 Make the Purpose of Your Page Clear (Pattern) or 4.4.5 Keep Text Succinct (Pattern) Or 4.3.2 Make the Site Hierarchy Easy to Understand and Navigate (Pattern)	42(Medium)	Severe MH (SMH) Schizophreni a	1)Minimize application's layer or hierarchy 2) Use explicit text 3)Employ navigational memory aids(like pop-up menus) 4)Group hyperlinks in one area, and 5)Minimize the number of different subjects an application addresses	Status-We received consensus of task force on adding text to the existing pattern
Keep the tone, of content simple positive, be respectful and do not	New pattern or Add to existing pattern 4.4.2	New pattern in objective 4 OR Add to 4.4.2 Use a	16(Very good)	Different chapters had different research	Also see mainstreaming and app names in Table 2 below about not calling out disability names or in alternative content • written in a hopeful,	Proposal 3 Status- The COGA task force agreed to create a new pattern

A-III- d	C: 1.T		
talk down	Simple Tense	positive tone; • include	Nata
	and Voice	practical suggestions on	Notes-
	(Pattern)	how to cope with daily	Should this be
		challenges as well as	part of @use a
		information on common	clear tense and
		experiences;	voice@ -we are
		be respectful and do not	not sure
		talk down to users, preach	
		to them, or stigmatize	Cultural issues
		them;	of what is
			respectful
			requires
			knowledge of
			culture
			Note, this may
			be hard to test,
			maybe Al?
			Grammarly has
			an option for
			tone. Note
			these are
			improving, but
			should not be
			followed
			blindly.
			Difficulty.
			User testing
			Josef teating
			How is this
			handled on
			social media,
			or just scathing
			content in

Choices of color can be an issue	New pattern on color ? Or merge with 4.2.5	We have Consistent colors in already there in 4.2.3 Use a Consistent Visual Design (Pattern)	47(Good) 16(Very good)	Anxiety, anxiety disorders (and others in 16?)	Red can cause stress Use vivid, warm colors and consistent formatting;	general. (necessary for the function or art) Proposal 4 Status- Has been discussed in COGA TF (check the Proposal for details)
		But it does not what colors to pick, or contrasts (or size) Or merge with				Maybe we could also bundle in to this new pattern Make clear controls
		4.2.5 Clearly Identify Controls and Their Use (Pattern)				The following: high contrast, size and do not rely on good fine motor skills
Few navigation areas	Add to existing pattern 4.6.3	Add Few navigation areas to 4.6.3 Avoid Too Much Content	2(Good) 39(excellent)	Healthcare and schizophrenia Down	2-Few navigation areas reduce the cognitive effort required particularly for persons with SMI and potentially others, including	Proposal 9 Status-Accepte d by COGA TF

		(Pattern) 39-Suggested pattern uses deep structure instead of broad structure for the sites (4.3.2 Make the Site Hierarchy Easy to Understand and Navigate)		syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome. 39	those with cognitive impairments and limited skills or experience with technology and improve simplicty [A navigation area is a distinct area of a screen or page that contained 1 or more hyperlinks grouped together by proximity and typically related to one another via a common topic] Counter (39) The depth of navigation, that is, the number of screens one needs to navigate through to reach the desired contents is the most important variable for usability. (4.3.2 Make the Site Hierarchy Easy to Understand and Navigate)	
Make navigation simple-	Add to existing patterns 4.3.3 4.6.3	4.3.3 Use a Clear and Understandable Page Structure (Pattern) Do not use too many columns-	16(Very good)	Different chapters had different research	 make navigation simple; present information chunks on the same screen; do not use too many columns; include tabs at the top of a page with drop-down menus; enable pages to scroll 	Edit into 4.3.3. Not enough for a specific proposal

		[4.6.3 Avoid Too Much Content (Pattern)]			slowly; • include options for multiple languages; • add a search box; and • have a clearly defined title and scope for any materials; • include an orientation to the site;	
Easy customizatio n for the number of links on each page	Add details to existing pattern	Add to 4.9.3.2 4.9.3 Support Simplification (Pattern) Add Easy customization for the number of links on each page as a bullet point (excluding site maps)	39(Excellent)	Down syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	Recognition failure (recognizing correct items in the search result's list of links) is one of the three major causes for failed tasks using search engines by people with cognitive disabilities. By providing easy customization function that allows people with disabilities to set the number of links on each page and modify the way those links are presented e.g., different font sizes, the amount of information presented for each link, etc.) instances of recognition failure can be reduced.	Proposal 5,6,7(Merged) Status- Accepted in COGA TF Example Abilitynet support page

Easy customizatio n for presentaion of links on each page	Add details to existing pattern	Add to 4.9.3.2 4.9.3 Support Simplification (Pattern) Add Easy customization for the presentaion on each page as a bullet point (excluding site maps)	39(Excellent)	Down syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	Recognition failure (recognizing correct item in the search result's list of links) is is one of a three major cause for failed task using search engine by people with cognitive disabilities. By providing easy customization function that allows people with disabilities to set the number of links on each page and modify the way those links are presented e.g., different font sizes, the amount of information presented for each link, etc.) instances of recognition failure can be reduced.	Proposal 5,6,7(Merged) Status-Accept ed in TF
Test the search functionality is not malfunctioning Test search functionality is usable and functions well	Add to existing pattern 4.3.6.2	4.3.6.2 What to Do https://www.w3 .org/TR/coga-u sable/#what-to-do-11 Add tips to refine search results and use	3(Good) 39(Excellent) suggestion for spell checking	Anxiety Disorders, Depression for health care and resources 39 Down syndrome, Autism, Traumatic Brain Injury	3- The issues that tended to cause the most anxiety, Difficulty with navigation related to problems with: locating information; poor navigation; malfunctioning search bars and a complex purchasing process. 39- also suggests spell checking for search	Proposal 5,6,7(Merged) Status- To be discussed internally for the correctness of text

search operators, allow users to do conditional search Test with users Maybe add to consistency and predictability Maybe add to testing. -Notes Paper is very vague @malfunctiong search bars@ Warn the use about malfunctions "ensure filters and search functions work properly." ???does that help with the problem Maybe operators, work, more terms act	(TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	-The three major causes for failed tasks using the search engine are recognition failure, typos, and broad or redundant keywords.	

		as an and Test the search as a priority. Add tips for refining a search and triggering operators. That work!.				
Make "Home" button highly visible/easily recognizable	Add to existing pattern	Add Make "Home" button highly visible. using larger sizes, bright colors, and appealing icons. How it helps Home buttons are more easier way to align users after an unsuccessful search attempt, due to navigate a wrong path, enter a misspelled	39(Excellent)	Down syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	Design considerations are needed to encourage people with cognitive disabilities to use the "Home" button in a more effective way. For example, the designers can make the "Home" button highly visible using larger sizes, bright colors, and appealing icons Participants with cognitive disabilities mostly rely on back button" to get back to the home page when they got lost or clicked a wrong link. The reliance on back button had a negative impact on efficiency, especially when	Revised Proposal 8

word in a search engine, or get lost at a certain point during navigation	some participants spent time reading every page on the way back to the home page.
Add to	
4.3.2 Make the Site Hierarchy Easy to Understand and Navigate (Pattern)	
or	
4.5.2 Let Users Go Back (Pattern) or	
4.3.1 Make it Easy to Find the Most Important Tasks and Features of the Site (Pattern)	
or	
4.2.2.5 Getting	

		Started https://www.w3 .org/TR/coga-u sable/#getting- started 4.5.2 Let Users Go Back (Pattern) or 4.3.1 Make it Easy to Find the Most Important Tasks and Features of the Site (Pattern)				
Simplify complex purchasing processes	Add to existing pattern 4.6.2	Add to 4.6.2 https://www.w3 .org/TR/coga-u sable/#mak E-short-critical- paths-pattern (It can be added as an example to Keep the critical paths short)	Good(3) Excellent(40) Medium (42)	3-Anxiety Disorders, Depression for health care and resources Schizophreni a or Schizoaffecti ve Disorder, Severe Mental Illness(SMI)	complex purchasing processes 40- The depth of navigation, that is, the number of screens one needs to navigate through to reach the desired contents is the most important variable for usability. (4.3.2 Make the Site Hierarchy Easy to Understand and Navigate)	Proposal 10 Status -Accepted by COGA TF

)Minimize application's layer or hierarchy 2) Use explicit text 3)Employ navigational memory aids(like pop-up menus) 4)Group hyperlinks in one area, and	
Make links and controls labeling explicit	Add to existing pattern 4.2.5	Explicit labeling of links and controls (we want the label to be visible) Is this part of 4.2.5 Clearly Identify Controls and Their Use (Pattern) ?or 4.2.6 Make the Relationship Clear Between Controls and the Content They Affect (Pattern)	7(Medium- Poor) 2(Good) 39(Excellent) 42(Medium)	Bipolar, Depression, Schizophreni a or Schizoaffecti ve Disorder, smi and schizophrenia spectrum disorder, 42-Schizophr enia or Schizoaffecti ve Disorder, Severe Mental Illness(SMI)	Pass onto silver?	Proposal 11 Status:Accepte d by COGA TF
		[Example- News Archives				

		by Category(old) Section in http://schizophrenia.com/ site				
Make pages printable	Add to existing pattern 4.8.2	Add to 4.8.2 Provide Alternative Content for Complex Information and Tasks (Pattern)	16(Very good)	Different chapters had different research	notes- Look at paper to see a bit more : It might be for important information How strong is this specific research, and what is the context	Status: The paper is revised by Lisa and Rashmi ,it does not have much details.
Privacy of data should be protected	4.8.3.1 Or issue paper				People with mental illness may be most vulnerable to the risks related to errors and biases in algorithms and big data. Many users are susceptible to scams, and employment etc data misuse and therefor are afraid of privacy, Big data and algorithms are used to commit fraud, and some with mental illness may have an increased vulnerability to online fraud.	

					Automated decision-making by computer algorithms based on the tracking our everyday behaviors impacts critical aspect of life including employment, health care and credit.	
Fear of time out adds to anxiety which reduces cognitive function	add to (Pattern)	4.5.9 Avoid Data Loss and "Timeouts"(Patt ern) Add Knowing that there is no time out?	55(Good)		Participants in the study reported experiencing overwhelming test anxiety weeks in advance of the actual exam, with worries and fears centering on issues of not having enough time to complete the exam and not being able to overcome the memory and	Proposal 12 Status-Accept ed by COGA Task Force
Findability	add to (Pattern)	4.3.2 Make the Site Hierarchy Easy to Understand and Navigate	40(Excellent) 42(Excellent) 39(Excellent)	[40,42] Schizophrenia or Schizoaffective Disorder, Severe Mental Illness(SMI) 39-Down syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia,	40-"The depth of navigation, that is, the number of screens one needs to navigate through to reach the desired contents is the most important variable for usability. (4.3.2 Make the Site Hierarchy Easy to Understand and Navigate)" The design lesson may be that the best designs,	Proposal 13 Status-Once discussed on 19/02/2024 To be discussed again in COGA TF on 11th March

	Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	in terms of quantitative effectiveness and user preferences, will minimize the need to scroll and will, at the same time, use a shallow navigational structure that relies on paging. 42 - It provides evidence based guidelines that to design e-health applications for persons with SMI (Severe mental illness) the most important features are -Minimize application's layer or hierarchyThe text of hyperlinks should be as clear as possible. 39- provides Counter point (Suggested pattern uses deep structure instead of broad structure for the sites. The study states it was more difficult for people with cognitive challenges to recover from incorrect categories on the lower-level pages in the broad structure	Take input from John kirkwood@
		lower-level pages in the broad structure than in the deep structure.	

				4.3.2 Make the Site Hierarchy Easy to Understand and Navigate) 39-Suggests a deep hierarchy with breadcrumbs etc)	
Triggers	New Pattern in personalization Proposed draft of pattern "Personalization of Trigger Warnings and Triggering Content"	Fill in after issue papers are drafted		Issue Paper Draft Issue paper: Trigger Warnings and Personalization See issue paper for discussion Under 8: add editor'sl note that a pattern may be added based on issue paper)	
Algorithms	Fill in after issue papers on social media is drafted				
Safety	Fill in after issue papers are drafted or edited			Divide into: 1. Make options and risk clear (4.8.3 Clearly State the Results and Disadvantages of	4.5.11 Help the user stay safe (Pattern)

Actions, Options, and Selections (Pattern) For now an editor's note: that we might add content based on the SDM Supported Decision Making issue paper) And issue paper
2. Help the user stay safe add bullet point of support decision making
Add in Objective 8: Support Adaptation and Personalization A new pattern Enable user control with supported decision making editor's note pointing to the paper and saying a pattern will be added. In the meantime look qta)

Supported decision making	Maybe issue papers		Mental health conditions, stress,anxiety, gambling addiction And Banking	Can augment:# 4.8.3 Clearly State the Results and Disadvantage s of Actions, Options, and Selections (Pattern) But needs to be more, under provide help and support. Oe personalization 4.5.3 Notify Users of Fees

Task (Patt	
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Table 2: Research that may result in new Issue papers, or changes to existing Issue papers, or similar key takeaways.

Issue Paper/ Other/Section/Tak eaway	Reference(Rowno. of Lit-Review) -Strength of research	Scope information (disability, and types of applications)	Notes of literature review and analysis	Notes From discussions	Next steps
Mainstreaming, and names of applications do not mention disabilities	5(Medium) 6(Good)	Anxiety, health care Anxiety Disorders, Depression, "mental health	App titles related to anxiety disorders and symptoms have lower adoptions and fewer reviews than others. anxiety apps with titles related to mindfulness activities have more installs, reviews, and higher ratings by users. Since app titles related to mindfulness activities (eg, breathing and meditation) signal providing a method to help users reduce their anxiety, users may perceive them to be more useful and applicable	Maybe the tone issues should be added here as well?	To do
Social media issue paper Allow for switching off social media, and distractions	24(Medium) 25(Medium) 34(Medium) 36(Excellent -(eating disorders)	General symptoms Eating disorders Well being/ mental health	24(added to draft)- The study contends that social networking site addiction stimulates various stressors among nurses such as envy,	Allow users to take some topics out of the algorithm Clusters of keywords / related terms	Next steps: Finish analysis, put together an outline for an issue paper

Draft -Issue Paper: Personalization Settings for Switching off Social Media	37(Good) 49(Excellent) 50(Excellent)	social anxiety and rumination that augment its negative effects on task distraction. 25(added to draft)- The relationship between social media and mental well-being is moderated by age. For adults over 30, social media use increases anxiety. For adults aged 18–29, social media use decreases anxiety. 34(added to draft)- This systematic review has found that social media envy can affect the level of anxiety and depression in individuals. In addition, other potential causes of anxiety	Allow switching off Limiting exposure (important/ facts/ news only) Allow less distracting notifications that don't affect flow Allow for calmer sounds	or add to existing one, review what we have. write to Adapt (github issue), propose supportive Issue Paper: Personalization Settings for Switching off Social Media 50 - allow for calmer choices of notifications and ones that do not disturb flow
		and depression have been identified, which require further exploration. 36(Added to draft) Body image and eating disorders Time spent on these social networking sites produced stronger correlations with body image concern than did overall Internet exposure. This may lead to reduced self esteem, dieting and eating disorder. -With over exposure of social media pretweens girls		

	are highly likely to be exposed to material that they neither fully understand nor evaluate sufficiently critically. 37-(added to draft) The study suggests using Facebook was associated with a likelihood of diminished future well-being and reduced self esteem. Study says excessive use of Facebook could induce higher levels of envy, which led to feelings of depression. Also people with signs of depression linked to Facebook spend even more time on social networking sites, leading to a vicious circle of depression. Counter 49- Small study not sure if it included disabilities - Customizations that lightly notify without pulling a user off of their current task are less distracting and still informative enough. 50- Over time users prefer to have softer/calmer
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			notifications (example teens vs. adults, or new tech users vs. experienced tech users). Related to distractions and actionability (adults and experienced preferred to take action more often and set less noisy notification settings.	
Social media issue paper (positive side)	21(Excellent) 25(Medium) 33(Medium)	21-Meta study 25-Anxiety Disorders, Depression, keyed ionto "feeling like you are having a nervous breakdown 33-Depressio, Social isolation	21(added to draft)- Social media has become an important part of the lives of many individuals living with mental disorders. Many of these individuals use social media to share their lived experiences with mental illness, to seek support from others, and to search for information about treatment recommendations, accessing mental health services and coping with symptoms. Researchers need to work closely with clinicians and with those affected by mental illness to	Add to social media paper but broaden it.

technology should support this. 25-(added to the deraft) The relationship between social media and mental well-being is moderated by age. For adults over 30, social media use increases anxiety. For adults aged 18–29, social media use decreases anxiety.	
33-(added to draft) Social Media can also support people with mental health who are in pain and can not go out much, protect from social	
support cognitive impairments and social anxiety . Online social participation can alleviate	
	support this. 25-(added to the deraft) The relationship between social media and mental well-being is moderated by age. For adults over 30, social media use increases anxiety. For adults aged 18–29, social media use decreases anxiety. 33-(added to draft) Social Media can also support people with mental health who are in pain and can not go out much, protect from social anxiety if web sites support cognitive impairments and social anxiety. Online social

		pain on mental well-being Online social networking sites should take care of cognitive impairment and the presence of computer anxiety so that old age people can use them easily.	
Add to social media issue paper Maybe Add to the Issue paper on safety? Maybe also to 4.5.11 Help the user stay safe (Pattern)	11-(very good) 33-(Medium)	From 11(Change from original review) -Preference for online social interaction (POSI) linked to social anxiety, loneliness good quality research From 33? Or 34? social media envy can affect the level of anxiety and depression in individuals. In addition, other potential causes of anxiety and depression have been identified, which require further exploration.	
Add to social media issue paper Maybe Add to the Issue paper on safety?	57(1 but article seen not the actual research)	Can affect body image, anxiety and depression especially in teens	

Maybe also to 4.5.11 Help the user stay safe (Pattern)				
Add to the Issue paper on safety? Social media issue paper Corroborates general need	14(Excellent)	schizophrenia	Negative feelings were reported "often" or "very often" 56% (255/457) of the time, including feelings of being unable to stop (27%, 123/457), frustration (25%, 114/457), paranoia (24%, 110/457), worry (20%, 91/457), sadness (20%, 91/457), anger (19%, 87/457), or envy (16%, 73/457). The lack of any strong signal regarding negative experiences with technology is also in line with a recent systematic review of the literature on mobile phone interventions in those with schizophrenia, which also found no evidence of adverse events such as increased paranoia, fear, or anger [13]. However,	Add to social media paper but broaden it. Add to safety issue paper And pattern 4.5.11 Help the user stay safe (Pattern)

Allow for limit time on different types of internet use	20(Excellent)		some who are afraid of technology may not have taken this Web-based There was an association between psychiatric symptoms such as somatization, sensitivity, depression, anxiety, aggression, phobias, and psychosis with exception of paranoia; and diagnosis of Internet addiction controlling for age, sex, education level, marital status, and type of universities.	Add to social media paper but broaden it. 4.5.11 Help the user stay safe (Pattern) ?
Social media screen time	22(Very poor-5 on scale)	General discussion	care needs to be inplace with social media, screen time and kids	Add to social media paper but broaden it.
Add to social media paper but broaden it. Links and affects on mental health are questionable. Internet use is not	23(Excellent/V ery good?)	General mental health	First, although time spent on the Internet was found to be negatively associated with mental health, some activities, such as school work, were positively associated. Second, time spent on the Internet was not an independent risk	Add to social media paper but broaden it.

intrinsically harmful but it depends on the activity that one engages in, and how it affects the individual.			factor for mental health after accounting for the perceived consequences of Internet use, underlining that Internet use is not intrinsically harmful but it depends on the activity that one engages in, and how it affects the individual. Even when it comes to specific activities, for example, gaming, the relationship could be complex		
Issue Paper: Personalization settings to Remove or hide Trigger Warnings and harmful content	32(Good) 30(Excellent)- Counterview 36-(Excellent-(eating disorders) 70-(Excellent) 71-(Excellent) 72-(Very Good) 68- excellent	Post-traumatic Stress Disorder (PTSD) 70-Although PTSD, phobias, panic disorders, and OCD are mentioned as being possible beneficiaries of trigger warnings, the study specifically doesn't test such groups.	Relating to images, audio and video: The responsibility of creators to avoid the infliction of secondary trauma on users. This goes beyond content warnings to the question of should something be shared at all. (Note: This research is still pending peer review and duplication) Trigger Warnings, non-specific (ea. The following content could be disturbing) From 30 trigger warnings	Global setting may be better	Finish analisis, incorporate into draft, Decided if more research is needed Draft pattern Later - publish

71-Anxiety suggest that they are Disorders, functionally inert or Post-traumatic cause small adverse side Stress Disorder effects. (PTSD) We found substantial 72-Anxiety Disorders, evidence that trigger Post-traumatic warnings counter Stress Disorder therapeutically reinforce (PTSD), survivors' view of their Although PTSD, trauma as central to their phobias, panic identity. disorders, and OCD are Other harm (36) includes mentioned as being possible eating disorders. With beneficiaries of over exposure of social trigger media pretweens girls are warnings, the highly likely to be study exposed to material that specifically they neither fully doesn't test understand nor evaluate such groups. sufficiently critically. 68 - meta study - against them The study found that trigger warnings have no effect on emotional reactions to warned-of material • Trigger warnings(TW) do not mitigate distress. Trigger warnings do not

seem to increase the avoidance of warned-of material. • Trigger warnings foster a "forbidden fruit effect" where warnings actually increase rather than decrease attraction to potentially negative material. • Findings likely reflect the "Pandora effect," which suggests that people have a general tendency to approach rather than	
upcoming content. • According to the current literature, the extra negative emotions induced by trigger warnings serve no productive purpose. • At best, warnings have no effect on the comprehension of material for students. At	
worst – because trigger warnings seem to reliably	

increase anticipatory anxiety responses trigger warnings have the potential to increase apprehension and anxiousness about student attending class. 70-Overall, trigger warnings appear to have little impact on affect or learning, but they do increase people's belief that warnings are necessary for sensitive topics. Like many educational trends, the importance of trigger warnings appears to have been overstated, and empirical evidence supports, at best, their judicious application rather than wholesale adoption. The paper suggests it is possible that trigger warnings are ineffective among the general

T T	
	population but effective
	among clinical
	populations
	71-
	* Apart from a minor
	increase in avoidance
	when a warning appeared in the first few trials,
	participants did not
	overall avoid negative
	stimuli prefaced with a
	trigger warning any more
	than stimuli without a
	warning.
	* Study contributes to the
	growing body of literature
	demonstrating that
	warnings seem trivially
	effective in achieving their
	purported goals.
	pulported goals.
	72- Across the studies,
	believing that trigger
	warnings are protective
	(versus coddling)
	increased their effect on
	anticipated negative
	affect, but weakened their
	effect on experienced

negative affect. Trigger warnings can reduce negative emotions but can also increase avoidance. Thus, trigger warnings introduce difficult-to-weigh tradeoffs: the avoidance of warneAcross the studies, believing that trigger warnings are protective (versus coddling) increased their effect on anticipated negative affect, but weakened their effect on experienced negative affect. Trigger warnings can reduce negative emotions but can also increase avoidance. Thus, trigger warnings introduce difficult-to-weigh tradeoffs: the avoidance of warned-of content might have short-term emotion-regulation

benefits, but also could
hypothetically
result in decreased
memory for important
material or prevent people
from learning to cope with
distressing content. On
the other hand, by
reducing negative
emotional experiences or
signaling
supportive environments,
trigger warnings might
promote engagement
with otherwise distressing
material in the long
run.d-of content might
have short-term
emotion-regulation
benefits, but also could
hypothetically result in
decreased memory for
important material or
prevent people from
learning to cope with
distressing content. On
the other hand, by
reducing negative

			emotional experiences or signaling supportive environments, trigger warnings might promote engagement with otherwise distressing material in the long run.	
Maybe issue paper on privacy or add to current issue papers on authentication or safety Or update safety issue paper And safety related patterns	29(Excellent) 35(Excellent) 31(Good) 58(Medium)	Disorders, Bipolar, Depression, Eating Disorders, Schizophrenia	 Add to safety issue paper about new findings. Possibly add section in the process part of making content usable giving clear instruction on the how of this issue One of the highest-rated reasons for not using apps for mental health is concerns about whether these apps could keep mental health information adequately private (31) (From row 29) Many users are susceptible to scams, and employment etc 	Discuss if we want a separate issue paper Add to 4.5.11 Help the user stay safe (Pattern)

data misuse and
therefor are afraid of
privacy
People with mental Hange report to the report
illness may be most vulnerable to the risks
related to errors and
biases in algorithms
and big data.
Automated
decision-making by
computer algorithms
based on the
tracking our everyday
behaviors impacts
critical aspect of life
including employment,
health care,
and credit.
(From row 35)
Help the user stay
safe.
The misuse of
algorithms has the
potential to cause
financial harm to
people with cognitive
and/or mental health
conditions. For
example, in 2015
Facebook filed for a
patent and part of that

 · · · · · · · · · · · · · · · · · · ·
patent was for an algorithm that could help financial institutions run credit scores of the people in a person's social network and use that data to determine whether or not to approve that person's loan application.
Any data collected should be clearly communicated and how that data is going to be used should be transparent. It should be simple for users to see their data and make corrections when they discover errors.
58-User would like more control over their personal data and the kind of content they are shown on social media.
And this is very sensitive information Revealing sources may be helpful (jon)

Add to Importance	19(Good)	Bipolar, Also	Key takeaway of article	
of data gathering	41(poor) 56 (review of	mental health in general	(quoted): Given the realities of app accuracy,	
	issues)	general	efficacy, privacy, security,	
Add to safety and			and the regulatory	
privacy for mental helps apps issue			environment, and to maximize participation, a	
paper			variety of technology	
And to 4.5.11 Help			platforms should be used for data collection rather	
the user stay safe			than focusing on	
(Pattern)			smartphones. (This can be combined	
			with above row about	
			safety and privacy)	
			40 Study noted that all	
			users has concerns about privacy and their data	
			being inappropriately	
			shared.	
			56 The use of IoT devices	
			assist in providing	
			medical care to patients including for bipolar	
			disorder and other mental	
			illness. IoT devices are eroding the boundaries	
			between public and	
			private. Massive amounts of data from all possible	
			digital activities through	
			IoT are collected. People	

		with mental illness may be especially at risk of harm from errors and biases in data and algorithms associated with automated decision making Privacy is a particularly important concern for individuals with psychiatric disorders, especially due to the stigma.	
Add to 4.5.11 Help the user stay safe (Pattern) or 4.5.3 Notify Users of Fees and Charges at the Start of a Task (Pattern) But broaden pattern	16(Good)	Should we talk about communicating and making decisions about health care has four dimensions? 1. understanding the nature as well as the risks and benefits of treatments and alternatives; 2. appreciating and applying the relevant information to one's self and one's own situation; 3. engaging in consequential and comparative reasoning	
Or add to clear processes and		and manipulating information rationally; and 4. expressing a clear and	

clear instructions			consistent decision. Also it has some evidence pro flat design, for schizophrenia for short paths		
Safety and privacy	31(Medium)	Anxiety Disorders, Depression, Post-traumatic Stress Disorder (PTSD)	One of the highest-rated reasons for not using apps for mental health is concerns about whether these apps could keep mental health information adequately private		Do we want new issue paper on privacy or add to existing one 4.5.11 Help the user stay safe (Pattern)
Supported decision making	61(its an article not research paper) 63 (very good)	Mental health conditions, stress,anxiety,gam bling addiction And Banking	Research has found that mental health conditions can have an impact on spending, something which banks and financial institutions often neglect. This research has resulted in Monzo designing product features to help those with mental health conditions, including real-time balance updates to increase financial visibility and an option to block transactions relating to gambling. Positive Friction in	1. supported desion making: such as n Increased impulsivity, which can make it harder to resist the temptation to spend. or make other desions for themselves positive friction, such as -Self-Imposed Spending limit (per website or shop?) -cooling off period -double conformation -notifing someone maybe with View-Only Account	Can augment:# 4.5.3 Notify Users of Fees and Charges at the Start of a Task (Pattern)

processes like financial transactions can give users more protection, a safety net when things can go wrong, whether big or small

Also from 63

When under stress, fast and effortless heuristics may dominate over slow and demanding deliberation in making decisions under uncertainty. The author reviewed evidence from behavioral studies and neuroimaging research on decision making under stress and propose that stress elicits a switch from an analytic reasoning system to intuitive processes. Stress may interfere in this

Stress may interfere in this competition between emotion and cognitive functioning and thereby impair decision-making. The review provides a relatively comprehensive summary of stress and economic decision-making and proposes that stress may potentiate decision biases.

The stress induced deliberation-to-intuition model (SIDI) provides

Access
Mobile Banking
Notifications
algeritmic support to identify
dark patterns and
explotation (such as tichets
bought in someone elses
name
Customizable

- 2. allow for customizable supported design making (helper) up to the user:
- -consent required
- -view only (to give support) with notifications
- -view and cancelation only

the second and third options works well with a cooling off period were the care taker can give advice and the user can have the time needed to cancel. an option may be to allow helper to cancel, but not do transactions.

note user needs change with time, for example a user with bi-poler can need support duering manic phases. when the condition is under control it may not be needed, or the settings can be readjusted to be less obtrusive. algerims could renstate notification for a

testable hypotheses and can guide future research in this direction direction differnt level of risk. note some items need forms and some should not be included: fetures (page 22) included: Customizable Mobile Spending Limit, Duplicate Account, Online Monitoring, Notifications on Debit Cards Statements not all actions should be subject to all of the above, for example change of address is only online monetering. View-Only Consent, Revocation, Third-Party Monitoring information may be Online Monitoring and Notifications note legal and privacy requirements may be in play. State privacy laws may impact the form of consent that financial institutions use for implementing supportive-banking features.
. The Gramm-Leach-Bliley Act of 1999 (GLBA) permits disclosure of nonpublic personal information so long as the financial

	institution acquires advance consent from the consumer. Financial institutions should acquire customers' consent prior to sending any text message notifications.	
	The Electronic Fund Transfer Act (EFTA) and Regulation E protects consumers against unauthorized transactions. The Consumer Financial Protection Bureau (CFPB) encourages financial institutions to report activity that signals financial exploitation, and many states have mandatory reporting requirements.	

Table 3: Research that shows the general importance of the topic

Takeaway	Ref(Row no. of Lit- Review) / Strength of research	Scope information (disability, and types of applications)	Notes of literature review and analysis	Notes From discussions	
Access to Internet and barriers in internet use for Veterans with Serious Mental Illness is discussed in this paper lack of knowledge and self-reported cognitive problems were cited as the most frequently experienced barriers Contrary to other studies this study suggests that veterans with serious mental illness frequently access the internet and have an interest in utilizing it to research both physical and mental health	8(Good)	Bipolar, Depression, Post-traumatic Stress Disorder (PTSD), Schizophrenia or Schizoaffective Disorder	Often "self blamed" as lack of knowledge or cognitive abilities Less access and internet use by ptsd when compared to schizophrenia spectrum disorder. The symptoms may be a factor., However VA (Veteran Affairs) services helped with compared to studies outside the VA However Tsai et el 2014, found vets with serious mental health significantly less likely to use the internet. Wide group of mental health reviewed		

conditions.				
General points Main takeaway for our purposes is potential for harm to individuals with mental health conditions.	13-Research quality -Not mentioned in Google response sheet	C	Web can be a resource for people to obtain psychiatric medications without a prescription.	
General point And corroborates supportive document that emphasizes the importance of web accessibility for people with mental health disorders	28-(Good)	Anxiety Disorders, Depression, Schizophrenia or Schizoaffective Disorder	This article would be helpful if we need a supportive document when we need to emphasize the importance of web accessibility for people with mental health disorders as this article points out that many mental health patients use the internet to find health information related to them.	
Smartphone applications(Techn ology-delivered healthcare interventions) may function as a useful	44(Excellent)	Schizophrenia or Schizoaffective Disorder	Smartphone applications(Techn ology-delivered healthcare interventions) may function as a useful	

adjunctive support for patients with schizophrenia during both on- and off-hours But the potential is huge			adjunctive support for patients with schizophrenia during both on- and off-hours	
Significant associations between depressive symptoms and subjective user experience, specifically of website content, usability, and aesthetics, as well as an effect of content perception on the overall appraisal of a website in terms of the intention to visit it again	48(Good)	Depression	significant associations between depressive symptoms and subjective user experience, specifically of website content, usability, and aesthetics, as well as an effect of content perception on the overall appraisal of a website in terms of the intention to visit it again	
Medical need for guidelines for	43(Good)	Anxiety Disorders, Depression	Web-based interventions for stress	

MH(Mental Health)	management offers
apps	promising
	advantages like
	24-hour
	accessibility,
	possibility for
	interaction, instant
	feedback and
	support, scalability
	.One major
	disadvantage and
	risk, however, is the
	lack of quality
	assurance of
	web-based health
	sites and
	interventions. There
	are no
	internationally
	agreed upon
	guidelines for
	assessment, and
	users of these
	services may
	receive misleading
	or incorrect
	information that
	may potentially be
	harmful to health
	and wellbeing.

Allow user to choose notification frequency	54(Medium)	General	Actionable directed notifications only, and allow users to choose when and how to get notifications.	
user interfaces need to be designed to be less stressful	59(Medium)	Anxiety Disorders, Depression	High level ideas like "user interfaces need to be designed to be less stressful," "users like to feel like they are being successful," and "users need to be able to customize their technology environment." (My paraphrasing.) Some of the papers referenced could be interesting to follow up on if we can access them.	
Hinted at using reward to generate eustress (good stress)	67(Medium)	Hyperstress, Hypostress, Distress, Eustress		
Suggestions about designing	54(Medium)	General		

notification scheduling -Actionable directed notifications only, and allow users to choose when and how to get notifications.				
Physical, sensory, and cognitive disabilities often co-occur with mental health conditions adding layers of digital accessibility concerns for individuals None of the existing evaluations framework evolved for mental health apps consider accessibility. Assessing user experience may not identify accessibility issues.	60 (very good) 61	Mental health	Simple copywriting throughout the product(3.3.1 Clear language), avoiding confusing jargon(4.4.1(Use clear words),having customer support 3.7.1 (Help) all these help in combat stress and anxiety	
When under stress,	63 (very good)	Anxiety Disorders,		

foot and offentless	Do at two was at a Other and		
fast and effortless	Post-traumatic Stress		
heuristics may	Disorder (PTSD),		
dominate over slow	Stress		
and demanding			
deliberation in			
making decisions			
under uncertainty.			
The author reviewed			
evidence from			
behavioral studies			
and neuroimaging			
research on decision			
making under stress			
and propose that			
stress elicits a switch			
from an analytic			
reasoning system to			
intuitive processes.			
Stress may interfere			
in this competition			
between emotion and			
cognitive functioning			
and thereby impair			
decision-making.			
The review provides a			
relatively			
comprehensive			
summary of stress			
and economic			
decision-making and			
proposes that stress			
may potentiate			
decision biases.			
The stress induced			
deliberation-to-intuitio			
n model (SIDI)			
provides testable			

hypotheses and can guide future research in this direction			
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Table 4: Research that corroborates or backs up existing patterns in <u>Making Content</u> <u>Usable for People with Cognitive and Learning Disabilities</u>

Pattern or objective in content usable	Ref(Row no. of Lit- Review) / Strength of research	Scope - disability, and types of applications	Notes	
4.2.4 Make Each Step Clear https://www.w3.org/TR/ coga-usable/#make-eac h-step-clear-pattern	39(Excellent)	Down syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	Reinforces adding breadcrumbs	
4.9 Objective 8: Support Adaptation and Personalization https://www.w3.org/TR/coga-usable/#objective-8-support-adaptation-and-personalization-0	39(Excellent)	Down syndrome, Autism, Traumatic Brain Injury (TBI), Dementia, Dyslexia, Attention Deficit Disorder (ADD), Cerebral Palsy, and Fragile X Syndrome.	Reinforces objective 8 (customization, spell check etc)	
4.3.2 Make the Site Hierarchy Easy to	40(Excellent)	Schizophrenia or Schizoaffective	The depth of navigation, that is, the number	

Understand and Navigate (Pattern) https://www.w3.org/TR/coga-usable/#make-thesite-hierarchy-easy-to-understand-and-navigate-pattern		Disorder, Severe Mental Illness(SMI)	of screens one needs to navigate through to reach the desired contents is the most important variable for usability	
4.6.2 Make Short Critical Paths (Pattern) https://www.w3.org/TR/coga-usable/#make-short-critical-paths-pattern				
4.3.2 Make the Site Hierarchy Easy to Understand and Navigate (Pattern) https://www.w3.org/TR/ coga-usable/#make-the- site-hierarchy-easy-to-un derstand-and-navigate-p attern 4.6.2 Make Short Critical Paths (Pattern)	42(Excellent)	Schizophrenia or Schizoaffective Disorder, Severe Mental Illness(SMI)	It provides evidence based guidelines that to design e-health applications for persons with SMI (Severe mental illness) and Schizophrenia the most important features are 1)Minimize application's layer or hierarchy 2) Use explicit text 3)Employ navigational memory aids(like pop-up menus)	

https://www.w3.org/TR/coga-usable/#make-short-critical-paths-pattern			4)Group hyperlinks in one area, and 5)Minimize the number of different subjects an application addresses	
4.6.3 Avoid Too Much Content (Pattern) and 4.6.3.2. https://www.w3.org/TR/ coga-usable/#avoid-too- much-content-pattern	2(Very good)	Schizophrenia or Schizoaffective Disorder	Few topic areas, Few columns, few themes, few display distractions, easy to moderate reading ease	
4.7 Objective 6: Ensure Processes Do Not Rely on Memory Ad to how it helps? To any or all of 4.7 And 4.3.3. (structured page and 4.10 Use White Spacing (Pattern)	51(Medium) 53(Very Good)	51-Scope not mentioned in Goggle response sheet 53-General, memory capacity	Don't make users memorize [This has implications for mental health as spoon theory would suggest that these chunks decrease as stress or ability to function decreases.]	Add to existing patterns on how it helps
4.5.1 Ensure Controls	4(Medium)	Mental health, general	High-demand For good	

and Content Do Not Move Unexpectedly (Pattern) Or 4.2.5 Clearly Identify Controls and Their Use (Pattern)			fine-motor skills and rapid information processing Also add it to the other objectives in the @how it helps Corroborates a number of patterns -add mental health to how it helps to many patterns?	
4.3.2 Make the Site Hierarchy Easy to Understand and Navigate (Pattern) https://www.w3.org/TR/ coga-usable/#make-the- site-hierarchy-easy-to-un derstand-and-navigate-p attern	7(Medium-poor)	Bipolar, Depression, Schizophrenia or Schizoaffective Disorder, smi and schizophrenia spectrum disorder	7- Flat hierarchy, lower-level modules, familiar phrasing, and presenting text at a low reading level. 39- provides Counter point (Suggested pattern uses deep structure instead of broad structure for the sites 4.3.2 Make the Site Hierarchy Easy to Understand and Navigate) 39 suggests a deep hierarchy with breadcrumbs etc	

4.8.2 Provide Alternative Content for Complex Information and Tasks (Pattern) https://www.w3.org/TR/ coga-usable/#provide-al ternative-content-for-co mplex-information-and-t asks-pattern	12(Excellent) 16(Good)	Bipolar, Depression, Schizophrenia or Schizoaffective Disorder, a nonorganic psychotic disorder (schizophrenia-related disorder or bipolar disorder or major depressive disorder with psychotic features present within the past 2 years	Reinforces Providing Alternative Content for Complex information Considers the use of multimedia elements to engage users when a more formal presentation of content might be difficult Calls for user friendly, uncomplicated design and understandable content Theorizes that more severe symptoms may motivate people to use online resources for mental health. 16-include infographics; • incorporate videos, audios, and images of "people who look like me" and role models;	
Help?? or 4.5.7 Use Clear Step-by-step Instructions (Pattern) https://www.w3.org/TR/coga-usable/#use-clear-	33(Medium)	Depression, Social isolation	Provide help and clear instructions for all the features so that older adults can use them easily Social Media can also support people with	

step-by-step-instruction s-pattern And 4.8.4 Provide Help for Forms and Non-standard Controls (Pattern) (extend for any critical task)			mental health who are in pain and can not go out much, protect from social anxiety if web sites support cognitive impairments and social anxiety Can it be added to- 3.7.1 Help https://www.w3.org/TR/coga-usable/#help-user-story 3.7.4 Cognitive Stress	
			(User Story) https://www.w3.org/TR/ coga-usable/#cognitive- stress-user-story	
4.6.1 Limit Interruptions	45(Poor- good) 46(Medium)	Openness to experience and need for structure Anxiety Disorders, Depression	Reinforces limit interruptions Interruptions degrade quality of work, whether the interruptions are similar to current tasks or not. Users who are less open to experiences and need for more rigid processes and boundaries are	MAY be add Add sentence to how it helps in 4.6.1 (Pattern)

			more affected. Interruptions, internal or external, are detrimental to stress, particularly email. This can be from the tone, content, etc. of the email	
4.8.1 Provide Human Help And 4.8.2 https://www.w3.org/TR/ coga-usable/#provide-al ternative-content-for-co mplex-information-and-t asks-pattern	12(Excellent)	Bipolar, Depression, Schizophrenia or Schizoaffective Disorder, a nonorganic psychotic disorder (schizophrenia-related disorder or bipolar disorder or major depressive disorder with psychotic features present within the past 2 years	Include Infographic- Add multimedia And In-person support Considers the use of multimedia elements to engage users when a more formal presentation of content might be difficult Calls for user friendly, uncomplicated design and understandable content Theorizes that more severe symptoms may motivate people to use online resources for mental health.	Maybe add sentence to how it helps in
4.4.1 Use Clear Words (Pattern)	16(Very good)	Different chapters had different research	· avoid acronyms	

4.2.1 Make the Purpose of Your Page Clear (Pattern) https://www.w3.org/TR/coga-usable/#make-the-purpose-of-your-page-clear-pattern	42(Excellent)	Schizophrenia or Schizoaffective Disorder, Severe Mental Illness(SMI)	Better content disclosure* of an application's home page design helps user to decide if a Web site will meet their need. (*The ability of a home page to convey information to users about a Web site's contents)	
Time out https://www.w3.org/TR/ coga-usable/#avoid-dat a-loss-and-timeouts-patt ern	55 (good)	Anxiety Disorders, Depression, Mental health disability	Due to the cognitive limitations people with mental health disabilities process the information slowly .This along with fear of not having enough time increase anxiety and stress which in turn reduces their efficiency further.	Proposal 12
Objectives 1, 2, 3 and 7	65(Medium)	Cognitive Appraisal,Stress	Avoid design patterns that are complicated, time-consuming, difficult to use,	

4.5.4 Design Forms to Prevent Mistakes (Pattern)	66 (Very Good)	Stress	unfamiliar to the user or make the user feel out of control. limits the application to automation to forms	
3.3.1 Clear Language Simple copywriting throughout the product(3.3.1 Clear language), avoiding confusing jargon(4.4.1(Use clear words),having customer support 3.7.1 (Help) all these help in combat stress and anxiety	60 (very good) 61?	Mental health	Failing to apply accessibility guidelines to privacy policies may result in overwhelmingly complex policies written at college-level reading levels requiring additional time and effort to understand. This is especially critical for those using a mental health app, who might need clear assurances that sensitive personal data such as what is shared in a mental health app will be treated with respect.	

I think the bellow were patriot of collaborative or general research,

16- brand the information, such as offered by a particular university; • use local resources; • include disclaimers; and • avoid clickbait sites, Google ads, pop-ups, and paid ads.

Johns comment lisa agrees - process can be overwhelming and people with mental health issues can give up on a ling process. (add to short critical paths

And frustration. Frustration can also become debilitating (general.)

Current proposals for COGA	
Template for Proposal	
NEW! Proposal N - Where:	
Text suggestion:	
References: (See Table 1 Row n)	
Row no. of Lit-Review x(Medium)	
Status:	

Proposal 3 : Add sentence or paragraph for "Keep the tone of content simple positive , be respectful and do not talk down"

Alternatively we can make this a pattern.

Where: Use a Simple Tense and Voice (Pattern) (4.4.2)

Text suggestion: Keep the tone of content simple, positive, be respectful. Avoid patronizing users, preaching to users or stigmatizing them.

this last sentence may have internalization and editorial issues

References:

(See <u>Table 1</u> Row 3) Row no. of Lit-Review

• 16

Status: This has strong localization implications. We need it on the list for the Internationalization subgroup. **Agreed to make new pattern**

Put it in with an editors not to flag for internationalization and email Jan

User need

What to do

How it helps

[More details]

Examples

Use

Avoid

Proposal 4: Add sentence or paragraph for "Choices of color can be an issue"

Alternatively we can make this a pattern.

Where: Use a Consistent Visual Design (Pattern) (4.2.3)

Text suggestion: Incorporate vivid and warm colors that promote a positive user experience while avoiding colors known to induce stress or discomfort. For example red color can cause stress and should be avoided in user interface design unless absolutely necessary.

References:

(See Table 1 Row 4)

Row no. of Lit-Review

- 47 https://www.frontiersin.org/articles/10.3389/fnhum.2015.00212/full
- 16

Status: <u>COGA Minutes</u> (06/052024)

This has strong localization implications. We need it on the list for the Internationalization subgroup.

The takeaway from discussion at COGA Task Force:

The choice of color is a topic that is quite subjective. It needs a re-review with deeper analysis to reach at some concrete proposal. **Guidance needed on color rather that specific instructions (new proposal john and david Swallow)**

Links

https://docs.google.com/document/d/1K4tl9SV4lsDXzCdaEAXExeL3f061_Sy06lfGV9mLvY/edit#heading=h.9q6669y2 mg9q

. https://inclusive.microsoft.design/tools-and-activities/MentalHealthGuidebook.pdf

https://inclusive.microsoft.design/tools-and-activities/MentalHealthCards.pdf

Draft

Pattern: B Suggestions for the next version of Making Content Usable

NEW! Proposal 13 -Findability

Add text to: Where: Add to 4.3.2 Make the Site Hierarchy Easy to Understand and Navigate

Text suggestion:

Some types of content are easier to use with a flatter design. However if there are a huge number of pages and categories a hierarchy can be easier.

Test the hierarchy of the site.

- Can users find the page they need?
- Is it better to have a flatter design or more logical hierarchy for your content?

Make sure there are redundant ways to find the content such as a well organized site map, and search etc.

Add text to: testing Can Users Find What They Need?

Test the hierarchy of the site.can users find the page they need. Is it better to have a flatter design or more logical hierarchy for your content.

Two patterns here:

- 1. Provide flexibility so that the user can engage through either a flat hierarchy, or a deep hierarchy depending on what works best for them
 - Some individuals are better supported by a flat hierarchy with all of the information in one place, and some do better with deep hierarchy where content is exposed only when it is needed: https://www.nngroup.com/articles/flat-vs-deep-hierarchy/
- 2. Ensure that surface-level search functionality (example, "control+f") works with your content

What to do

The best designs, in terms of quantitative effectiveness and user preferences, will minimize the need to scroll and will, at the same time, use a shallow navigational structure that relies on paging Shallow depth of hierarchy helps in finding the information easily.

References:

(See Table 1)

Row no. of Lit-Review

40(Excellent),42(Excellent)

Status:

Discussed in COGA TF(COGA meeting minutes of 19-02-2024)

To be discussed again in COGA meeting(probably **11th March**) - john felt it is more dependent on the user then the . next subgroup meeting john and tiffany and rashmi can see if there a new proposal

NEW! Proposal 14 -

Where:

Add to 4.5.11 Help the user stay safe

Text suggestion:

Add to

What to Do:

- follow or analyze ongoing analysis of mental health inclusion
- follow safety best practices

May be Change or add-"known risks" to potential risks

Add to

How it Helps:

Adding advice in more detail. [e.g. keep users informed about how their data collected from mental health apps will be used etc.]

Or recommending people to look at the Online Safety issue paper

References:

(See <u>Table 1</u> and <u>Table 2</u>)

Row no. of Lit-Review /Issue Paper

Online Safety Issue Paper

Status:

Received initial consensus from COGA TF to add above changes to 4.5.11

Agreed proposals for COGA

Proposal 1: Add sentence or paragraph for fine motor skills

Add a paragraph or pattern explaining comorbidity and problems with High-demand For good fine-motor skills, eye hand coordination and rapid information processing. Alternatively we can make this a pattern...

Where: Moving controls and Clearly Identify Controls and Their Use (Pattern) and a general statement.

Text suggestion: People with mental health and cognitive challenges also may have other disabilities. They may have issues with **fine-motor skills** and rapid information processing and fine motor coordination (eg, clicking small radio buttons, operating computer mouse, scrolling). **Using large controls**, **fonts and less scrolling may help. [github text:**People with mental health and cognitive challenges may also have other disabilities. They may have issues with fine motor skills, rapid information processing, and fine motor coordination (e.g. clicking small radio buttons, operating a computer mouse, scrolling, etc.). Using large controls and fonts and less scrolling may help.]

References:

(See <u>Table 1</u> Row 1)

Row no. of Lit-Review

- 4(Medium)
- 16(Very good) but not so relevant scrolling
- 40(Excellent) not so relevant scrolling

Status: Agreed to add to two patterns (COGA Minutes)

Proposal 2 : Add sentence or paragraph for Limiting the Topics/Subjects covered per page[GitHub Changes in olivier.org/limiting-new-normal

Minimize the number of topics a page covers. Minimize the number of different subjects an application addresses. Page contents should be organized using minimal independent topic areas. Try to group all the hyperlinks for a given topic together in one area of a screen. The diversity of topics covered, and the complexity of their designs likely caused significant impediments to understanding and navigating the web sites. Alternatively we can make this as a pattern...

Where: Make the Purpose of Your Page Clear (Pattern) (4.2.1) or https://www.w3.org/TR/coga-usable/#keep-text-succinct-pattern (4.4.5)

Text suggestion: Minimize the number of topics a page/screen covers. Minimize the number of different subjects an application addresses. Page contents should be organized using minimal independent topic areas. Try to group all the hyperlinks for a given topic grouped together in one area of a screen. The diversity of topics covered, and the complexity of their designs likely **cause significant impediments for people with SMI(Severe Mental Illness) in understanding and navigating** the websites and apps. Limiting the number of topics or subjects on a page or screen makes the purpose of the page clear and makes the navigation easy.

References:

(see <u>Table 1</u>- Row 2)

Row no. of <u>Lit-Review</u>

• 42(Medium)

Status: Agreed to add to two patterns (COGA Minutes)

Proposal 5,6,7 (Merged) - (GitHub changes in o2p06-search.html)

Where: 4.3.6 Provide Search (Pattern)

Text suggestion:

(Addition to) What to Do:

Provide a friendly search to your app or website. Ideally, search should include:

Use assistance, such as:

o autocomplete,

- ability to easily find previous searches,
- o acceptance of close variants of search terms, such as singular or plural forms, acronyms, or similar terms,
- Spell-checking.

Support for finding the right result, such as:

- grouping of results when appropriate with headings for each group,
- when appropriate, ability to refine users' search queries using filters.
- boolean search operators and modifiers, when explained, can also help users find the information they need.
- -ability to customize the number and presentation of links in search results

Reliable search, including::

Make sure the search works reliably, and finds results that match users' intent for common searches.

(Addition to) How it Helps:

Having a search capability allows users to find the content they need even if they cannot use the site menus. A user can learn how to use search and reuse that skill on many sites.

Menu systems and most site navigation require the user to understand the menu categories. Users with impaired <u>executive function</u> may be unable to identify the correct categories.

In some cases, users know the correct category via memory, rather than logic. For example, most users remember that the print function is often found under the file menu. Users with impaired memory may not be able to find these menu items based on recall.

Users with impaired short-term memory, <u>age related forgetfulness</u>, or who are easily distracted may also find navigating a site and going to many pages to look for content difficult. If it takes too long they may lose focus and forget what they are looking for.

Search is most useful when it corrects misspellings, finds appropriate or related content, and provides suggested auto-corrected versions of the search terms. Accepting close variants of search terms benefits many people such as people with language impairments, dyslexia, or a memory impairment.

Help users find the right result they need. Users with impaired short-term memory, age related forgetfulness, or who are easily distracted may also find navigating a site and going to many pages to look for content difficult. If it takes too long they may lose focus and forget what they are looking for. A busy page of search results containing long lists of links can also be overwhelming for people with cognitive and learning disabilities and mental health challenges.

If there are many results from related topics, it helps if search results are presented under the appropriate heading and categories. This helps the user find the search results they are looking for. Advanced search options and search filters offer users greater control over search queries, making it easier to retrieve information. It is also particularly important for some people with obsessive-compulsive disorder (OCD), helping to reduce repetitive behaviors or the need to open and check every result, when most of them are not useful.

Providing an easy customization function that allows users to set the number of links and modify their presentation in search results makes it easier for users to recognize the correct search result and avoid becoming overwhelmed.

Ensuring that search options function reliably and consistently and according to expectation is key to reducing anxiety and allowing successful information retrieval. Error and frustration can aggravate anxiety and depression. This in turn can affect cognitive functioning, which in turn can impact upon the accessibility of web-based information.

More details

Search is less important on small sites where every page is no more than two clicks away from the main page.

References:

- 1. See <u>Table 1/ Row 7 (opens in new tab)</u>, <u>Row 8 (opens in new tab)</u>)
 <u>Row no. of Lit-Review</u>
- 39(Excellent)
- 2. See <u>Table /1 Row 9 (opens in new tab)</u>)
 Row no. of Lit-Review
- 3(good)

Status:

Accepted by COGA Task Force(<u>COGA meeting minutes of 19-02-2024</u>) + Need to do editorial work on "how it helps section"

Proposal New Pattern 8.1:

Make it easy to return/go directly to the home page of a site or relevant landing main page of a set of Web pages.

User need:

When I get lost, I need/want to get back to the starting point directly for my task, such as the home page in a multiple page website.

What to do:

Make sure home pages are easy to get to and easy to find on each screen. Ways this can be done include: using larger sizes, strong color contrast, and appealing icons and predictable location.

Note that a site can have a different landing page for subsites and sections of the site. For example each facility of a university may have its own home page. In such a case the home page of both site and the subsite that the user is on, should be easy to get to.

<div class="ednote">We many need to add clarification of landing page, and structure</div>

How it helps:

Users often get lost and disoriented when using apps and websites. This is often aggravated by stress, mental health and/or cognitive overload. Providing an easily identifiable starting point helps users know that they can always restart if they become disoriented or lost.

Making starting points more visible and recognizable (by using larger sizes, strong color contrast, and appealing icons) provide a more efficient way for people with cognitive disabilities to reorient themselves in order to complete their intended tasks.

More details:

Where templates are used for different sets of pages, they often have more than one landing page. Examples of more than one landing page for subsites includes

- An account landing page and the bank home page
- A shop may have a home page and a department landing page with a specific color coded template.

References:

See <u>Table 1</u> / <u>Row No. 10(opens in a new tab)</u>

Row no. of Lit-Review 39(Excellent)

Status:

The revised version has been discussed(COGA Meeting Minutes)

First round of discussion(COGA Meeting Minutes)

Approved 11 march 2024

Proposal New Pattern 8.2:

Allow the user to return directly to the starting point of a multistep process (should we merge with 4.2.4 Make Each Step Clear (Pattern)

User need:

When I get lost, I need to easily get back to my starting point (first step in a multistep process)

What to do:

The starting point of processes are:

- easy to get to,
- easy to orient: easy to find on each screen. For example: using larger sizes, strong color contrast, and appealing icons and predictable location.

When there is a process with breadcrumbs/progress indicator/progress tracker, start the breadcrumbs/progress indicator/progress tracker from the beginning of the process.

In a multistep process, users can directly reach the starting step of a process without losing filled data (when possible). [Note:While making the first step easily identifiable, make sure that the current step should be the most visually prominent.]

How it helps:

Sometimes users make mistakes and need to check their work. Other times users get lost and disoriented during a process. This is often aggravated by stress, mental health and/or cognitive overload. Allowing users to return to the beginning means they can check their work and orient themselves or restart if they become disoriented or lost.

References:

See Table 1 / Row No. 10(opens in a new tab)

Row no. of Lit-Review

39(Excellent)

Status:

The revised version has been discussed(<u>COGA Meeting Minutes</u>)

First round of discussion(COGA Meeting Minutes) approved on the 11th march 2024

Proposal 9 - Few navigation areas [GitHub changes in o2p03-page-structure.html]

[A **navigation area** is a distinct area of a screen or page that contained one or more hyperlinks grouped together by proximity and typically related to one another via a common topic]

Where: Add to 4.3.3 Use a Clear and Understandable Page Structure (Pattern)

Text suggestion:

Make sure navigation areas are easy to find and that the user knows what to find in each area. (visual groupings can help, chunked, white space, icons, headers etc) They know what to ignore. **One way to Improve navigational simplicity is by having fewer navigation areas**. If you have many navigation areas check they are clear and check that users with disabilities can easily find them and are not overwhelmed.

If you have 5 or more landmarks, check if they are needed. Also make the landmark names clear and describe the purpose, so that your users know what they are likely to find in each section (including screen reader users). Ensure accessible labels for landmarks are easy to understand - they can be non visible, but they still need to be easy to understand (e.g. primary, secondary, and tertiary may not make sense).

Improving simplicity by having fewer navigation areas.

•

How It Helps:

Fewer navigational areas reduce the cognitive effort required particularly for persons with SMI(Severe Mental Illness) and potentially others, including those with cognitive impairments and limited skills or experience with technology and it improves simplicity.

[Use of fewer navigational areas reduces the cognitive effort required, particularly for persons having SMI(Severe Mental Illness) and potentially others. These may include those with cognitive impairments and limited skills or experience with technology. It also improves simplicity]

References:

See Table 1 / Row 5(opens in a new tab))

Row no. of Lit-Review

2(Good)

Status:

Discussed in COGA Task Force(COGA meeting minutes of 19-02-2024)

Accepted ,add to 4.3.3 Use a Clear and Understandable Page Structure (Pattern)

Added changes suggested by Tiffany

Proposal 10 -Simplify complex purchasing processes(Can be added as an example)[GitHub Changes in o5p02-short-paths.html]

Where: Add to 4.6.2 https://www.w3.org/TR/coga-usable/#makE-short-critical-paths-pattern

Text suggestion: Can be added as example of Make Short Critical Path (keep critical paths short)

How it Helps-

Web pages can become inaccessible to people who are experiencing impaired cognitive functioning as a result of anxiety and/or depression. For example, a website may give additional shopping options and gifts during the checkout process. If the user is forced to accept or deny these options they may become overwhelmed and unable to complete their original purchase. Complicated designs like complex purchasing processes often increase anxiety which then further impacts upon cognitive functioning. Simplifying and keeping critical path short provides ease of use and causes less anxiety.

Note - add about cognitive load staying manageable

[4.6.2.3 How it Helps

Streamlining processes and workflows reduces distractions, mistakes, and mental fatigue and causes less anxiety. Using short critical paths increases the chance that users with cognitive and learning disabilities and mental health challenges can successfully and accurately complete a process or task and navigate a workflow.

For example, a user with early stage dementia is trying to buy a new phone. Before they can pay, steps are added offering them headphones and other items. They become overwhelmed and confused. They leave the site without buying the phone.

Simplifying and keeping critical paths short provides ease of use and causes less anxiety
Web pages can become inaccessible to people who are experiencing impaired cognitive functioning as a result of anxiety
and/or depression.

Complicated designs like complex registration or purchasing processes, often increase anxiety, further impacting cognitive functioning.

For example, a website may offer additional shopping options and gifts during the checkout process. If the user is forced to accept or deny these options, they may become overwhelmed. They may be unable to complete their original purchase.

References:

[See Table 1 / Row 11(open in a new tab)]

Row no. of Lit-Review

3(Good)

Status:

Accepted. This has been discussed in COGA TF(COGA Minutes)

Proposal 11 -Make links and controls labeling explicit (GitHub Changes in o1p05-clear-controls.html)

Where:

Add to <u>4.2.5 Clearly Identify Controls and Their Use (Pattern)</u> or <u>Make the Relationship Clear Between Controls and the Content They Affect (Pattern)</u>

Text suggestion:

4.2.6 Make the Relationship Clear Between Controls and the Content They Affect (Pattern)

What to Do add: the relationship and their label is clear - decision. Move out of this patter

4.2.5 Clearly Identify Controls and Their Use (Pattern)

What to Do add: links and controls should have clear visible labels.

Using Clear visible label for links and controls.

4.2.5 Add to how it helps:

Links and controls should have clear labels. Navigational elements should not need inference or interpretation to understand. Making the text of hyperlinks as explicit as possible reduces cognitive effort for people, for example, with severe mental illness(SMI),Schizophrenia and others and improves usability.

[Links and controls should have clear visible labels. Navigational elements should be easy to understand without needing to guess. Making the text of hyperlinks as clear as possible reduces cognitive load. This helps many groups with cognitive and mental health impairments including people living with SMI (Severe Mental Illness) and Schizophrenia.

References:

[See Table 1]

Row no. of Lit-Review

7(Medium-Poor), 2(Good), 39(Excellent), 42(Medium)

Status: Accepted by COGA TF + need to do editorial changes This proposal has been discussed in COGA (<u>COGA Minutes</u>)

Proposal 12 - Fear of time out adds to anxiety which reduces cognitive function .(GitHub changes in o4p09-data-loss.html)

Where: 4.5.9 Avoid Data Loss and "Timeouts" (Pattern)

Text suggestion:

4.5.9.2 What to do

Add to bullets:

if a method is available to extend the time, explain how to do it, and what to expect upfront.

How it Helps:

People with mental health related challenges often process information at a slower pace due to cognitive difficulties such as memory impairments, difficulties sustaining attention and concentration, and inability to focus on or to filter out environmental distractions. Fear of not having enough time to complete the task may further add stress and anxiety which may result in further reducing cognitive function.

References:

[See <u>Table 1</u>]

Row no. of Lit-Review

55(Good)

Status: Accepted by COGA Task Force(COGA meeting minutes of 19-02-2024)

Original Proposals(before revision)

Proposal 5, 6, and 7 are merged into one combined proposal

Proposal 5: Add an example of being able to limit the number of links displayed in search results to prevent recognition failure

Where: Avoid Too Much Content (Pattern) (4.6.3) or possibly Support Simplification (Pattern) (4.9.3) or

Relevant text: Recognition failure (recognizing correct item in the search result's list of links) is one of a three major cause for failed task using search engine by people with cognitive disabilities. By providing easy customization function that allows people with disabilities to **set the number of links on each page** and modify the way those links are presented e.g., different font sizes, the amount of information presented for each link, etc.) instances of recognition failure can be reduced.

Note: this recommendation pertains specifically to search results.

Text suggestion:

Text for **What to Do**: Allow user to limit the number of links displayed in search results.

Text for **How it helps**: Easy customization function that allows to **set the number of links** displayed in search results help users recognizing correct item in the search result's list of links for people having cognitive needs.

References:

(See <u>Table 1 Row 7</u>)

Row no. of Lit-Review

• 39(Excellent)

Status: Has been merged into one Proposal

To be discussed in subgroup meeting

add to 4.3.6 Provide Search (Pattern) including boolean instructions, , reducing umber items, or catagrins, forgiving terms, as well as

allow close terms, not necessarily the correct technical terms, with proposals 5, 6 and 7

Very important for ocd. Filter tool, based on something like price, allows people to not check each item. Needs more discussion (albert)

Assist the user find what they really want, such as providing new option (price range, memory or features) help the user create the right search. Assisted term s ither, with new ranges or options, boolean etc Request new proposal alonge these lines to the list

Proposal 6: Add being able to customize the presentation of links in search results (e.g. different font sizes, the amount of information presented for each link etc.) to prevent recognition failure

Where: Add to Provide Search (Pattern) - https://www.w3.org/TR/coga-usable/#provide-search-pattern (or

Avoid Too Much Content (Pattern) (4.6.3) or possibly Support Simplification (Pattern) (4.9.3) +

Relevant text: Recognition failure (recognizing correct item in the search result's list of links) is one of a three major cause for failed task using search engine by people with cognitive disabilities. By providing easy customization function that allows people with disabilities to set the number of links on each page and **modify the way those links are presented** e.g., different font sizes, the amount of information presented for each link, etc.) instances of recognition failure can be reduced.

Note: this recommendation pertains specifically to search results.

Text suggestion: In search results **allow users to modify the way links are presented** (e.g., different font sizes, the amount of information presented for each link, etc.) And the number of links.

Text for **How it helps:**Easy customization function that allows users to **modify the way links are presented** in search results help users recognizing correct item in the search result's list of links for people having cognitive needs.

References:

(See <u>Table 1 Row 8</u>) Row no. of Lit-Review

• 39(Excellent)

Status: Has been merged into one Proposal

discussed above

Proposal 7: Add Sentence for Testing Search functionality is usable and functions well

Where: Add to existing pattern 4.3.6.2 Provide search pattern - What to Do

Relevant text: While finding or locating information one of the issues that tended to cause most anxiety for people with anxiety and depression is malfunctioning search bars.

Text Suggestion: Allow users to refine their search results by designing filtering and use search operators (conditional searching options and/or an advanced search option). Ensure filters and search functionality are usable and function well.

How It Helps: -

References:

(See <u>Table 1 Row 9</u>) Row no. of Lit-Review

• 3(good)

Status: Has been merged into one Proposal

discussed above

Proposal 8 has Revised version

Proposal 8 -Make "Home" button highly visible/easily recognizable

Where: Add to existing pattern Add to

4.3.2 Make the Site Hierarchy Easy to Understand and Navigate (Pattern)

or 4.5.2 Let Users Go Back (Pattern) or

4.3.1 Make it Easy to Find the Most Important Tasks and Features of the Site (Pattern)

Or 4.2.2.5 Getting Started https://www.w3.org/TR/coga-usable/#getting-started or 4.5.2 Let Users Go Back (Pattern) or

4.3.1 Make it Easy to Find the Most Important Tasks and Features of the Site (Pattern)

Relevant Text: Home buttons are more easier way to align users after an unsuccessful search attempt, due to navigate a wrong path, enter a misspelled word in a search engine, or get lost at a certain point during navigation. Making "Home" button highly visible using larger sizes, bright colors, and appealing icons help users with cognitive disabilities to reorient themselves during navigation.

Text Suggestion: Being able to directly access the start page of a website(home page) or the starting step of a multi-step process may be a more efficient way for users with cognitive disabilities.

How It helps:

This helps them to realign when they become disoriented during navigation or while completing a process. Making these starting points more visible and recognizable (by using larger sizes, bright colors, and appealing icons) can help users effectively reorient themselves in order to complete their intended tasks.

References:

(See <u>Table 1</u> / <u>Row No. 10(opens in a new tab)</u>

Row no. of Lit-Review

39(Excellent)

Status: Discussed in Task Force and received input To do:Need to write revised proposal based on input

Editors note: Rows looked at so far:

■ Archived Proposed patterns and changes from Mental Health review (Archived version)

Rows done from <u>Mental Health Literature Review (Responses)</u>: 1-8,[9-NA*]10-15,16,(17,18?),19,20,21,22,23,24,25,[26, 27-NA*],28,29,30, 31, 32,33,34, 35,36,37,38,39,40,41,42, 43, 44, 45,_46,47,48,49,50,51,[52-NA],53,55,56, 57,58,59,[64-NA],60 61,62, 23, 28, 29 65,66,67,68, 69,70,71,72 [62-About Banking and financial transactions],69(seems incomplete entry)

(NA*-Not applicable/Not important-No need to add row in this sheet if review is NA,

The number referenced is the Mental Health Literature Review (Responses) Row Number) concentration difficulties caused by their disability.